

ANDHRA

# Loyola

COLLEGE

VIJAYAWADA

MARCH

1967





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MAGAZINE  

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**VIJAYAWADA**  
**MARCH - 1967**

LOYOLA COLLEGE  
MAGAZINE  
March 1967

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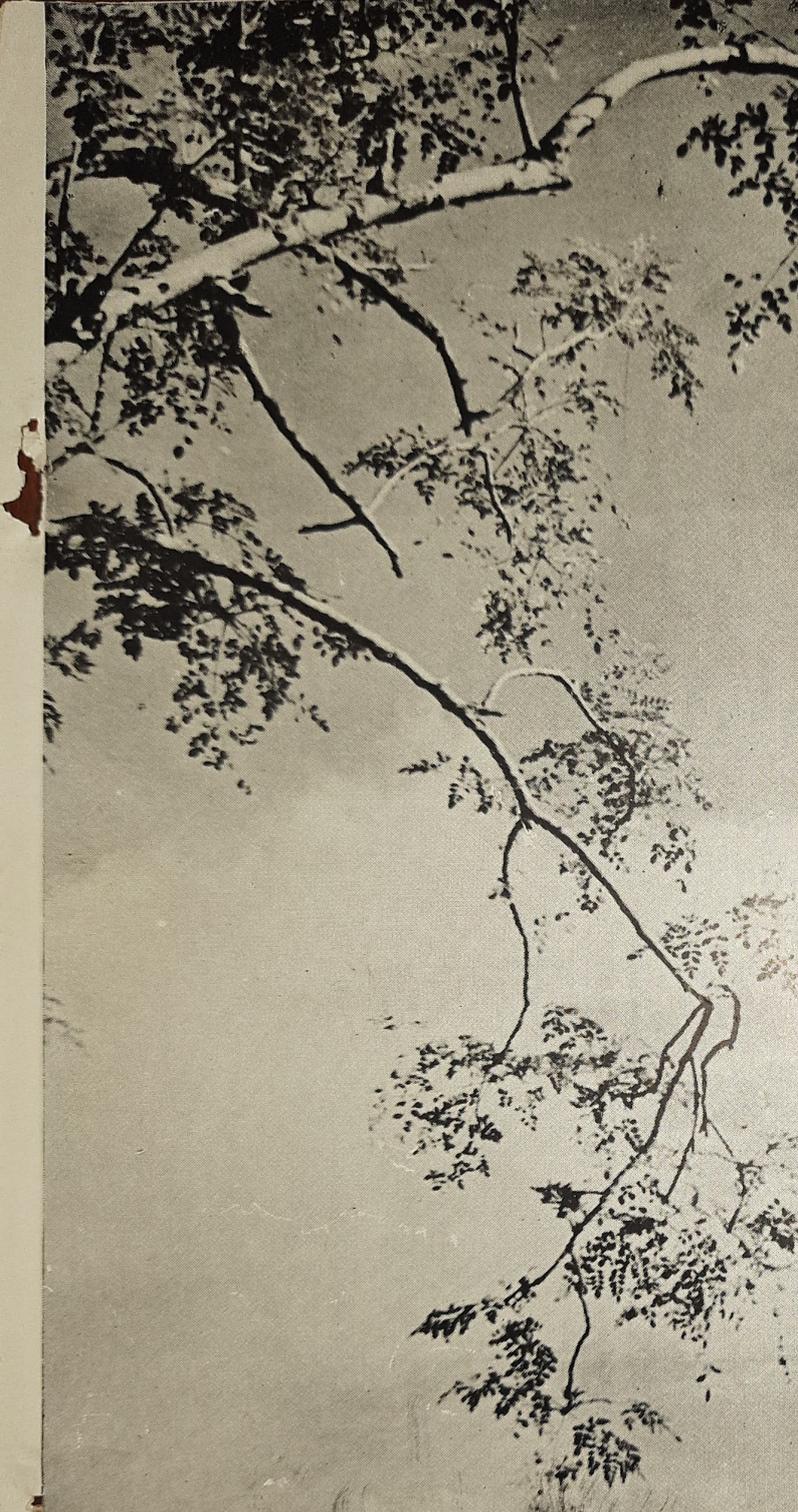
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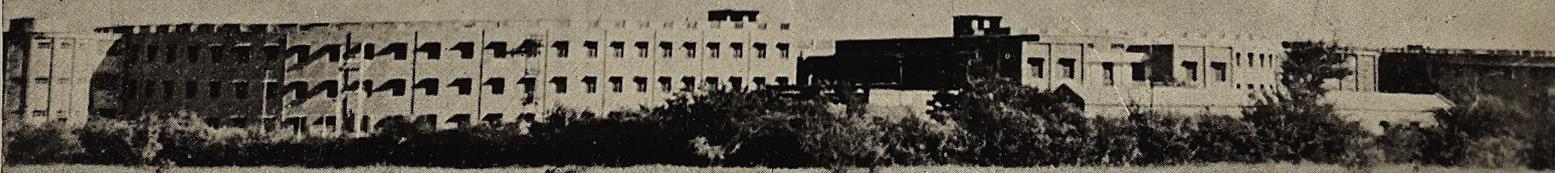
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# Editorial

1966 has by common consent been judged a bad year for the country. Some would try to explain it astrologically as the effect of a maleficent conjunction of the planets. A more rational explanation would be the unfortunate coincidence of a number of factors, political, economic and physical, aggravated by a surfeit of human selfishness.

The year had scarcely begun when we suffered a political calamity in the sudden death of the Prime Minister, Lal Bahadur Sastri, in the very act of his peaceful triumph at Tashkent. Hopes for a settlement with Pakistan dwindled as the weeks and months passed by, till relations between the two countries are now no better than at any time, except when they were at war. The previous year had been one of drought and food shortage: the people could be excused for hoping that the law of averages was in their favour and 1966 would bring more rain and normal harvests. The situation eventually proved worse: stark famine faced Bihar and most of Uttar Pradesh, while the total Indian production of cereals was lower than it had been for years. Only the import of millions of tons of grain from abroad, mostly from the U. S. A., prevented a catastrophe too frightful to contemplate.

The vagaries of the monsoon were reflected in the financial situation of the country, especially in regard to foreign exchange. Towards the middle of the year the government was compelled to take the drastic step of devaluing the Indian rupee by more than a third. The argument that devaluation would boost exports was belied by events : imports dropped appreciably, but exports remained stagnant. Apparently Indian goods were still priced too high for world markets.

Added to this, 1966 was a pre-election year and the occasion for every opposition party and pressure group to try to discredit the party in power, or to hold the government to ransom. Whether it was a case of legislators agitating in parliament and the assemblies, or students rioting in the streets, the whole nation seemed to be convulsed by a midsummer madness of disorder and destruction. A rash of strikes, fasts unto death, and sheer hooliganism spread across the land, growing worse with the passage of time, and culminating in the steel plant agitation in Andhra, and the anti-cow-slaughter campaign in Delhi and throughout the north. The orgy of violence marred many election meetings so that foreign observers wondered whether India was suited to democracy at all.

Fortunately there is a credit side to the balance sheet also, listing constructive effort and responsible activity. The way in which private charity, aided by foreign agencies, came to the help of the starving villages of Bihar, while Indian politicians were bickering, is a most consoling story. The Report of the Education Commission was published in the middle of the year and became immediately a focal point of attention for governments and all those engaged in the task of teaching. Conferences and seminars were held at all levels to study the recommendations and consider how they could be implemented in differing circumstances. Special mention should be made of the Conference of Principals of Christian Colleges throughout India held at Madras Christian College, Tambaram, in late December. We hope that the collaboration started among these colleges, and intended to include eventually all similarly minded private institutions of higher learning, will contribute greatly to raising educational standards.

For the Catholic Church in India the publication of the Decrees of the Second Vatican Council, which ended in December, 1965, was an occasion for self-introspection, renewal and adaptation to a fast changing world. For the Society of Jesus, to which Andhra Loyola College is entrusted, the holding of the second and final session of the General Congregation, and the publication of its decrees, was a God-given opportunity to update its own activity in many spheres. The visit of Very Rev. Fr. General to India in January, 1967, a lightning visit of three weeks the itinerary of which could not include Vijayawada, was the cause of rejoicing and mutual encouragement all round.

All in all, 1966 had its bright spots, enabling us to take heart for the hard work ahead. Even the student "unrest" (as it is euphemistically termed) had its saving features. It proves our young people are idealistic and are not going to take injustice, corruption and inefficiency lying down. The startling results of the just completed general elections, more orderly than one would have dared to hope, should drive this lesson home, that neither will the common people tolerate political chicanery.

The immediate prospect for the world of higher education in Andhra Pradesh includes two new developments: the starting of three post-graduate centres, one in each university area in 1967, and the introduction of the two year pre-university course in 1969. Both these developments concern us intimately, the former because it provides greater facilities of higher study for our successful graduates, and research for the members of our staff, and is to be the nucleus of a new university, mooted for the next five year plan ; the latter because it means adding a fifth year of studies to the existing one year of pre-university and three years of degree courses. The increase in numbers this change entails involves the provision of additional accommodation in college and hostel, and of furniture and equipment, all costing a great deal of money. If the colleges of Andhra Pradesh are to be ready for the influx of students in 1969, there is no time to be lost.

In the midst of all the turmoil described earlier Andhra Loyola College continued its chartered course on an even keel, as

may be gathered from the Principal's Report and the account of the various annual activities given in the Magazine. One cannot be too grateful to God for His fatherly protection over the college nor too appreciative of the devotion of our staff and the good sense of our students.

One will notice a preponderance of Science articles among the contributions from students to the magazine. This should give rise to no surprise because among the 1600 odd students on the rolls more than 1400 take Science. It is a matter for congratulation that many of the science students are interested in public affairs and are able to compete successfully with their counterparts in Arts, Social Science, and Commerce.

# Principal's Report

*Your Excellency\*, Ladies and Gentlemen,*

I have great pleasure in placing before you this evening the Annual Report of Andhra Loyola College for the academic year 1965-66, the twelfth since its foundation. I had hoped to continue the procedure adopted last year of holding College Day during the second term, since the report would deal with the events of the previous year. But the state-wide agitation for the steel plant upset our plans, and I have been obliged to transfer the function to the last term. The report will therefore inevitably contain many references also to the events of the current academic year which is drawing to a close. However, it is an ill wind which blows nobody any good. The postponement of College Day has made it possible for us to welcome as President on this, the most important annual occasion, the representative of His Holiness the Pope to the Republic of India. Apart from the fact that this is a Catholic College, in which Your Excellency will naturally be interested, I recall another significant fact that the first and the largest donation to the building fund of this College came from the Holy See, a sum of nearly Rs. 4 lakhs, in 1954, when the rupee had much greater purchasing power than it has today. This munificent donation set the institution firmly on the

path of development which it has followed steadily ever since. It gives us all great satisfaction to be able to demonstrate to your Excellency in person the progress which Andhra Loyola College has made and continues to make.

The College reopened in June amidst the usual rush for admissions in both Pre-University and degree classes. For the 640 science seats in Pre-University class alone, there are over 3000 applicants regularly. We have developed a technique to cope with this phenomenon by which merit is given first preference, while other considerations, especially our obligations to friends and benefactors, are not overlooked. By and large, it works out satisfactorily.

I should like to make a point here that the mere total of marks obtained in the final school examination is not our only criterion of merit, even if those marks were an objective assessment of intelligence, which frequently they are not. I have seen too many students with large totals gained in the S. S. L. C. barely able to cope with studies in the Pre-University class, while others with modest totals fare very well. There seems to be an increase in this divergence year after

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\* *Most Rev. Dr. James Robert Knox*, Apostolic Internuncio to the Republic of India.

year, depending on the area or the institution from which the students come, which is, I think, a matter for investigation by the authorities in charge of the S. S. L. C. and Higher Secondary School Examinations.

I recorded last year the numerous changes in the religious staff which this College has suffered recently and the corresponding strain on the few who remain. Fr. Varkey and Fr. Baliyah left in 1965. Fr. Kannikal who replaced Fr. Varkey left in 1966. Though his qualification in Sociology will be better utilised in Loyola College, Madras, our loss is none the less. We are grateful for all he did during the year he was with us. Fr. Anselm Miranda, Warden of the Gogineni Hostel, who had taken root in this College and become an Andhra, so to speak, in order to serve the Andhras, began to show signs of physical strain. Superiors have wisely given him a change of climate and of occupation for a year and we look forward to his return next year. Fr. Thayil left as expected to complete his religious training; but Fr. Coyle's departure was wholly unexpected and a matter of regret to all of us. It was the end of his second spell of service in Andhra Loyola, unstintingly helping the Pre - University students in particular, besides his duties as Librarian, Choir Master, Editor of the College Magazine, and a host of minor charges. The gap he has left is felt all the more because no one was sent to replace him. Lastly, Br. J. Mariasusai retired from service in the College to which he devoted the past ten years of his life. We bid him a fond farewell.

The replacements though valuable are fewer. Fr. J. Inchackal, fresh after his religious training, comes to strengthen our Physics Department and look after the New Hostel; Fr. P. Jojaya has returned for a year (prior to his final year of training) and has settled down quite naturally in what has practically become home to him. Fr. G. Christuraj has also been given us for a year, before he proceeds for his theological studies. He is Assistant Warden in Gogineni Hostel. Br. I. Joseph, who saw the very beginnings of Andhra Loyola, has returned in his double capacity of Secretary to the Principal and Infirmarian.

Changes in personnel have been followed by changes in work, characterised chiefly by the dubious arrangement of one person doing the work previously done by two or even three.

In last year's report I mentioned the junior lecturers who left our service in 1965 and their replacements. The only lecturers to leave us this year are from the English Department: Messrs. V. Kodandaram for doctorate studies and S. V. Bhaskara Rao for other employment. To replace them Sri S. V. Subrahmanyam and Sri Akthar Pasha, an Old Boy, were newly appointed. Sri C. M. Antony, another Old Boy, has taken study leave for a year to acquaint himself with the latest developments in Modern Mathematics at the Institute of Advanced Study, Punjab University, Chandigarh. He has been replaced temporarily by Mr. K. M. Sastry. There is a continual flow of tutors and demonstrators

every year, those who leave usually taking up a postgraduate course to improve their prospects. In all this welter of change we have to be thankful that none of our tried and seasoned senior staff have left us. The efficiency of the College in teaching or in any other respect, the very family atmosphere of friendly seriousness that prevails, is due to these members of the staff, and I welcome this opportunity once again to pay them public tribute.

It is about time I spoke of the results at the last University examinations, by which the public is too prone to judge the worth of an educational institution. The remarkable item in the list is the extraordinary success of the B. Sc. students who scored 30 first classes, 64 second classes and 42 thirds, with a pass percentage of 95. The Mathematics, Physics and Chemistry group topped the list with 100% passes. B. A. was content with a modest 56% and only one second class, but he was a student who had gained second class in Part I also, quite a creditable achievement in B.A., B.Com. scored 78% with 15 second classes. Knowing the quality of the students sent up for examination, one cannot help feeling that at least three of them deserved first class.

The results in the Pre-University class were up to our usual standard. Out of 640 students who appeared, 192 scored first classes, a quarter of the first classes in the whole University, and 90 second classes. The total percentage of passes was 82, as against the University percentage of 41. The only individual subject

worth remarking is English. Out of 114 failures, 107 failed in English, 51 in English alone. Among those who passed, 140 required moderation in English and nearly 100 of them lost a technical first class on that account. These figures tell a significant story and indicate to what an extent English has come to dominate the examinations, not only in the Pre-University but in other classes also. I do not think it is any exaggeration to say that much of the frustration experienced in the prevailing system of university education in this country arises from the use of a foreign medium of instruction. This is no place to enter into a discussion of the problem, but a solution is long overdue.

Our students won the following university prizes at the last public examination : V. Aruna Kumar won 3 awards : the General Macdonald Medal, the Sir George Stanley Prize, and the Principal Sri Kaja Sivarama Krishna Rao Memorial Prize, all in the B.Sc. examination. C. Nageswara Rao won the Sri Tamma Sambaiah Medal, also in B. Sc. P. V. Satya Prasad won the Sri Puvvada Mrutyunjaya Prize in B.Com., Commerce, and Kantilal S. Jain the Pandit V. Venkateswara Sarma Memorial Prize also in B. Com.

The College Associations have been functioning with their usual round of activities. The election of office-bearers of the Students' Society took place on the 15th July. Wajid Ali Khan of III B. Sc. was elected Chairman and R.V.V. K. Prasad of II B. A. Secretary. The Society was inaugurated on the 23rd July by Mr. Narla

Venkateswara Rao, editor of Andhra Jyothi.

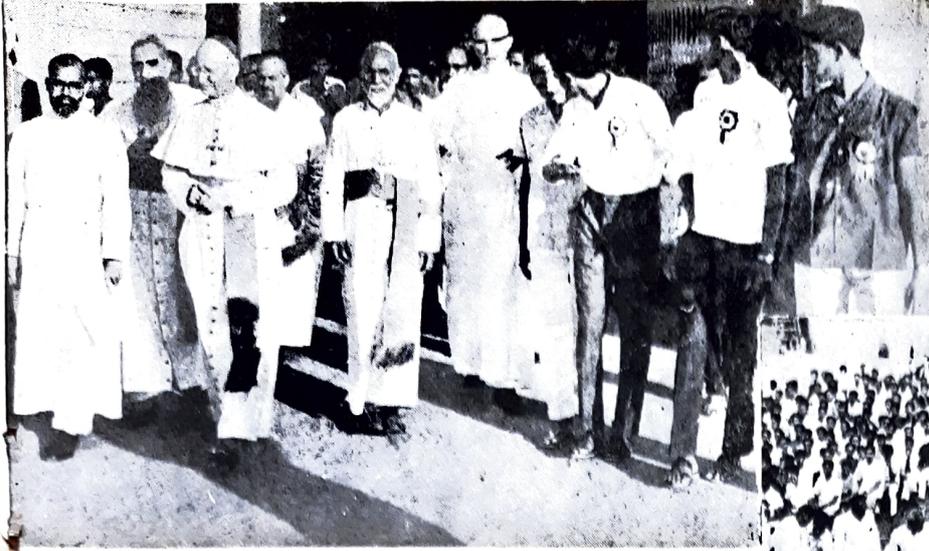
A number of meetings of various College Associations has since taken place, of which the following are particularly noteworthy. Sri N. V. Seshaiyah, editor of Andhra Prabha, addressed the Arts and Commerce Association on "Journalism as a career". Dr. M. Madhusudana Rao, Prof. of Mathematics, Carnegie Tech., U. S. A., spoke to the Mathematics and Science Association about "Modern Mathematics at undergraduate level in the American Universities". During Associations week in November, Dr. F.W. Burghall Chief Medical Officer, St. Ann's Hospital, and our popular "College Doctor", spoke on Science Day about "Science at the service of Modern Medicine with special reference to Anaesthesia"; while Dr. G.V. Krishna Rao, A. I. R., Vijayawada, enlightened the students on Arts and Commerce Day about "The Canons of Literary Excellence particularly in Telugu Literature".

Besides these addresses there were debates and quizzes and symposia. Among them the science staff symposium on "Summer Institutes in Science", the Economics and Commerce staff symposium on "The Devaluation of the Indian Rupee", the student debate on the motion that "Compulsory N. C. C. should be abolished", and the staff cum students symposium on the "Causes of Student Indiscipline", deserve special mention.

Our speakers and debators have not been idle. Wajid Ali Khan, Stu-

dent Chairman, won the shield in the debating contest conducted by the Nehru - Kennedy Cultural Association. H. Devarajan and Anoop Ambrose represented the College at the Jawaharlal Nehru Memorial Debating Contest held at the Andhra Jatiya Kalasala, Masulipatam. Our team won the rolling shield for the second time in succession. Anoop Ambrose also came first in the mono - act contest organised by the Tagore Memorial Committee, winning the only prize of Rs. 120. N. Peri Sastry stood second in the English Elocution Contest at P. B. N. College, Nidubrolu. We entered a few other competitions also, but won no laurels.

The Dramatic Association has been as active as ever under the dynamic leadership of Y. Harshavardhana Rao, the Secretary. During Associations Week they staged two Telugu plays: "Evaridi Mosam?" and "Pattalu Thappina Bandi", very successfully. They were getting ready with the latter play to compete for the Inter - Collegiate Dramatic Competition in Waltair, when we learnt it was cancelled because of the loss of time from student disturbances earlier in the year. The boys were very disappointed because we had won the Nataraja Vighraha twice in succession and were hoping to win it a third time this year. However, we keep the trophy for the present and will certainly enter the competition next time. Another notable event organised by the Dramatic Association was a much appreciated demonstration lecture on Indian Dance by Natyacharya Sri Korada Narasimha Rao, Govern-

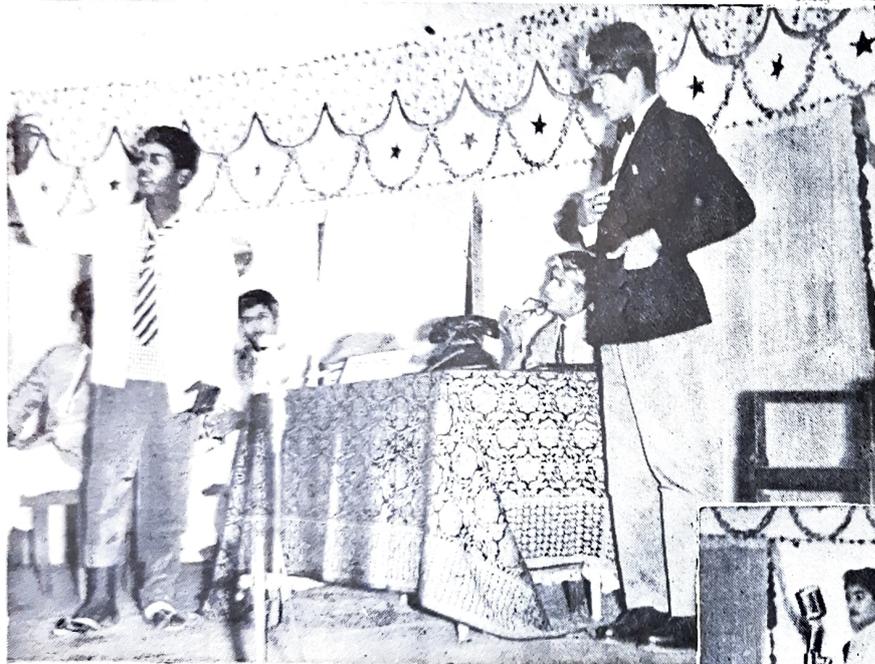


The President, His Excellency Dr. Knox, arrives accompanied by their Lordships, the Bishops of Vijayawada and Guntur



The audience

# COLLEGE DAY



Scene from the English play, "I want my money back"



Scenes from the Telugu plays "Gayaleeyam" (above) and "Manasthathvalu" (left)

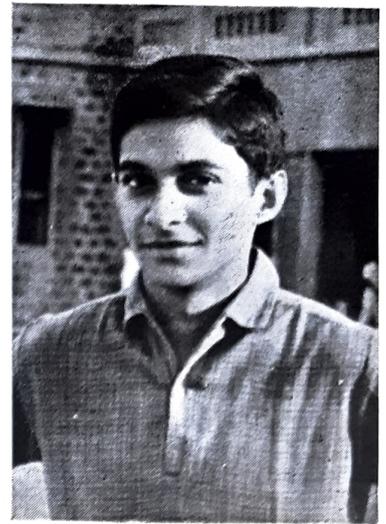




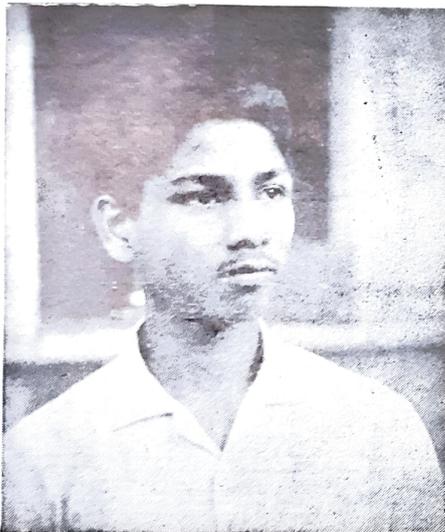
K. Wajid Ali Khan  
Chairman, Students' Society,  
College Debater



V. Aruna Kumar, B. Sc.  
(1966 March)  
(now I.I.T. Madras)  
Winner of three University prizes

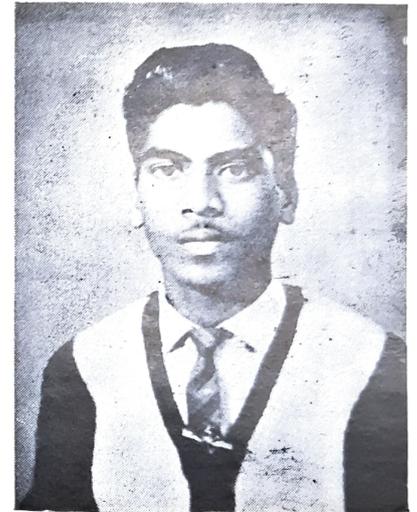


R. V. V. K. Prasad  
Secretary, Students' Society, College  
and University Cricket Captain

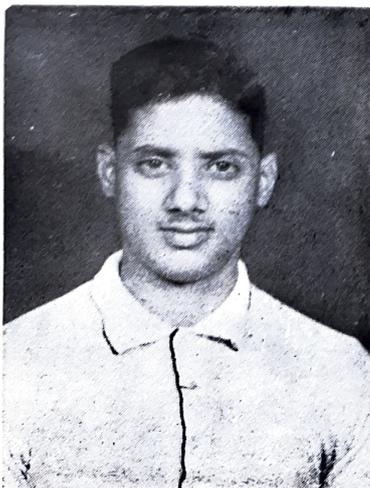


M. George  
Junior Athletic Champion, Captain  
Kho-Kho team, University Champions

STARS IN  
ANDHRA  
LOYOLA'S  
SKY



S. Samuel Prasad  
Senior Athletic Champion,  
University Athletic team and  
Hockey Player



V. Umamaheswaram  
Runner up in Weight Lifting and Body  
Building, University Tournaments



J. P. Narayana Reddy  
General Captain, Hockey Captain  
and University player



S. Kannan Naidu  
Sub-Junior Champion

ment of India Research Scholar in Kuchipudi.

The Planning Forum which is one of the most important College Associations had a successful year in 1965 - 66. The most impressive activity was the social work cum study camp for 20 days at Vittamrajupalle, a village in Guntur district, where the 45 campers, with the cooperation of the villagers, constructed a link road. During the current year the Planning Forum has not been able to do much because of the disturbance in October and November. However, we have set up an Information Bureau in a pleasant room situated in the Student Centre Building and equipped it with furniture, shelves and a lot of literature. This Bureau will supply information regarding courses of study in India and abroad, scholarships both Indian and foreign, admission procedure of various institutions, employment opportunities, careers, public service and other entrance examinations, etc., all designed to serve the student inquirer.

While I am on this subject I should like to mention that it has dawned on us rather strongly that the College does not provide organised services by way of student counselling and vocational guidance. Given the difficult times and the need the students have of guidance in various spheres, we are making an effort to start some service of this kind as a beginning, with a view to establish fully professional guidance in course of time.

A useful activity to which the members of the Planning Forum and

Social Service League have lent their hand is the cultivation of the new twelve acre vegetable garden started in the fallow land behind the hostels. The driving force is Br. Susai Arul, our energetic Mess Manager, under the valuable direction of Mr. Venkatrama Reddy, District Agricultural Officer. A great variety of country and so-called English vegetables has been successfully grown, besides chillies and coriander. We have the added satisfaction of doing our bit to grow more food during this time of general shortage.

We have had ups and downs in games and sports. Last year most of our teams were defeated in the first round in the Inter-Collegiate Tournaments. This year we have fared better: our cricket, kho-kho and table tennis teams have come out zonal champions and are now competing in the inter-zonal tournaments. Hockey, in which we had a fairly good team both years, with regular practice to its credit, has proved a disappointment. We seem able to keep the game in the opponent's half and often to enter their ring, but are not able to put the ball between the posts, which is the only thing that counts. However, several of our students were chosen to represent the state and the university: R. V. V. K. Prasad, J. Narendranath and H. Ramaswamy were selected for the Andhra Pradesh Junior Cricket Team. The same 3 players along with G. Ramakrishna represented the Andhra University and R. V. V. K. Prasad was nominated captain of the university team. Three of our hockey players were also chosen for the

university team, viz. D. Jayaprakash Narayana Reddy, captain of our hockey team and general captain of the College, P. Bhimeswara Rao, and N. Samuel Prasad; while our Physical Director, Mr. P. Rayanna, accompanied the team to Tirupati as Manager. They were defeated by Bangalore University by the narrow margin of 3 goals to 2. It is worth noting that Bangalore emerged south zone winners and went on to become runners-up in the All India University finals. Others chosen for university teams were H. Devarajan for table tennis, N. Samuel Prasad for Athletics (for the sprint items), and K. Vasudeva Rao and M. George for Kho-kho.

The N. C. C. started off in full swing from the beginning of the year with a total enrolment of 1350 cadets. For those who have not heard about it we recall that Cadet U/o V. Ravi Kumar (B. Sc. of 1966) distinguished himself in the Earl Roberts Shooting Competition last year and was awarded a medal for the best shot in India, conferred by the Director, N. C. C., Andhra Pradesh, on the 26th April, at a special function in our campus. I am happy to report that this year also we have proved ourselves the best cadet shooting team in Andhra Pradesh and S. S. K. Anjaneyulu was adjudged the best shot in the state. All India results have not yet been announced. In the Burdwan Shooting Competition, A. Leela Prasad emerged as the best shot, while T. A. N. Sarma was judged the best bayonet fighter in the state. We sent the three cadets mentioned and a fourth, Jaya Kumar Babu, for selection to

the Republic Day Contingent of Andhra Pradesh. Three of them were selected to go to Delhi and the fourth was placed in reserve. Sarma and Anjaneyulu were deputed last summer for attachment to a regular army unit and two other cadets, Ranga Raju and Sesha Sai to the Advanced Leadership Course at Manali. Leela Prasad attended the All India Summer Camp and C. Williams the All India Combined Summer Camp at Bangalore.

For the Navy Wing, Cadet Captains K. Wajid Ali Khan and G. Devi Prasad and cadet B. V. S. S. Sastry attended the Nau Sainik Camp held at Bangalore. The special feature of the naval training this year is the provision of proper facilities for boat-pulling exercises at Poranki which are being fully utilised by the cadets on all parade days. From the Air Wing Cadet U/o K. Devendra Prasad and Cadet W/o K. Koteswara Rao were selected for the Republic Day Contingent to Delhi. Orders have just been received from the N. C. C. Directorate for the acquisition of a site near Gannavaram aerodrome for the construction of hangars for gliders. So we can hope soon to see our cadets take to the air. While many other Colleges cancelled the annual training camps altogether for their students this year, we sent 418 Infantry cadets to Nambur, 50 Naval cadets to Vedayapalem near Nellore, and 125 Air Wing cadets to Secunderabad.

Some mention should be made of the scholarships awarded to our students by the Central and State Governments, the Atomic Energy Commis-

sion and the Andhra University. Apart from fee concessions which amounted to nearly Rs. 80,000 last year, the various scholarships received in this College came to Rs. 3,70,000, divided among 576 students. Of these 192 were merit scholarships, accounting for more than half the sum. I understand this exceeds the total amount of merit scholarships paid out to all the other Colleges in the University area put together. During the current year the volume of merit scholarships is even greater and is not yet complete. While this reflects to the credit of our students who have deserved them; I must mention the hard work done by the College Office in bringing to the notice of the students the various scholarships available, helping them to make applications, processing the forms, submitting the applications in time, claiming the amounts, and disbursing them promptly. This is a student service of great value and much appreciated by the beneficiaries. I should like to put on record here once more the faithful and honest work of the administrative staff of the College, especially those in the office and library.

Before leaving the subject of scholarships I must mention the establishment of a private endowment of £ 200 by the brother of Fr. Coyle, Mr. Terence Coyle, the interest on which will be given to a poor and deserving Catholic student. Yet another endowment of Rs. 500 has been made by Mrs. N. Lakshmi, mother of one of our present students, in memory of her father, the proceeds of which will constitute a prize to be awarded

annually for proficiency in Moral Science in the Pre-University class.

Among all the happy events of the year recorded here there is one tragic happening which cannot be passed over: the loss by drowning in the Krishna river of five of our senior B. Sc. students in two accidents occurring within a period of five days in September. To say that we were stunned by the disasters is to declare the obvious. We must, however, commend the charity of all those who helped to recover the bodies during those dark days, both students and staff, especially Mr. P. Rayanna, the Physical Director, and Lieut. Chandran our popular Navy N. C. C. Commander.

The Old Boys' Association of the College is growing from strength to strength. The Annual Reunion of Old Boys is a gala day for the present students also. This year on the 22nd January there was a record attendance of 250, with large contingents from Bapatla and Guntur and representatives from almost everywhere else. The substantial achievements of the year are the enrolling of more than 30 life members, the holding of a benefit cinema show in the second term, and the establishment of a scholarship in the name of Fr. Devaiah, Founder of the College, from the investment of the money collected. Prizes have also been instituted for good conduct by the Vijayawada branch and the Bapatla Agricultural College and Guntur Medical College units. We fondly hope that the Association with its quarterly News Letter will be of real

benefit to our Old Boys who in turn will also be of help to the institution.

The Staff Association established only last year has been functioning regularly. Their principal achievement has been the moderating influence exerted on the Federation of College Teachers Associations in the State. Where hotheads were chafing for direct action, our office-bearers, Messrs. V. V. Krishna Rao and A. V. Subba Rao, along with others, stood out for a constitutional approach to the problem. Wise counsel prevailed and we are happy now to learn that the teachers have succeeded in persuading the Government to sanction U. G. C. scales without tarnishing their good name by resorting to coercive methods.

A Cooperative Credit Society was formed in February, 1966, for the benefit of the College employees and was affiliated to the Vijayawada Cooperative Bank. So far 104 members have been enrolled : 62 from the teaching staff, 6 from the office staff, and 36 from among the attenders and peons. About Rs. 63,000 have been disbursed as loans, to be repaid in monthly instalments. The Principal is ex-officio President and Mr. G. V. Rama Rao of the History Department is Secretary. It is his devotion to the scheme that has led it to function efficiently.

Some of my audience may wonder why I make no mention of student indiscipline, especially this year when the whole state was agitated over the steel plant issue. The plain fact is that I have nothing of the kind to report. Our boys were second to none

in demanding that the Union Government honour its promises ; but they went about expressing their feelings in a democratic way. We held a meeting of the whole College in the open, which was addressed by both staff and student speakers ; we passed a strong resolution and sent telegrams to the President and Prime Minister, and then we went back to class. If similar action had been taken by every other institution and public group in the state, we might perhaps have obtained some assurance from Delhi ; whereas now we have only to suffer in chagrin the losses we have thoughtlessly inflicted on ourselves. However, even democrats are not left in peace. A youthful mob, led by professional "student leaders", invaded the campus on the 31st October and tried to persuade our students to join them. They were received coldly and only succeeded in breaking a few window panes. Subsequently we were obliged to close the College for two weeks, at the request of the district authorities, much to the boredom of our boys.

Before I end I should like to make some mention of our developmental plans for the next few years. We have laid the foundation of a new library and reading rooms and are waiting for the sanction of the University Grants Commission to complete the building. The College Church is now under construction and will be finished in the course of this calendar year. We have to plan for the introduction of the two year Pre-University course which will be introduced in 1969. There is no question of admitting as many new

students into the course as we have been doing every year in the recent past; but, even if the number of admissions is reduced, there will still be an increase in numbers, necessitating additional class rooms and hostel accommodation. The top floor of the southern block will have to be built and we contemplate a new hostel block opposite the Church for the Catholic students. We expect Government help for the class rooms; but we shall have to find the means ourselves for building the hostel. There still remains the auditorium, which, however useful it might be, must take second place to the priorities I have just mentioned.

The coming of the University Post-graduate Centre to Guntur lends substance to our ambition to upgrade this institution academically. While we cannot conduct postgraduate classes here under the prevailing set-up, we can aspire to research under the direction of the University Professors who will certainly be attached to the new centre. Already three enterprising staff members have begun independent research in Botany, Politics and Mathematics, and are taking steps to be registered for the Ph. D. Two of them are receiving small grants from the University Grants Commission which we expect will be enhanced in coming years. With active research being conducted in various departments, both arts and

science, we can confidently expect better teaching.

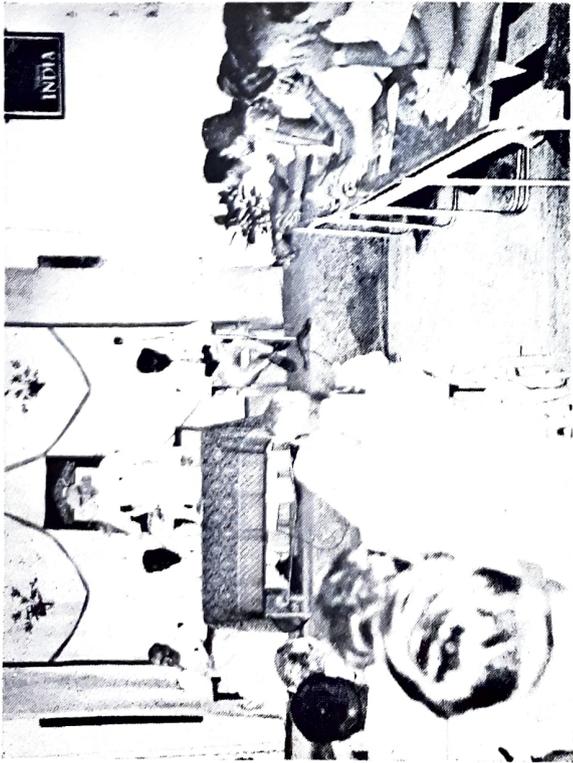
There now remains for me the pleasant duty of thanking all who have contributed to the steady progress of Andhra Loyola College during the past year. After Almighty God, the giver of every good and perfect gift, I thank our devoted staff of all categories, from the highest to the lowest, for their unstinted service. Next come our students who, with all their liveliness and occasional mischief, are loyal and responsible young men whom it is a pleasure and privilege to teach. Our gratitude is due to the Government, both Union and State for material help, in particular the latter for its generous action in bearing the full running deficit of aided Colleges. We are grateful also to the public of Vijayawada and beyond, fairly well represented in this gathering, for appreciating our efforts in educating the youth of Andhra Pradesh and rendering us help whenever asked. Finally, Your Excellency, I must thank you, and through you Mother Church, represented in all her elements here today, for accepting our invitation to attend and preside over this function, and much more for the understanding, aid and prayerful support which has called down God's blessing on all our undertakings.

I now request Your Excellency to address the gathering eager to hear you.



## UNIVERSITY EXAMINATION RESULTS MARCH, 1966.

	I Cl.	II Cl.	III Cl.	Failed	%
<b>PRE-UNIVERSITY :</b>					
Mathematics, Physical Sciences	132	25	108	30	90
Physical Sciences, Biological Sciences :	59	64	110	49	82.6
Indian History, Economics :	—	—	12	12	50
Economics, Accounts & Commercial Knowledge:	1	1	13	24	38.4
<b>Total</b>	<b>192</b>	<b>90</b>	<b>243</b>	<b>114</b>	<b>82</b>
<b>B. A. (R. R.)</b>					
Mathematics or History, Economics, Politics.	—	1	8	7	56
<b>B. Sc. (R. R.)</b>					
Mathematics Course (i), Course (ii), Physics.	5	4	7	1	94
Mathematics Course (i), Physics, Chemistry.	18	32	6	—	100
Chemistry, Botany & Zoology.	7	28	29	6	91
<b>Total</b>	<b>30</b>	<b>64</b>	<b>42</b>	<b>7</b>	<b>95</b>
<b>B. Com. (R. R.)</b>					
	—	15	14	8	78.4



Principal Addressing the Business Meeting

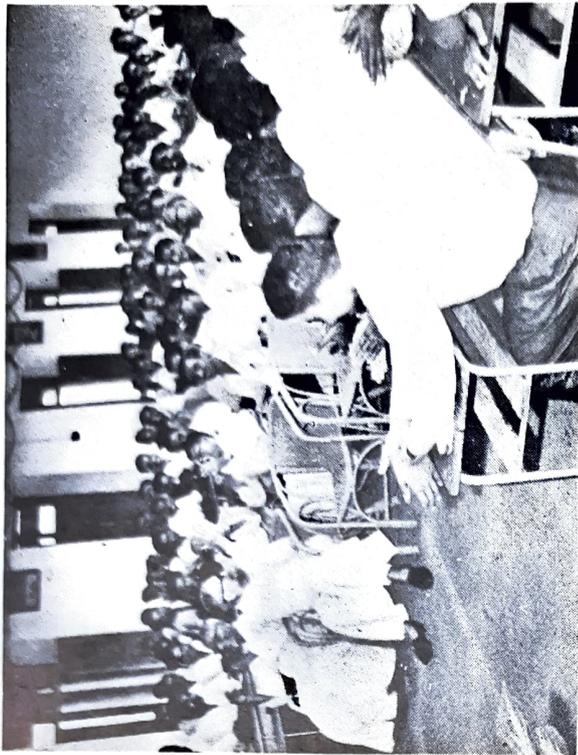


Batch from Agricultural College, Bapatla

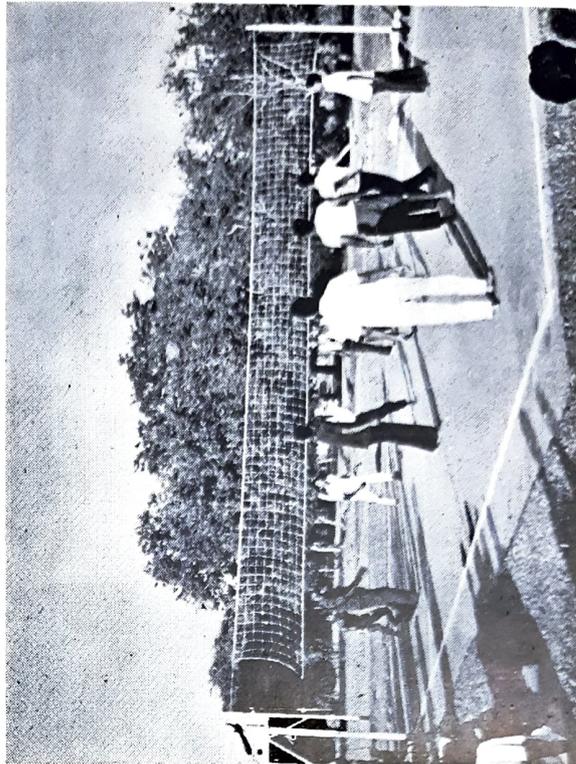
# OLD BOYS ANNUAL

# RE-UNION

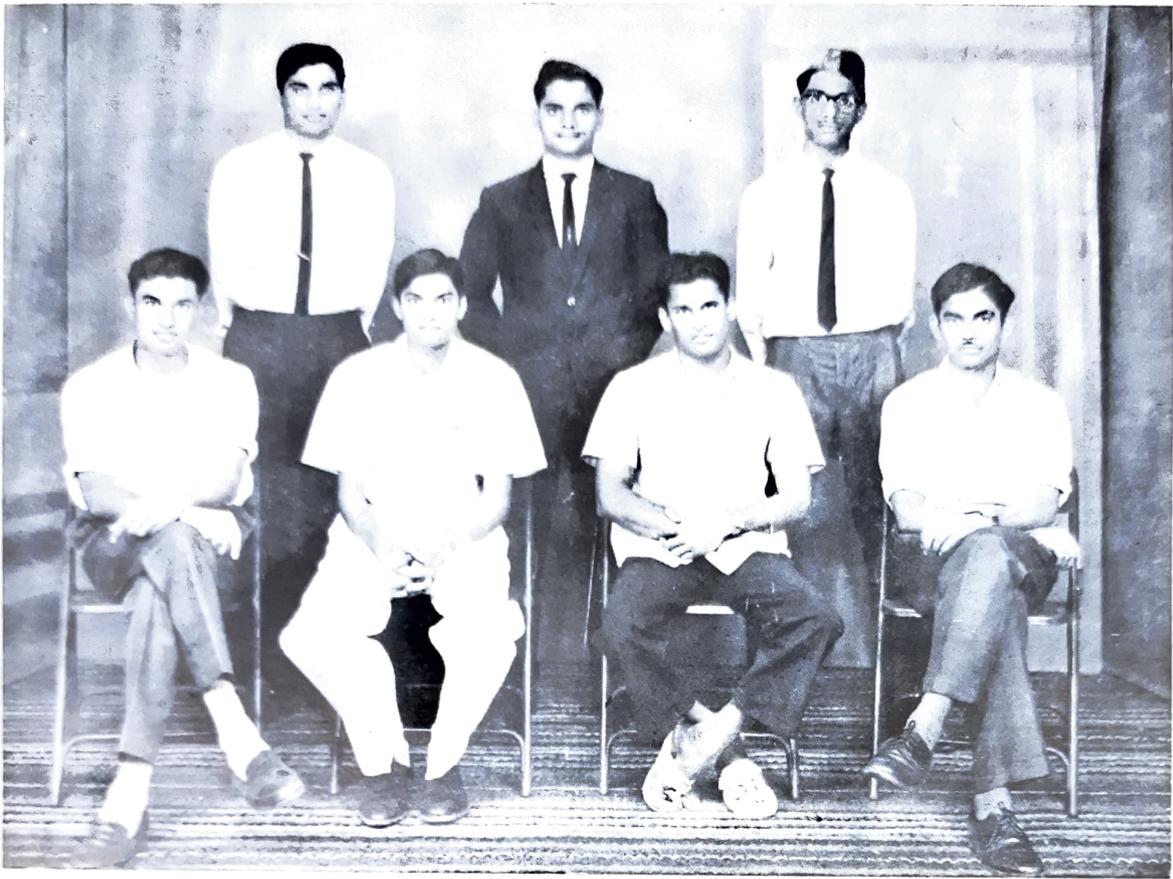
Photos by  
Lalitha Prasad,  
II B, Com.



A view of the gathering



Volley-ball Match - Old vs New



Loyola Old Boys studying at Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry



Old Boys of Andhra Loyola College at Andhra University (South Campus) Waltair

## ACADEMIC PRIZE WINNERS - 1966

B. Sc. Degree Examination - March/April, 1966.

Subject	Name of the Candidate
FIRST in Part II with Mathematics Course (i), Mathematics Course (ii) and Physics.	D. Anthony.
FIRST in Part II with Mathematics, Physics & Chemistry, (Rodrigues Prize)	K. Madhusudana Rao
SECOND in Part II with Mathematics, Physics and Chemistry.	P. Lakshminarayana
FIRST in Part II with Chemistry, Botany and Zoology.	S. V. S. R. K. Gangadhara Rao
SECOND in Part II with Chemistry, Botany and Zoology.	B. Krupanandam

### B. A. Degree Examination

FIRST in Part with Mathematics, Economics & Politics.	A. K. Matthews
FIRST in Part II with History, Economics and Politics.	M. Venugopala Reddy

### B. Com. Degree Examination

FIRST in Part II	P. V. Satya Prasad
SECOND in Part II	N. Suryanarayana Rao

## UNIVERSITY EXAMINATIONS

Pre - University, 1966

Part I - English	
Pan Huai Chin	First
Lahiri Arindam	Second
Jaya Prakash, G.	Third
Part II - Telugu	
B. Sambhi Reddi	First
P. C. Subba Rao	Second
B. Ravindranatha Reddi	Third
Part II - Hindi	
B. V. Narayana Swami	First
G. Murali Sekhara Babu	Second
Part II - French	
N. Peri Sastry	First
Part III - M. P.	
T. Devanath	First
K. Radhakrishnan	Second
A. Rama Rao	Third

Part III - B. P.

T. Kodanda Rami Reddi	First
A. Venkateswara Rao	Second
M. Papayya Sastry	Third

Part III - E. I.

P. Subba Rao	First
D. D. Bala Raju	Second

Part III - E. A.

M. Inyasi Showraiah	First
B. Seshamohan Rao	Second

I. U. C. University Examinations, March - 1966

LANGUAGES (B. A., B. Sc. & B. Com.)

ENGLISH

P. Raja Kumar	First
M. Soundara Rajan	Second
N. Arun Kumar Chatterjee	Third

TELUGU

J. Ramakrishna Murali	First
C. R. Narasimha Sarma	Second
A. S. C. Prakasa Rao	Third

HINDI

K. Mohan	First
K. V. Subrahmanyam	Second

HINDI (B. Com.)

M. Ramaseshu	First
K. V. S. Satyanarayana Prasad	Second

Group

B. A. (H. E. P.)

M. Ramakanta Rao	First
M. George	Second

B. A. (H. P. Spl. ENGLISH)

M. Soundara Rajan	First
M. Theophilus	Second

B. Sc. (M. M. P.)

G. Suryanarayana	First
P. Sitarama Sarma	Second

B. Sc. (M. P. C.)

P. Chinna Thomas	First
B. Subba Rao	Second
C. R. Narasimha Sarma	Third

B. Sc. (C. B. Z.)

T. Koteswara Rao	First
N. Subba Rao	Second
B. Hanumantha Reddy	Third

B. Com.

K. Satyanarayana Prasad	First
A. Krishna Reddy	Second

## II U. C. University Examinations, March 1966

### ENGLISH

K. Satyanarayana Murthy	First
S. Motilal	Second
M. Z. Humayun	Third

### TELUGU

P. Sivasankara Reddy	First
K. Satyanarayana Murthy	Second
G. Ramachandram	Third

### HINDI

A. Ramakrishna Rao	First
M. Venkatanarayana	First

### B. Com. HINDI

P. Raghupati Rao	First
P. Siva Prasada Rao	First

### GENERAL EDUCATION : B. A. & B. Com :

C. D. Ananda Raj	First
K. Ravindra	Second

### GENERAL EDUCATION : B. Sc.

M. Z. Humayun	First
G. P. Krishna Rao	Second
D. N. Madhusudana Rao	Third

## Group

### B. A. (H. E. P.)

G. Koteswara Reddy	First
R. Ramesh Babu	Second

### B. A. (H. P. Spl. ENGLISH)

M. V. L. Narasimha Rao	First
T. Marreddy	Second

### B. Sc. (M. M. P.) :

S. Motilal	First
Ch. Sreeramamurthy	Second

### B. Sc. (M. P. C.) :

K. Satyanarayana Murthy	First
D. N. Madhusudana Rao	Second
S. Krishna Mohan	Second

### B. Sc. (C. B. Z.) :

S. Subrahmanyeswara Rao	First
G. V. N. Narasimham	Second
P. Deva Varam	Third

### B. Com :

D. Adishesha Reddy	First
A. C. Mohan	Second

## COLLEGE EXAMINATIONS 1965 - 66

### MORAL SCIENCE

II U. C.	M. E. P.	C. D. Ananda Raj	First
	H. E. P.		
	M. M. P.		
	B. Com.		
	M. P. C. - 1	Y. Harshavardhana Rao	First
	M. P. C. - 2		
	C. B. Z. - 1	M. Z. Humayun	First
	C. B. Z. - 2		
I U. C.	M. E. P.	M. Soundara Rajan	First
	H. E. P.		
	M. M. P.		
	B. Com.		
	M. P. C. - 1	V. Badari Nath	First
	M. P. C. - 2		
	C. B. Z. - 1	C. Samarendra Nath	First
	C. B. Z. - 2		

### PRE-UNIVERSITY

Section	1	C. Santirama Prasad	First
		D. S. R. B. N. Haranatha Babu	First
Section	2	J. V. V. Krishna Rao	First
Section	3	A. Sreenivasulu Reddy	First
Section	4	A. Lahiri	First
		T. Devanath	First
Section	5	D. Madhana Mohana Rao	First
Section	6	Pan Huai Chin	First
Section	7	M. V. V. Satyanarayana	First
Section	8	P. Ramesh Chander	First
Section	9 & 10	N. Peri Sastry	First

### RELIGIOUS INSTRUCTIONS 1965 - 66

P. U. C.	J. A. Honeyford	First
I U. C.	M. George	First
II U. C.	E. Swaminadham	First



# \* Reorientation of Science Education in India

by V. BADARI NATH,  
II B. Sc.

**S**CIENCE, as we understand it in the space age, is a methodical pursuit of knowledge concerning the material universe that surrounds us. It is based on the systematised body of knowledge it accumulates, and proceeds by the peerless method of scientific enquiry.

In the modern age science has introduced much into our daily and personal life. It has become part and parcel of our domestic routine and invaded every sphere of living. This earns for it an indispensable place in the educational curriculum and that too a predominant one. Science has become a major rival to Arts and owing to its unparalleled relevance has even exceeded its antagonist in importance.

No doubt we find around us numerous Colleges and Universities patronising science to a large extent; but the spirit of science is not captured fully by them and it has still to be firmly established in our curriculum. The main requisites of science education stem from the peculiar method of science. The insistence is on keen observation, organised recording of facts, and straight but shrewd inferences drawn from those facts. This

means a lot of practical work, besides theoretical knowledge. The requirements of scientific education are moulded accordingly.

To start with, there should be good and standard sources of information. Pains should be taken to keep the reference shelf well furnished and up to date. These books should be within the reach of all those aspiring to pursue science.

Secondly, there should be enough visual aids—charts, films, etc., besides a good stock of demonstration materials. All these serve to intensify the inerasable impression created by the facts of science on the students' minds. All such aids illustrate the portions covered in theory and prove to the pupils that science is not jugglery or illusion, but methodical knowledge of real things.

Thirdly, a large amount of practical work must supplement the lectures and demonstrations in theory. Practicals, unlike demonstrations, are to be carried out by the pupil himself. They not only prove to him unflinchingly the facts and statements of the science in question, but also inculcate in him the spirit of experimentation. They

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\* Prize winning essay in the competition of the Mathematics and Science Association.

must be carried out with the zeal and spirit of a research worker, for it is research in its own way. This should be undertaken not simply as a verification but as a rediscovery. For such practical work, good and well-equipped laboratories with efficient staff are required.

There should also be enough opportunity for bright, intelligent boys to take up higher courses in science and an assurance of good well-paid employment after they complete their studies.

Last but not least, the student should be provided with scope to exercise his intelligence in new fields and thus foster in him original and creative talent. This is the most important part of science education, since, for all that he may know and learn to do, a boy may possess mediocre intelligence in the creative direction.

Keeping in view the proper standard of science education as outlined above, let us examine the present position in the Indian Colleges and Universities. The common practice in India of teaching science is to adopt the lecture-method and then to supplement it with a little practical work that has lost its colour and flavour. The lectures deal with subjects developed mainly in chronological order, which is not convenient in science. It would serve the cause of science better, if the lectures were arranged on the basis of logic, introducing even the most modern fundamental concepts right from the beginning of the course.

As for the practical work, the true spirit of science has departed from the modern Indian laboratories and what remains is a travesty of the original. Nothing prevents the students from resorting to the art of cooking results, which succeeds quite easily in the present set-up. But for all that, the student is not well versed in the method of scientific enquiry. The present emphasis is more on the result than on the manner in which the practical work is carried out.

Next, the books on science published in India are not up to date and their presentation of the subject is often unimpressive. They are not within the reach of ordinary students owing to their high price, and this constitutes a serious hindrance to the study of science.

The examination system adopted in India also encourages mechanical memorising regarding the facts of science, and draws no line between one who understands the subject really and one who does not. A mere last-minute preparation is enough to get through the examinations and that too with flying colours.

As regards visual aids and demonstrations, the less said the better. They are altogether neglected and the student rarely has any opportunity to benefit by them.

Finally, the pupils of the best intellectual calibre are drawn into the administrative and technological fields, the attraction for pure science being very little, if at all.

I would suggest therefore to remedy this situation an altogether different mode of science education :

1) The syllabi in every science-teaching institution should be drastically redrafted, giving importance to the logical development of science.

2) Confirming to these syllabi, a large number of well-written standard books should be produced to maintain uniformity of high standards (if necessary under government patronage).

3) Practical work should be thoroughly reorganised on new lines, giving importance to individual work and original talent. A sort of project work should be undertaken by every student throughout the year to exercise his creative capacity in new and developing spheres of science. Libra-

ries and laboratories must be vastly improved and brought within the reach of all.

4) The examination system should also be revised, giving importance to the student's performance throughout the year and his capacity to assimilate and apply the portions he has studied.

By overhauling science-teaching in this manner we may hope to raise the standards in India and turn out able scientists whose talents would unfold in a congenial atmosphere. That would be a golden age for Indian Science, and all of us should do our part in hastening the dawn of such an era.



## Defects in Our Five - Year Plans

KATAKAM VENKATA SUBBA RAO

Final B. Com.

**P**LANNED development has taken the country forward in many directions and, on the whole, the record will bear a scrutiny. Our Plans have presented the social objectives of development in broad terms without setting time-limits and without specifying in detail the means to be employed. Thus, between the statement of social objectives and the practical abilities to achieve them, there has been a wide gap. This statement is true, for instance, of such objectives as establishment of greater equality of opportunity,

ensuring adequate expansion of employment opportunities, and a more even distribution of economic power.

There has been a divergence between Plan objectives and current policies. This has reduced the effectiveness of our Plans without giving corresponding advantage in managing the current problems of the economy. This observation is true, for example, about the manner in which we have dealt with such problems as food distribution, control of inflationary

pressures, etc. In fairness it should be said that these are problems which have been found difficult in other countries as well. Yet, the more closely current policies and plan objectives are integrated with one another, the larger will be the measure of success.

In several fields of development, targets have not been proposed after sufficiently detailed study. This is a fault in their technical preparation. With better project preparation, even if certain factors turn out to be adverse, some measure of re-planning could be adopted. There has also been excessive fixing of targets in the fields in which they may not be appropriate. Only a limited number of targets, each justifiable in itself, should be proposed. One error which has often occurred is to fix targets and judge achievements in terms of expenditure incurred. Any expenditure is intended to represent a certain performance in a physical sense. So performance budgeting rather than financial targets should be encouraged as a tool of planning.

Through various forums the Central Government is able to exert a certain advisory influence upon the States. If the Central assistance meant for given purposes is not well applied or is diverted to other purposes, planning will be a failure. There have been indications of this during the Third Plan. The social objectives and the policy approaches implicit in the plans may not be fulfilled, unless the State Governments and those who hold responsible office are motivated to see that financial and regulatory procedures are well administered.

Several examples could be cited. For instance, failures in implementing programmes of land reform in an efficient and timely manner, need not have occurred. There could have been more integrated development between rural and urban areas.

Earlier, the critical importance of management in relation to projects and development programmes was not fully realised. The authorities concerned assumed that they would do whatever was necessary and there was no need to pursue this aspect otherwise than in a broad way. This assumption has proved false. The frequency with which the projects exceed their cost and time estimates and fail on their targets, constitutes a blot both on planning and its implementation. Deficiencies in management can be effectively removed. From now on the utmost concentration should be on the proper working out of projects and ensuring that each project has an adequate organisation and method of work.

If the gestation period of a project is longer than has been planned, it may be regarded as a failure in the managerial functions. That there have been foreign exchange difficulties is not denied. However, it is also true that, in many instances, there have been more serious factors at work. Delays, for example, in making steel or cement available during the construction phase, indicate that materials and management planning have not been given due importance. This has been realised for the past two years, but the steps taken to correct this known deficiency have been inadequate. As an important prepa-

ratory step, it can be suggested that a programme whereby a regular and continuous flow of key materials to the projects under construction can be assured, should be taken into hand from now on.

Cost, productivity and returns are aspects first, of investment and, secondly, of management. Technological improvements and raising of levels of productivity are basic to economic growth. Costs and returns are in themselves both tests of productivity. In the past these aspects received only casual consideration. It is necessary that both in formulation and implementation of the Fourth Plan, measurement of productivity and setting of productivity standards should be given a key place.

In any area the main investment in a plan helps to establish certain potentials for development. These potentials can be realised and progressively enlarged, if human resources and leadership can be harnessed for achieving integrated development. This would mean that various development programmes and activities are seen as interdependent, for example, fields of agriculture and irrigation, health and family planning. These concepts lie behind our planning, but

they have not been so far realised in any adequate measure. They need more studied application.

Planning and plan implementation are intimately related to one another. Whether in project management or area development administration, unless the quality of planning improves, it is not possible to obtain the results which a plan postulates. Nor is it possible to ensure that investments will be correctly made, targets correctly set and costs and returns correctly established. Therefore, the strengthening of organisations concerned with planning is of the utmost importance. There is much to be done in this regard within the Planning Commission at the national level. Several Ministers of the Centre do not have adequate planning units of their own. In the States, although some steps have been taken from the technical aspect, the level of planning cannot be said to be anywhere near the requirements of the difficult tasks they have to accomplish. In relation to the private sector, planning tends to reduce itself largely to licensing and allocations. Experience of earlier Plans and, more specially recent experience, has emphasised the need for early action in each of the directions outlined.



# THE ELECTRON MICROSCOPE

P. SIVA SANKARA REDDY  
III B. Sc.

**T**HE electron microscope is one of the most important new instruments of our day because of the truly extraordinary way it has widened our ability to see directly into the fine structure of matter. It is a great improvement over the optical microscope.

The first electron microscope was built in Germany by Knoll and Ruska in 1932. In this instrument lenses of minimum focal length of 3 mm. were used. In 1937 a compound electron microscope was described by L. C. Martin, R. V. Whelpton, and D. H. Parnum in London. They incorporated an optical microscope in the magnetic microscope to compare the relative image quality of optical and electron optical images. They used a magnetic lens of 6 mm. focal length. In 1939, James Hiller and Albert Prebus described a microscope in America, in which the source of electrons was a tungsten filament bent to a hairpin shape. Current voltage used was 45 KV. Electronic magnification obtained was 20,000 times greater than that of an optical microscope. The time of exposure of the object was 5 seconds. In 1940 von Ardenne described a new magnetic electron microscope in Germany. The

descriptions went on and finally Drs. Newman and Watson designed an electron microscope at the University of Toronto in Canada. It was first used in 1944.

Early electron microscopes were of two types, emission and transmission types. The emission type electron microscope gives enlarged images of an electron source, whereas the transmission type gives enlarged images of objects interposed in an electron beam. In the emission type the image is a reproduction of the cathode, i. e., the source of the electron, while the image is a reproduction of the object in the transmission type.

The field of usefulness of the emission type is restricted to objects which (a) can be heated to induce electron emission; (b) can be made electron emitters by ultraviolet illumination; (c) or are radioactive electron emitters; (d) or can be bombarded heavily as they scatter enough electrons to provide a useful image. This group of objects is so limited that recent developments are concerned with the transmission type microscope exclusively.

The transmission microscopes are built of electron lenses. These lenses

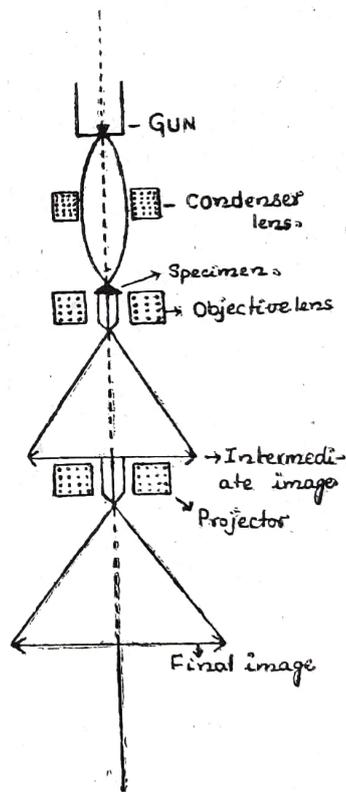
are designed and arranged to fulfil the purpose of the lenses of an optical microscope, and may be electrostatic or magnetic. In an electron microscope each of these lenses or both of them may be used.

The magnetic lens consists of two axially symmetrical electrodes maintained at different potentials. Electrons passing close to the axis of such a lens system will be deviated and focussed just like light passing through a succession of thin lenses. But this kind of lens' focal length is high and it cannot be used in microscopy. By enclosing the magnetic lens coil in an iron case and a pole-piece in the magnetic gap, lenses of a few millimeters focal length capable of producing large magnifications are obtained.

In an electron microscope, cold cathode or hot filament will be used as the source of illumination. Electrons from the source will be deviated and focussed by a magnetic lens. Since the electrons are passing through different media (air and vacuum), their velocity and direction will be changed. Electrons from a heated filament are focussed on the object by a magnetic condenser lens. Some electrons are absorbed by the object and others are scattered in different angles both with and without loss of speed. Only the electrons passing through or close by the object without loss of speed are brought to a focus on the photographic plate.

The transmission type electron microscopes have usually an electron gun that acts as source of illumination, a condenser lens, an objective lens, a third lens which functions as a pro-

jection eye-piece, a specimen holder situated between condenser and objective, and a viewer. This viewer will be a fluorescent screen for visual work or a photographic plate for photographic registration. More complicated lens systems are introduced to minimise the image distortion and permit uninterrupted examination over a wide range of magnifications. The object to be examined is placed between condenser and objective lenses in an ordinary electron microscope just as in the optical microscope.



Here the electrons will originate in the gun, where they acquire the required velocity by being accelerated through the high potential field established within this gun. These electrons emerge through a hole in the

anode and are focussed by the condensing lens. By varying the current through this lens the position of an image of the source can be shifted along the axis of the microscope. The objective lens whose focal length is short produces a real enlarged image of the object below it. This image is called "the intermediate image". It is further enlarged by a projector to yield a final enlarged image which can be viewed either on a fluorescent screen or recorded on a photographic plate in the plane of the final image.

In a magnetic electron microscope converging action of the magnetic field of the coils in the condenser lens controls the illumination. The first image will be formed by the converging action of the magnetic field of the coil in the objective lens. Necessary magnification will be obtained by the converging action of the magnetic field of the coils in the projector lens. This helps in forming a second enlarged image of a portion of the first image. In the electron microscope the medium is a very high vacuum. A particle less than one millionth of a centimeter can be photographed in detail by an electron microscope.

The electron lenses are totally uncorrected lenses with the inherent defects in them. An electron microscope capable of giving good results must be adjusted very carefully. The aperture in the lenses must be very low, since the defects in the images produced by the uncorrected lenses decrease rapidly with their aperture. The size of the hole in the cap of the specimen holder is reduced

in order to keep the sample (object) safe from damage.

The axes of the several lenses of the electron microscope should be in a straight line, if it is properly aligned. This line would be the mechanical axis of the lenses and their pole-pieces and it must pass through the source at one end and the centres of the observing screen and photographic plate at the other. The source of electrons must be very sharp, just like a point.

The electron microscope has a wide range of applications since its resolving power is very large. It is used to determine the fine details of natural objects such as carbon black, fillers, clays and mine dust. Drilling and blasting operations produce silica dust in the air of a mine. If this dust is breathed into the lungs over long periods of time, it causes a serious disease named Silicosis. The drilling dust is more harmful in its effect than the blasting dust, but no significant differences between the two could be discovered by ordinary methods. The electron microscope is used to examine the dusts and to determine the important differences existing in them.

To study the nature of crystalline and non-crystalline smoke particles, the formation of silver deposits in photographic emulsions, and the molecules of organic materials, these microscopes are useful. They are used in medicine also to photograph the morphology of disease agents, interaction between disease agents and antibodies, the life-history of bacteria, and microtome sections. They are also used in getting the magnified

view of the surface of an opaque substance like metal.

Significant contributions have been made to our knowledge of the ultra structures of the various organelles of plant and animal cells by viewing them through the electron microscope. Mitochondria, the nucleus, the chloroplast and cell membrane are no longer vague entities of a cell. Toge-

ther with the advances in the field of molecular biology, biologists are in a better position to unravel the secrets of the life processes.

[with reference to the books, "Electron Microscopy" by Ralph W. G. Wyckoff, and "The Electron Microscope" by E. F. Burton and W. H. Kohl.]



## The College Information Bureau

G. V. SUBBA RAO. Ist B. Sc.

Member in charge of the Information Bureau.

**M**OST of the students of the College are aware that our information bureau was inaugurated on the 22nd of August by Sri Subba Raju, Principal S. R. R. & C. V. R. Govt. College, Vijayawada. However, not many seem to know what the bureau is for, or how it can be of use to them.

The information bureau was thought of already last year (1965-66) and steps were taken to find a suitable room and to acquire furniture for it. One of the best rooms available in the Students' Centre, with large windows on all sides and as many as six cup-boards in the walls, was chosen. A fine table specially made for the purpose, some twenty chairs, poster

boards on the walls, a colourful table cloth and window curtains lend grace to the room and make it inviting.

Rev. Fr. Principal is much interested in the scheme and has been supplying a number of books and other literature. Since the bureau is under the auspices of the planning forum, it is only natural that many books, pamphlets, posters, etc., deal with planning and with economic and social conditions in India. There are also books about Indian History, great leaders of the past, and some books on General Knowledge.

Many students keep asking staff members for information about insti-

tutions where they can study after completing the Pre-University or the degree course in the College. They want to know what courses are available in various Universities and institutions, how to apply for admission, etc. They are anxious to know about job opportunities, public service and other entrance examinations and how to prepare for them. They also want advice on courses suited to their abilities. Some want to pursue higher studies abroad and are in need of all kinds of information about the courses offered, the Universities to apply to, the conditions in foreign countries.

Our bureau is going to try to gather all this information from Universities and other institutions in India and abroad, from Govt. Depts, employment exchanges, private firms etc., for the benefit of our students. We

have made a modest beginning in gathering the literature and want to add to it. Any one who can help us, who knows where we can get useful information, is welcome to make suggestions.

The information bureau is not a reading room where one can find news papers and magazines. These are provided in the general reading room in the college library. It is a place where people can gather useful information regarding their present or future plans. We welcome questions on such matters and we are setting up a Question Box in the Information Bureau where questions of the kind may be dropped. We sincerely hope many will make use of this important facility and we invite suggestions to improve it.

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## THE WITHERED LOTUS

A faded lotus was lying idle in a corner;  
None took notice of it.  
I, a seer, took it in my hand,  
Unfolded it to satisfy my own curiosity.  
Noticed to my surprise a bee sleeping inside,  
Like the unfulfilled desire of a man  
On his way to the next world.  
To give the bloom the life it had lost,  
I sprinkled a drop of water on it;  
But in vain - it had long withered.

S. K. CHATTERJEE,  
II B. Sc.



Learning how to spray vegetable crops

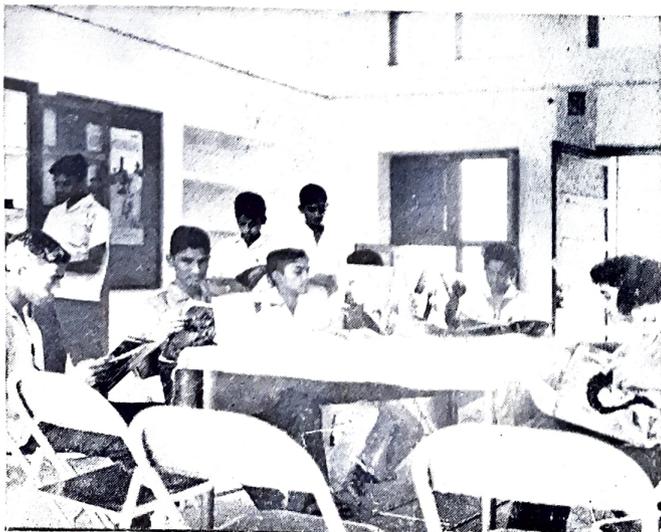


Weeding the College Vegetable Garden

# PLANNING FORUM ACTIVITIES



Demonstration Lecture by Sri T. Venkatrama Reddy,  
District Agricultural Officer, Krishna



Planning Forum Information Centre



Planning Forum President, Director and Secretary  
with Guest Speaker Sri A. Lakshmi Narayana of  
S.R.R. & C.V.R. Govt. College



Andhra Loyola College - N.C.C. Navy Wing



President, Vice-Presidents and Secretaries of College Associations

# Sex Determination in Animals

S. SUBRAHMANYESWARA RAO

III B. Sc.

**T**HAT the various types of plants and animals by all possible means try to increase their numbers is a very common observation of all of us in nature. This process of multiplication of plants and animals is known as 'reproduction' and is brought about in many ways. For example, in lower animals there is a method called 'fission' in which the single cell animal divides into two exactly identical halves which after separation lead an independent existence. Accidental breakage of the body into several bits results in the development of an equal number of separate individuals in some animals. Such methods come under the category of 'asexual' reproduction.

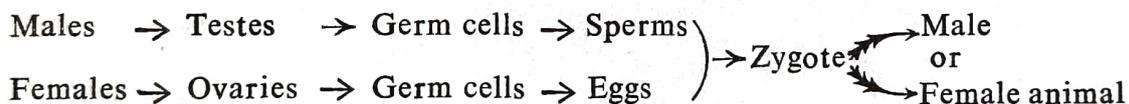
There is a more advanced method of reproduction called 'sexual reproduction' which involves the union of 'gametes' or 'sex cells', specially produced for this purpose to form a 'zygote' which by further development grows into the animal having parental characters. These two types of 'gametes' are produced by the same individual in some lower animals such

as earthworms, snails, etc. Such animals are known as 'bisexual' animals or hermaphrodites. In higher animals like cattle, dogs, monkeys, man, etc., two types of sex cells are produced from different individuals. Male gametes or 'sperms' are produced by the males, and they unite with the female gametes or eggs produced by females. Their fusion results, as already stated, in the zygote which develops into a male or a female individual. Why should the zygote develop either into a male or a female? What is the basis for the determination of the sex of the future individual? What are the factor or factors that influence the sex of the offspring? These are some of the many problems that puzzled reasoning minds both of the past and the present. Many explanations were offered from time to time for a satisfying answer to the above questions. Of all of them the modern theory of chromosomal sex determination is the best one and it can explain to its credit almost all the peculiar phenomena regarding sex determination seen in nature. For a clear understanding of the expla-

nation offered by the theory, a basic knowledge of certain cytological facts is necessary.

All animal and plant bodies are composed of billions of microscopic units called cells. These are structural and functional units of living matter. A cell is a nucleated bit of protoplasm, *the physical basis of life*. The nucleus is the controller of all the physiological activities of the cell. The nucleus is bounded by a nuclear membrane and is composed of chromosomes. These chromosomes lie in a diffuse manner in the nucleus. They are the transmitters of the hereditary characters to the offspring. The number of chromosomes in the nucleus is definite for different animals. The cells of the body are

distinguished into two types. Cells present in all body organs (except in the gamete-producing tissues) are called 'somatic cells', while those cells which turn into gametes are called 'germ cells'. In the process of the transformation of germ cells into male gametes or sperms in the testes of males, and into female gametes or eggs in the ovaries of females, the characteristic chromosomal number of the animal is reduced to half by a special (reductional) division. The sperms fuse with the eggs and the chromosome number of each is doubled and the double number is characteristic of the parent animal and therefore the zygote formed develops into an individual having the parental characters. This may be represented as follows:



With this minimum of cytological basis, the chromosomal theory can be better appreciated. Today it is well established that sex is determined at the time of fertilization. Twins to quintuplets arising from one fertilised egg would support this view.

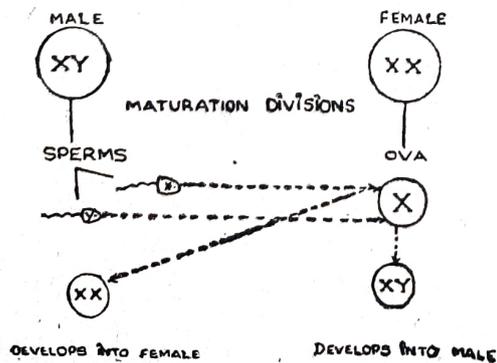
### Chromosomal Mechanism of Sex Determination

The mechanism can be understood better from the study of a specific example, *Drosophila Melanogaster*. This insect is characterised by the presence of four pairs of chromosomes in the nuclei of its body cells. In the somatic cells and imature germ cells of the female, of the four pairs of chromosomes one pair of straight and

medium-sized chromosomes is noticed, in contrast with the other three pairs. These two marked chromosomes are called the sex chromosomes or X-chromosomes. In males a striking difference is noticeable regarding the X-chromosomes. The body cells and immature germ cells contain in their nuclei the three common pairs of X-chromosomes, but one of the two chromosomes observed in the females is substituted in this case by a hook-like chromosome, called the X-chromosome. Excluding the three pairs of chromosomes seen in common, the chromosomal composition of the female can be represented by XX and that of the male as XY, for a convenient study.

As stated earlier the female germ cells undergo 'reduction' division in order to mature into eggs. During this process only one type of eggs is produced, all having one X-chromosome or sex chromosome along with three ordinary chromosomes. In the case of males the germ cells by undergoing maturation divisions produce TWO types of sperms. One type will have an X-chromosome and the other will have a Y-chromosome in their nuclei. These two types of sperms are produced in equal numbers.

At this stage the process of union of gametes is effected. Both the types of sperms have equal opportunity to fertilize or unite with the egg. Suppose a sperm having X-chromosome unites with an egg which also has an X-chromosome. Then the resulting zygote will have two X-chromosomes. The presence of two X-chromosomes is the character of females and hence the zygote develops into a female insect. On the other hand if an egg and a sperm having the Y-chromosome unite, the resultant zygote has an X-chromosome and a Y-chromosome. The XY-composition is met with in the case of males. So it is natural that the zygote develops into a male individual. The whole process can be represented as follows :



The mechanism of sex determination described above is a typical instance. The general scheme holds for all forms of animals including human beings. However, there exist interesting differences in the details of 'operation of the sex determining machine'. Some simpler variations may be briefly mentioned. In some cases the X-chromosome is absent. Then the male chromosome condition is XO. In females the condition is unchanged and it is XX. In some animals the X-chromosomes have 2 to 9 components which may be seen as separate chromosomes. In some insects and birds the females have either the XY or XO condition. As a result of this simple exchange between the sexes of nuclear differences characterising males and females, the females produce two types of eggs while the males produce only one type of sperms. The rest of the mechanism is the same as described in the typical case.

There are some further interesting phenomena seen in some animals such as parthenogenesis, gynandromorphism, hemaphroditism, etc.

### Sex Determination in Parthenogenesis

Parthenogenesis is a really wonderful phenomenon in which eggs are capable of developing without union with male gametes or sperms. In one type of parthenogenesis the developing egg and embryo have the full somatic number of chromosomes. It is termed diploid parthenogenesis and is seen in aphids and phyloxerans. The second type of parthenogenesis is seen in insects and arachnids. This is designated 'haploid parthenogenesis' because the

developing embryo will have half the somatic number of chromosomes. In honey bees the eggs develop in parthenogenesis invariably into males (drones) because they have only one sex chromosome in them. These drones are destined to be the future mates of the queen and they must supply sperms for the future generation. The germ cells in these drones do not undergo reduction division. The sperms, thus having a sex chromosome, fertilize the eggs produced by the queen, and the resultant zygote with two X-chromosomes automatically develops into a female, i.e., the queen.

### Gynandromorphs and Hermaphrodites

Gynandromorphs are individuals made up of some female body regions and some male body regions. The chromosomal condition for this is not clear. But it is assumed that in the first or second cleavage division of the zygote with two X-chromosomes, one of the X-chromosomes lags behind and is excluded from the daughter cell. Thus one daughter cell gets two X-chromosomes while the other has only one X-chromosome. That is why the descendants of one cell have male characters while the derivatives of the other cell possess female characters.

Hermaphrodites are bisexual individuals. They are functionally both male and female. Little information is known about chromosomal mechanism in these cases.

### Factors Influencing Sex

Besides the chromosomal mechanism some other factors, such as environment, influence the determination of

sex and differentiation of secondary sexual characters. By looking into the following cases one can understand the factors of influence.

1. Crabs whose testes have been infested by a parasite, *sacculina*, are gradually changed to such an extent that the cells destined to produce sperms produce ova instead, i.e., the males are transformed into females. Though sex is determined at the time of fertilization, rare accidental or unnatural conditions result in such disturbances.

2. *Bonellia* is an animal whose development is not direct. There is an intermediate free swimming larva. If this larva happens to settle on the proboscis of a female, it develops into a male; otherwise it grows into a female. If it is kept apart from the female after settling on its proboscis, it develops into an intersex. This is due to the glandular (hormonal) secretion of the cells of the female's proboscis.

3. If testes or ovaries of very young rats are removed, a retention of undifferentiated condition of secondary sexual characters occurs. If at this stage ovaries from young female rats are engrafted into the castrated young males, they become much altered in the female direction in instincts, etc. Conversely spayed females with engrafted testes show a tendency toward maleness.

4. In birds it is an interesting feature that practically complete reversal of secondary sexual characters may be induced by the removal of ovaries from young females.

These anomalies are explained by the current theory that "certain glandular cells that form part of the body of ovary or testes secrete materials into the blood, which stimulate various tissues in different ways to produce dimorphic results", These glandular secretions are called 'hormones' and have the capacity to completely change the sex of an individual.

It is worthwhile to mention here the case histories of sex change in human beings. There are several instances of human males who develop symptoms of sex change in later life.

They are surgical curiosities. Surgeons have helped to perform a series of operations and transformed them into "women". Quite a few such metamorphosed women are married and lead a normal life. The reverse case is also met with; but the transformed males are incapable of leading normal sex life. Reasons underlying these transformations are under investigation.

In conclusion it may be said that though chromosomes determine the primary sex differences, they have no effect on the differentiation of secondary sexual characters.



## MY BELOVED

My beloved, you come to me every day and especially at night, you are irresistible. You do not allow me to study, you ask me to do away with my books and to be with you. In winter when nights are longer, you are more welcome, and in summer when the days are hot and longer, you invade the studying hours. Thus in summer your presence is doubled. You ask me to leave all study and enjoy your intoxicating company. When you are with me I slip away to heaven from this sorrowful world. Your company gives me such bliss! My beloved, you sometimes come even when I am in the class, and I cannot help it.

As you know, I cannot do anything without you, and sometimes you are too harsh and compelling.

Whenever I am blessed with your company, your visit lingers on and on. It is true that I love you much and I enjoy your company, but this enjoyment lasts so long that when you are away I feel very sad and alone, and lose interest in everything. My examinations are fast approaching, and if you go on in the same way, I will have to wait for next September.

I beg you, my beloved "Sleep", to come to me only when I need you.

K. B. NAGESWARA RAO  
III B. A.

# THE ANNUAL TRAINING CAMP AT NAMBUR

S. U/o B. NAGESWARA RAO,  
III B. Sc.

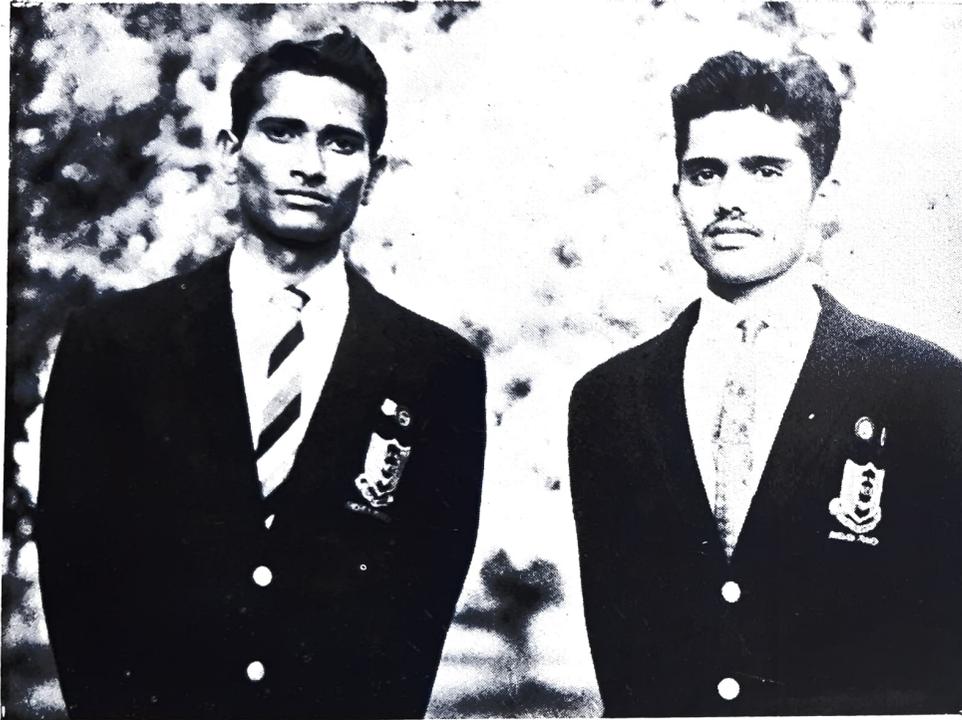
**T**HE Annual Training Camp for the Infantry Cadets of the 15th (Andhra) Bn., N. C. C., was held at Nambur from December 23rd, 1966, to 1st January, 1967. The camp site was on the eastern outskirts of Nambur village, between the Vijaya-wada - Guntur Road and the Vijaya-wada - Guntur railway track. Part of the area is plain and level ground and was very useful to us to practise drill and field craft. The rest of the area was covered with thick bushes and palm trees and was eminently suitable for practising military tactics.

The camp was attended by about 560 cadets from both K. B. N. College and Andhra Loyola College. Nine officers attended the camp, Maj. S. Srimannarayana being the Camp Commandant. Capt. M. D. A. Ananda Rao was the second in command, while Capt. K. V. Narayana was adjutant of the camp. The cadets were formed into four coys - Alpha, Bravo, Charley and Delta.

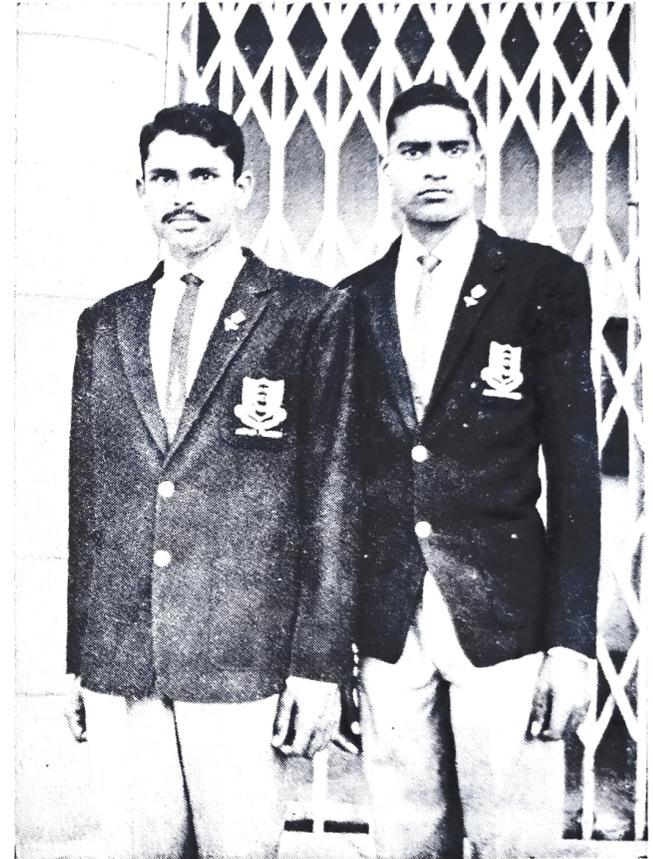
The daily routine was as follows. All the cadets had to wake up at 4-30 A. M. At 5-45 A. M. tea was

given. From 6-30 till 8-00 A. M. we had parade. At 8-30 A. M. breakfast was served. Then from 9-25 A. M. till 12-45 P. M. we had parade again. We had our lunch at 1-00 P. M. followed by an hour's rest. In the evening we had theory classes and demonstrations from 3-30 to 4-45. At 5-00 P. M. we had tea. At 7-00 P. M. all the cadets had to attend compulsorily the Roll Call parade. Here the cadets could explain to the Commandant their difficulties through the Duty Officer. The Duty Officer explained the next day's programme and gave the necessary instructions to the U/os. Supper was served at 8-00 P. M. At 10-00 P. M. the lights were finally turned off for the night.

In the camp great importance was attached to health and hygiene. A fixed policy was followed to ensure sanitation in the camp. In N. C. C. language it is called "Internal Economy". Everday the Camp Commandant and other judges inspected every company. That company whose area and tents were kept most clean and tidy was awarded a prize in the end. There were separate lavatories for the



U/o T. A. N. Sharma & Ju/o G. Embero  
Cadets attached to Regular Army Camp at Ambala

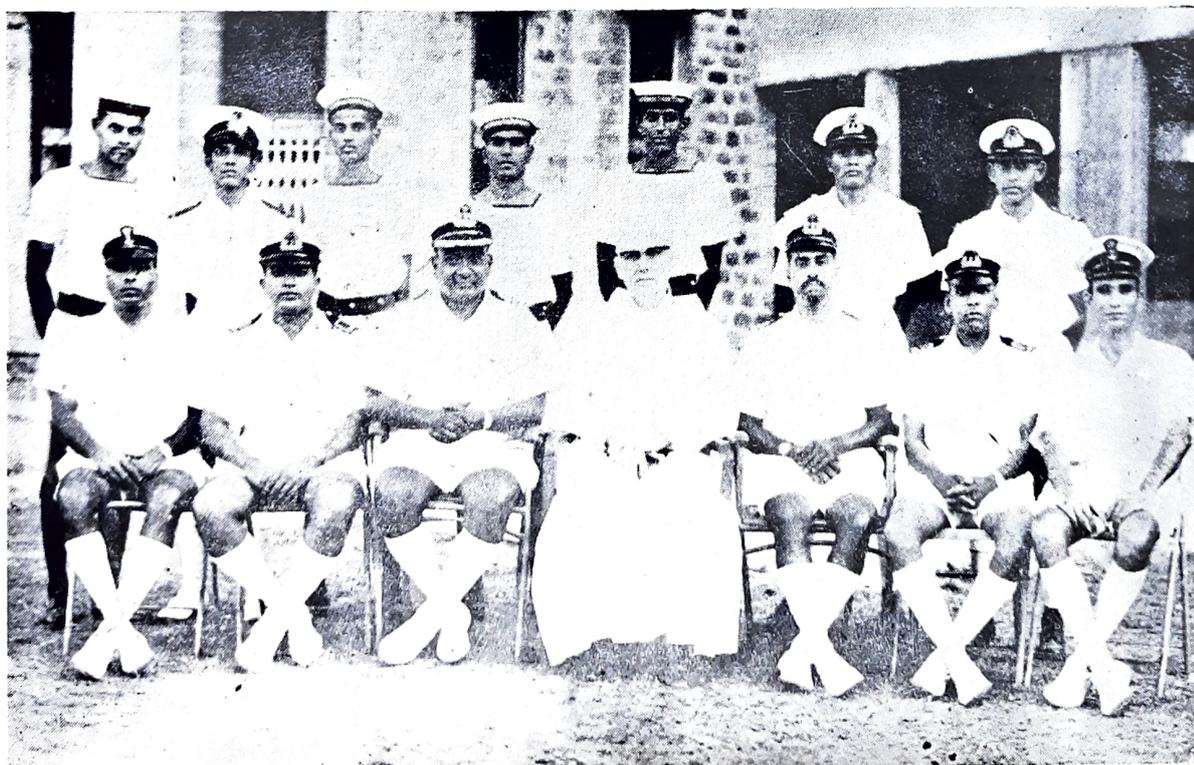


W/o K. Koteswara Rao &  
U/o K. Devendra Prasad  
Air Wing Cadets selected for Republic Day Parade,  
Delhi, 1967.

## N. C. C. CELEBRITIES



N.C.C. Infantry - Under Officers  
15 (An) Battalion, Andhra Loyola College



N.C.C. Navy Wing - Under Officers and Certificate Holders

cadets, the officers, and the P. I. Staff. No one was allowed to go out for such purposes.

Drinking water was very scarce, though water for other purposes was quite abundant. A truck supplied drinking water from Guntur, taken from an irrigation well. There were facilities for bathing, but the time for bathing was short. The food was not very good, but palatable. In spite of what some of the junior cadets were saying at the time, the food could not have been so poor after all, for in that case we could not have completed our camp so successfully.

Everyday we had some demonstration or other. On 26th December our A Coy gave a "Fire Fighting" demonstration. The next day the cadets of Coy Charley gave an "Ambush" demonstration. Bravo Coy cadets gave the "Section Attack" demonstration on 28th December. On 29th December Delta Coy cadets

gave the "Fire and Movement" demonstration.

We had many inter company competitions. Coy Charley stood first in firing. Coy Delta stood first in obstacle course. Coy Bravo stood first in drill. Coy Alpha got two first places in guard mounting and internal economy. It was accordingly awarded the championship.

On 30th December there was a grand dinner in the evening marking the successful completion of the camp. On 1st January, 1967, the Camp Commandant distributed the prizes early in the morning. Then we returned home.

The camp was a grand success in spite of some petty inconveniences experienced by some of the cadets. But such things are unavoidable in a huge camp. It must be conceded that every cadet has gained a lot by his participation in the camp.



# A Survey of Synthetic PLASTICS

K. SATYANARAYANA MURTY  
III B. Sc.

## INTRODUCTION

IT has been the need of men for a raw material capable of being easily and cheaply moulded into useful domestic articles that has led to the development of the synthetic resin or 'Plastic' industry. Synthetic resins are amorphous substances manufactured from the by-products of coal gasification and oil refining. They have the property of becoming 'plastic' on heating and can be moulded quickly into any article of any desired shape. The materials known as plastics are generally rigid substances which are obviously not plastic in the strict sense of the word, but they are all substances which at some stage in their manufacture have gone through a plastic condition. Plastics can be defined, according to Redfarn, C.A., as "an arbitrary group of artificial materials, generally of synthetic organic origin, which at some stage in manufacture are in a plastic condition during which they are shaped, often with the aid of heat and pressure and often in a mould".

## RAW MATERIALS

Coal, petroleum and natural gas are the principal sources of organic materials for the production of organic ingredients employed in the manufacture of synthetic plastics. These organic intermediates are obtained from coal by a process known as 'destructive distillation' and from petroleum as a result of the 'cracking' of petroleum. The various properties of plastic materials like modulus of elasticity, extensibility, flexibility and impact strength can be improved and adjusted to our will by the incorporation of a filler of suitable kind such as fibre, cellulose, jute, saw-dust, asbestos and mica. Catalysts speed up the hardening of the plastic materials. 'Plasticisers' are generally added to the plastic materials to increase the fluidity of the material under hot-pressing conditions and for easy hot-shaping.

## ANALOGY WITH METALS

Plastics are much lighter than steel, but both aluminium and magnesium

are very near to plastics in specific gravity. Plastics are much inferior to metals in surface hardness and in shock resistance; also they are much inferior to steel. Laminated plastics approach the stronger metals in tensile strength. There is a wide variation in the thermal expansion of plastics and metals with a few exceptions. Regarding thermal and electrical conductivities, plastics are non-conductors and metals, on the contrary, are good conductors. Plastics are inferior to metals in distortion under heat when loaded and are much less rigid than metals. Plastics have a good moisture absorption compared with metals and with regard to colour possibilities also, plastics are much superior to metals.

### FABRICATION

Fabrication means giving shape (for example, of a button) to the plastic material. There are four main mechanical methods (1. Injection moulding. 2. Compression moulding. 3. Casting and 4. Extruding) for the manufacture of various articles from the plastic materials. The method to be chosen depends upon the nature of the plastic and the shape of the article required.

### POLYMERISATION

Almost all synthetic resins and plastics are made by a process known as 'polymerisation'. It is a process in which a number of small molecules or monomers combine chemically to form a big molecule called high polymer. Polymerisation is of three types. Elimination of water as a by-product during polymerisation is called 'con-

denation polymerisation' (eg. Nylon.) If no water or other by-product is removed, the process is called 'addition polymerisation' (eg. Poly vinyl chloride). When two different monomers are mixed and reacted together under suitable conditions, 'co-polymerisation' takes place and the product is known as 'copolymer'.

### CLASSIFICATION

Plastics are classified into two groups, the thermosetting and thermoplastic materials.

The thermosetting materials generally require heat and pressure to mould them to shape. On the application of heat, first they become soft and plastic and the continuous heating makes these materials undergo a chemical change and set hard. This process is called 'thermosetting' or 'thermohardening' and the material is often referred to as 'cross-linked polymer'. When the material has reached this hardened stage it is permanent and does not soften to any appreciable extent when re-heated. Intense heating, of course, causes the material to burn. The most important thermosetting materials are those made from phenol and formaldehyde (bakelite) and those from urea and formaldehyde.

The thermoplastic materials soften on the application of heat and pressure and cooling is necessary to set them to shape. In this case, no chemical hardening of the material takes place and hence they can repeatedly be moulded and remoulded by subjecting them to heat and pressure. Thermoplastics are also called 'linear

polymers'. The most important thermoplastics are those based on nitrocellulose, cellulose acetate, polystyren, polymethyl methacrylate, polyvinyl chloride, nylon and polythene.

Casein plastics made from skimmed milk (lactoid) lie in an intermediate position between the thermoplastic and thermosetting materials.

We now proceed to discuss a few of the plastic materials that are quite familiar to us.

#### **Phenol-Formaldehyde resins :**

The foundation of the plastic industry which has now become a vast and rapidly expanding field was laid by the American chemist, L. H. Baekeland, about 1908.

Phenol and an appropriate amount of formaldehyde (as formalin) are boiled together in the presence of ammonia which catalyses the reaction and on heating, under pressure, to a temperature of about 100°C, it polymerises and changes into a hard, non-melting mass. To this material, the commercial name 'Bakelite' is given.

Bakelite is a thermosetting plastic; infusible, unaffected by various acids, alkalis, oils, solvents, etc., not inflammable, durable, less expensive and, perhaps, the most versatile and widely used of all the plastics. It is an excellent insulator of electricity and so mainly used for insulation purposes. It is also used for buttons, knife handles, telephone parts, radio cabinets and many other articles of common use.

#### **Urea-Formaldehyde resins :**

In the manufacture of urea-formaldehyde resins urea and formalin are made to react in the presence of an alkaline catalyst. Urea-formaldehyde materials have a wide colour range and have fair moisture absorption. They are a trifle inflammable and char when brought into contact with a naked flame. The chief uses are for electrical fittings, buttons, bottle caps, etc.

#### **Nitro-cellulose plastics (Celluloid) :**

In 1865, ALEXANDER PARKES of Birmingham discovered that if camphor is added to a mixture of nitrocellulose and alcohol, a hard horn-like material is obtained which can be fashioned, while hot, into any article. This material was named 'celluloid'.

Celluloid can easily be dyed various colours and can be rendered opaque by special treatment with some materials. It is tough, strong and flexible, light in weight, not readily breakable and has good moisture resistance. It is used for the manufacture of photographic films, toys, combs, buckles, knife handles, pens, soap-boxes, etc. Celluloid is, however, a material the use of which is not completely devoid of danger, since it is based on the highly inflammable nitrocellulose.

#### **Cellulose acetate plastics :**

In the production of the cellulose acetate plastics, the 'secondary cellulose acetate' flakes, plasticisers (commonly mixtures of dimethyl, diethyl phthalates and triphenyl phosphate) and acetone are treated to

give sheets of cellulose acetate plastics.

Cellulose acetate plastics are relatively non-inflammable, but are not quite as tough as celluloid and have no good moisture resistance. They are used mainly for spectacle frames, pens, buttons, combs and novelty articles. Plastics of cellulose triacetate are now preferred to celluloid plastics for cinema and photographic films since they have no great danger of fire.

#### Polystyrene :

To prepare polystyrene, styrene monomer ( $\text{CH}_2=\text{CH}-\text{C}_6\text{H}_5$ ) and benzoyl peroxide (catalyst) are dissolved in ethyl benzene. The solution is subjected to continued and controlled heating and at the end of the process the solvent is removed.

In polystyrene, since a bulky group is introduced into the molecules, the various molecules cannot be packed in tightly and therefore there will be a large amount of empty space between the molecules. Hence the material is highly transparent. Its modulus of elasticity is high and it will not deform easily under mechanical stress, but is slightly brittle. Polystyrene is an excellent insulator, unaffected by moisture and oils but affected by benzene and toluene. It is used for toys, buttons, buckles, combs, battery cases and radio, television and refrigerator parts. In order that its properties may be improved, it is copolymerised with substances like butadiene and acrylonitrile.

#### Polymethyl methacrylate :

The raw materials for the production of the monomer are hydrocyanic acid, acetone and methyl alcohol. Methyl methacrylate monomer is a mobile liquid which, when heated in the presence of benzoyl peroxide, undergoes polymerisation and is gradually transformed into a colourless glass-like substance.

Polymethyl methacrylate is called "Perspex" (manufactured by I. C. I. India Ltd.), "Lucite" (U. S. A.) and "Plexiglas" (W. Germany). It is a thermoplastic and can be moulded into spectacle lenses, photographic lenses, other optical apparatus and buttons which are resistant to heat, water, caustic soda, etc. It is extremely transparent and has the ability to 'pipe' light. It is fairly tough, non-brittle and has the ability to take colour. Perspex is now finding extensive use in the construction of the cockpits of aeroplanes and in the production of bullet proof glass. An important development of polymethyl methacrylate is its use in dentistry.

#### Polyvinyl Chloride (P. V. C.) :

Polyvinyl chloride is obtained by the polymerisation of the monomer, vinyl chloride ( $\text{CH}_2=\text{CH}-\text{Cl}$ ). P. V. C. is a whitish, rather buff coloured powder. Bright sunlight and moisture have bad effect upon this material. The plasticised P. V. C. is rubbery and is extremely tough and flexible. It can be obtained in the form of sheets which are used for rain-coats, table cloths and curtains. P. V. C. with low proportion of plasticiser is used for toys, radio

parts, etc. Rigid P. V. C. is used as a material of construction in chemical plants and P. V. C. pastes are used for the production of gloves, etc.

#### Nylon :

The development of Nylon arose out of Carother's research work in the U. S. A. This was first manufactured, on a commercial scale, by E. I. du Pont de Nemours and Company in 1939.

Nylon is produced by the condensation of adipic acid ( $\text{HOOC}-(\text{CH}_2)_4-\text{COOH}$ ) and hexamethylene diamine ( $\text{H}_2\text{N}-(\text{CH}_2)_6-\text{NH}_2$ ). The reaction between these two compounds is called 'polyamide condensation'. Nylon is a thermoplastic material and its natural colour is milky white, but it can be dyed various colours. It is mainly used as a textile fibre. It is used for making gear wheels (especially in calculating machines) since no sound will be created and no lubricant is necessary. It is also used for brushes, combs, mugs and kidney bowls. It is also used for tennis-racket strings, surgical instruments and other articles of common use too numerous to mention.

#### Polythene (Poly ethylene) :

It is a remarkable material because of its properties especially electrical. Polythene is made by polymerising ethylene, a gas obtained from petroleum. Polythene is a rigid, rather waxy, white translucent thermoplastic material. Its specific gravity is .92 to .94 and hence will just float in water. It has good moisture resistance and

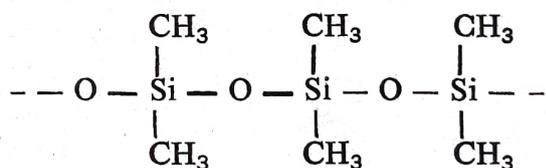
has negligible 'loss factor' and hence used as an insulator mainly in Radar. When under the action of an A. C. having very high frequency, it can remain an insulator; Polythene is used for bottle caps, toys, domestic articles such as washing-up bowls and for novelty articles. The tubes made out of polythene are used for irrigation.

#### Casein plastics :

The material casein is a protein found in milk coupled with calcium. It is separated from milk by treating with a coagulant such as rennet. Casein plastics have a good moisture absorption and so are not used for articles to be used under damp conditions. It is widely used in knife-handles, buttons, fountain pen cases, umbrella handles, etc.

#### Organo - Silicon polymers :

One of the few kinds of polymers which do not have a backbone of carbon atoms is the silicones. A typical silicone has the structure:



In 1904, Professor F. S. Kipping of University College, Nottingham, synthesised a number of compounds known as silicols which on heating readily undergo condensation with loss of water to produce substances of high molecular weight known as silicones. These are used for water-proof insulation, as lubricants in valves and bearings, as heat-resisting

varnishes and as rubber-like materials which can withstand high temperatures.

### CONCLUSION

Although, undoubtedly, plastics were at first introduced as substitutes for naturally occurring materials such as bone and ivory, they must no longer be so regarded. They are superior to and have displaced wood, metal and stoneware and have found a widespread and varied use as new constructional materials. Plastics are

new materials made available to man, materials with their own distinctive and prodigious properties. Needless to say, plastics are one of the greatest and most remarkable contributions of chemistry towards humanity. Chemistry is thus playing an ever increasing and vital role in the development of modern industries and in the uplift and the betterment of humanity. Had there not been anything such as chemistry or science, perhaps, we would be now leading the lives of the stone-age men.

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## MIGRATION OF ANIMALS

T. RAVI PRASAD, III B. Sc.

ONE of the fundamental characteristics of animals is their ability to move about, which is used primarily to seek improved living conditions. These journeys are however of two different types: some are non-cyclical, that is they never go back to their place of departure. Others on the contrary are much more regular, occurring at definite intervals in the animal's life cycle, and always including a return trip to the region where they began the journey.

The term migration is used to designate the wandering of men who have come in successive "one way" waves to settle in various parts of our globe. Mammals migrate to other territories and attempt to settle there. This movement is common throughout the whole animal kingdom. Some

crustaceans move periodically from one marine zone to another. For example, the common crab, "CANCER PAGRUS", leaves the intertidal zone at regular intervals to go to deeper waters. Insects make much more generalized migratory movements, but they are not always truly cyclic. The brevity of their life span prevents most insects from performing real migrations. The monarch butterflies of North America leave the Great Lakes to winter as far South as the Gulf of Mexico. They spread along the Atlantic coast and through the Mississippi valley.

Innumerable fishes are great travelers, coming to specific places to spawn, but spending the rest of their lives in regions that are far away. Among them sardines, herring, codfish

and tuna, often cover long distances during the course of the year in their search for optimal conditions. Certain fishes, notably salmon, make even longer migrations, which include movements from fresh to salt waters and back again. Whales travel northward leaving the Antarctic seas to spend the winter in southern equatorial waters. In the river Ganges a fish, by name Hilsa-Hilsa, migrates from Calcutta and travels all the way to Delhi (along the river Jamuna) and even beyond for the purpose of breeding. It covers nearly 1000 miles. The same fish is found to be migrating in the river Godavary also. Certain bats of both the old and new world make long seasonal flights. Even elephants are known to migrate from region to region.

Migratory phenomena are very common throughout the whole animal kingdom; but they are most conspicuous among birds which have the best developed faculties for swift and long travel. There are many scientific theories to explain the migration of birds. The failure of food in autumn compels the birds to go south where the food is abundant. Temperature is one of the important reasons behind these migrations. Unfavourable temperature compels the birds to fly from north to south. The struggle for existence makes the birds of the south migrate to the north. During the breeding season they migrate to the south. Birds have a tendency to move to the regions of abundant light; so when light diminishes in the north during winter they migrate to the south and vice versa. This feature is called phototropism.

Migration of birds is best studied by banding, which means a light metal ring is tied round one of the legs of the migratory bird, on which the name of the bander and date of banding are mentioned. A peregrine falcon bearing the mark of Henry IV, king of France, escaped from Fontainebleau and was recovered twenty-four hours later in Malta 1,350 miles away. Closer to our day is the story of a Danish stork marked with a medallion bearing a message. The following year it returned with a reply from Banaras in India. Twelve months later the same manoeuvre was repeated and the story ended in a romantic way by the marriage of the Dane to the English girl with whom he had corresponded, through the intermediary of the migratory stork. This is a case of a stork's visit before a marriage! During World War II soldiers in Africa attached messages to the legs of the wintering European migratory birds in the hope that they would be carried to their distant home-lands.

Fresh plumage appears before the onset of the migratory season. It is really wonderful to see that birds maintain some punctuality during migrations. The times of arrival of birds either at summer or winter quarters, or at various points of their routes, are very accurate year after year. The two journeys are called by different names. The first one is the postnuptial towards the winter quarters and the second one is prenuptial and the return flight to the breeding area. Further observations revealed that many migrants return every year to the same winter quarters. Salim Ali (India) noted that a

grey Wagtail came back to his garden in Bombay to spend every winter from 1942 to 1946.

Migrants are of two types : one is latitudinal and the other altitudinal. Birds staying in the north during the warmer months migrate to the south for winter and return to the north in spring some move from east to west. During summer they migrate to the mountains and later return to the plains. Such altitudinal migrations are noticed among the birds of America and the Himalayas in India. Some birds will migrate every year to the same place and some do not. Some birds migrate only by day and some fly both day and night. Small birds like Warblers fly only during night so as to escape from enemies. Most of them follow established routes of migration. They follow landmarks like rivers, mountains, sea coast and islands. Others migrate without directional features to help them. Rivers and valleys are usually helpful to them by supplying abundance of food. The coastal routes are east and west Atlantic, east and west India and east and west Pacific. The sea routes are usually short. If they are long, islands invariably assist the passage, for example between Japan and Australia.

The average speed of a bird is 30 to 50 MPH. The records show that crows fly at 31 - 45 MPH, geese at 42-45 MPH, larks at 38 - 49 MPH and ducks at 40 - 49 MPH. The greatest speed recorded in India is by swifts, 200 miles per hour. The noise made by the birds helps other colonies of birds to follow them.

The distance travelled by the song sparrow is 300 miles, robin 1000 miles, orchard oriole 2500 miles, humming birds 3000 miles, redstart 3500 miles, and golden plover 7000 miles. The longest journey is by Arctic terns, which fly from the Arctic, where they spend the winter, southwards right across the world to the Antarctic for the summer and back again, covering a distance of 11000 miles. In India the wood-cock is the longest distance migratory bird which breeds in the Himalayas, but during winter may be found frequently in the Nilgiri hills in Madras state.

The birds make the best use of the seasons, avoiding the inconveniences of winter, the deadliest enemy of living things. Dangers along their way during migration are countless. Natural hazards are storms, oceans and desert crossings. Artificial obstacles created by mankind, particularly maritime and aeronautical beacons and ceilometers, blind the migrants and cause them to crash in great numbers. Tall buildings, radio and television transmitters, and electric wires which cover the civilised world with a tight network also trap countless winged travellers.

This phenomenon of migration helps the animals to avoid hardships such as food shortage, severe cold and other dangers to life. Birds and fishes usually migrate for the purpose of breeding to safer places in order to preserve their race. Such activity helps in distributing animals in various parts of the world.



# *A. I. C. U. F. SOCIAL WORK*

## *CAMP AT SILVEPURA*

### *NEAR BANGALORE*

G. V. M. RAMARAU,  
III B, Sc.

A. I. C. U. F. stands for the All India Catholic University Federation, which, among other things, conducts social work camps during the summer vacation at several places in India. Last year they conducted camps at Bangalore, Coimbatore, Kerala and at Cape-Comorin. I attended the camp at Silvepura near Bangalore. I should mention that I am not a Catholic, but these camps are meant for all, irrespective of caste or creed. The main aim is to introduce one to the changing patterns of rural life, to bring about mutual understanding among students, and to help them to work together for building up the nation.

As one who was privileged to attend the camp, I am glad of the opportunity to relate my experiences. There is an application form to be filled by the students who wish to attend the camp. The selected persons will be informed by post at an early date. Normally the camp period is 15 days; but last year, as there were far more applicants than usual, the organisers decided to have two bat-

ches for 8 days each. I was selected for the second batch that is from 29th May to 5th June, 1966.

I started from Vijayawada on the 28th morning by an express train after getting my 'students concession' ticket. On the 29th morning I reached Bangalore via Madras. As directed in the letter I had to go to St. Joseph's College, Bangalore. I felt lost and lonely in that large city, as it was the first time I had been so far from home. But, after taking some tiffin in the station restaurant (which I found expensive), I found my way to the College.

St. Joseph's College is one of the biggest educational institutions in Bangalore. Since it was holiday time, all the grounds were empty. I was wondering whom I should meet and where I should go, when I saw a notice at the very entrance to the compound. It was for the guidance of the Social Workers who were arriving there that day. I immediately found out Rev. Fr. Gueriviere of Loyola College, Madras, who was



K. Kesava Rao, I B.Sc.



K. Balaiah, I B.Sc.



ప్రేమకుసుమాంజలి

K. Radha Krishna, I B.Sc.



P. V. Subba Rao, II B.Sc.



Tulasidas  
D. Appa Rao, II B.Sc.



Albert Schweitzer  
P. V. Durga Rao, II B.Sc.



Govinda Vallabha Pant  
D. Appa Rao, II B.Sc.



Gopala Krishna Gokhale  
D. Appa Rao, II B.Sc.

going to take charge of the camp. I proudly introduced myself as a member from Andhra Loyola College, Vijayawada. He was very happy to see me and I felt quite at home in his company. I forgot all my fears and shed all the weariness of the 30 hours' journey. Then I was introduced to some of the delegates who were already there by that time and immediately made new friends.

Though many students applied, only a very few turned up for the second batch of the camp. The number was so small, only sixteen, that the organisers seriously considered whether it would not be a waste of time and money to attempt work which required a large number of campers. However, they finally decided to conduct the camp for us. We were taken by a special bus to the camp site which was about 20 km. from Bangalore. That very day the first batch of campers left for their homes. I found three people from Andhra in the first batch, and that too from Andhra Loyola College. I had a brief talk with them and we gave a send off to the former campers then and there. We were taken to our lodging, a small elementary school building, and then given a cup of tea. Little children were the first we met at the camp. In the evening after dinner, we had a small meeting at which the programme was explained to us and jobs were assigned.

The next morning we started on our day's work. At 6-00 a. m. we had flag hoisting, followed by a brief tiffin and coffee. The main work was to deepen and widen a tank for the cattle. Bangalore with its surround-

ing area is in a dry region and water is carefully saved. The project area is 'Fathimapura' about 2 km. from Silvepura. These are in the N. E. S. block of Yeswantpur. The village consists mainly of labourers, technicians and soldiers. Apart from the proximity of Bangalore city, the camp locality is a backward area.

Our task was comparatively easy because the first batch of campers had already made themselves familiar to the villagers. They gave us a warm welcome, and were most willing to cooperate with us in our efforts to help them. At 8-15 a. m. we prepared our breakfast; we were supplied drinking water, etc., by the villagers. At about 11-00 a. m. we stopped work and then had a nice bath and rested a little. At 1-00 p. m. we had our lunch, and took rest till 2-30 p. m. At 3-00 p. m. we had group discussions and a meeting. In this we discussed questions like "What can students do for village uplift, especially during the holidays? - Problems of Democracy - Should students set apart some time for the service of their fellow men; or should they concentrate exclusively on studies? - What do most students think of social work? - What are the methods to be adopted to popularise social work among them?"

After tea at 4.00 p. m., some of us attended to environmental work; some others to the village contact work. In the village contact work, we used to collect data of all sorts. We asked the villagers about their troubles, their jobs, health, rains, crops, etc. We collected their suggestions regarding the work of the camp.

Most of them were uneducated, many of them workers in the Hindustan Machine Tool Factory. At 6.15 p. m. the day's work was almost over.

At 7.30 we had our dinner and afterwards we had evaluation work, entertainment programme, etc. In the evaluation work, we used to comment on the work during the day, call for suggestions and complaints, if any.

In our sixteen member batch there were nine from Madras State, five from Mysore, one from Kerala and one, of course myself, from Andhra Pradesh. The nine from Madras and myself complained to the 'food minister' that buttermilk was not served during meals and the rice was over cooked. The food minister gave the necessary direction to the cook and the matter was set right.

A camp is very useful to learn about the habits of Indians from other states, as regards eating and

many other matters. We come to understand others better and can also learn from them.

Thus the 8 days of camp passed quickly and fruitfully. Though we were few, we succeeded in doing some useful work. The village children followed us everywhere, innocent and bright-eyed. We all felt that we should do something to help them especially. The first batch had anticipated us by laying the foundation of a permanent school building.

We were given a warm send-off by the villagers of Silvepura. I shall always remember the days I spent at this camp, so few and yet so rich in experience. These camps, open to all university college students, are conducted during the summer holidays for the convenience of those who wish to attend them. Therefore in conclusion I urge all my readers to seize any opportunity they get of attending a camp like this.

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## Dr. H. J. BHABHA

B. R. S. PRASAD, III B. Sc.

JANUARY 24th, 1966, marked the end of the promising career of a great modern scientist. On that day that distinguished son of India, Dr. Homi Jehangir Bhabha, the then Chairman of the Indian Atomic Energy Commission, perished in a

tragic air crash on Mont Blanc. The people of India were shocked to learn that Dr. Bhabha was also among the 117 passengers on board the ill-fated Air India Boeing 707. Dr. Bhabha was on his way to attend a conference on 'Atoms for Peace' at Geneva. He

was the only physicist who had the great honour of being asked to preside over that conference. The people of India were still in mourning over the death of their beloved leader, Sri Lal Bahadur Shastri, when this cruel disaster dealt them a second blow. The whole world mourned for the sudden and tragic death of Dr. Bhabha, one of the great physicists of the world today.

Many people do not know much about Dr. Bhabha except that he was a high official concerned with the Indian Atomic Energy Establishment at Trombay. The following facts will not only reveal the greatness of Dr. Bhabha, but also the immense loss the country has sustained.

Dr. H. J. Bhabha was one among the great modern physicists who have been doing both fundamental and applied research in Atomic Energy. As Secretary to the Government of India in the Department of Atomic Energy and Chairman of the Indian Atomic Energy Commission, Dr. Bhabha was the prime architect of the Indian Atomic Energy programme.

Dr. Bhabha first achieved great distinction and recognition as a physicist for his pioneering research work on cosmic rays. His original contributions to physics lie in the field of cosmic radiation. He did some of the earliest work in establishing the existence of a new electronic particle, the meson, which owes its name to his suggestion. His prediction of the slowing down of the rate of decay of U - Mesons with increasing velocity in accordance with relativity, and the subsequent obser-

vational confirmation, remain one of the best proofs of the correctness of Einstein's theory of special relativity at extremely high velocities. The importance of his work has received wide recognition and acclaim.

Born in 1909 on 30 October, Dr. Bhabha had his school education in Bombay up to the age of seventeen. He then joined Cambridge University and obtained the B. A. degree in mechanical science. During his stay there he held the Rouse Ball travelling studentship in Mathematics for three years in succession. He spent some time with W. Pauli in Zurich, Enrico Fermi in Rome, and H. A. Kramers in Utrecht. After returning to India he took up the job of Reader in Theoretical Physics at the Indian Institute of Science, Bangalore. Very soon he became Professor at the same Institute.

We can have a glimpse of Dr. Bhabha's greatness, if we look through the awards he received from various parts of the world. During his stay at Cambridge, he was awarded the Adams prize in the year 1942 and in 1948 he received the Hopkins prize of the Cambridge Philosophical Society. Dr. Bhabha was elected President of the Indian Science Congress in the year 1951. The President of India awarded him 'Padma Bhushan' in 1954. In 1957 he was elected honorary fellow of Caius College, Cambridge, and the Royal Society of Edinburgh. The American Academy of Arts and Science elected him as honorary fellow in 1959. Again in 1963 he was elected foreign associate of the U. S.

National Academy of Sciences and in the following year the Royal Academy of Sciences of Madrid elected him as foreign corresponding member. Dr. Bhabha, in addition to the above mentioned awards, had a number of honorary doctorates in his credit, awarded by several Indian and foreign Universities.

Dr. Bhabha was responsible for the establishment of the Tata Institute of Fundamental Research and he was Director and Professor of Theoretical Physics there. Since 1948 Dr. Bhabha held the post of Chairman of the Atomic Energy Commission and Secretary to the Government of India in the Department of Atomic Energy. He was also the Director of the Atomic Energy Establishment at Trombay.

In recognition of his services to the country the late Prime Minister Sri Lal Bahadur Shastri invited Dr. Bhabha to join his Cabinet as the Minister of Atomic Energy and Scientific Research. But the scientist politely declined the offer.

Very few people know the fact that Dr. Bhabha, besides being a great physicist, was also an artist. Many years ago he held a one-man exhibition of his paintings in London and was acclaimed by critics.

The Atomic Energy Establishment at Trombay, which is now accepted as an important centre of research in the world, is a standing monument to Dr. Bhabha. To him goes the credit of guiding the project right from the stage of planning to the state of functioning.

To lose such a great scientist like Dr. Bhabha is unacceptably is indeed a great misfortune to Indian science. It is impossible to compensate this loss in any way because no one else in the country has such abilities as Dr. Bhabha. When the great chemist Lavoisier was guillotined, Lagrange said, "It took but a moment to cut off that head, but France may not produce another like it in a hundred years". We could perhaps say the same of Dr. Bhabha. India may not produce another scientist like him for many years to come.



# THE RAY FROM BEHIND

M. Z. HUMAYUN,  
III B. Sc.

WHEN we emerged from the bushes, the full view of the hill burst in front of us. It took my breath away, though it hardly came as a surprise. I stood silently gazing at the once-so-familiar scene. Ram and Shah were by my side.

Here we are – I thought – almost eight years since THAT happened. An avalanche of memories choked me as it struggled to gush out.

'Do ... Do you remember ?' Shah was the first to break the silence.

Who could forget that ? Ram snapped a twig savagely, without replying. I stood silent. A strange ache was stirring in the depths of my heart. There was a vague but stabbing awareness that there already lay something behind us : that we had passed a phase that was as irretrievable as it was precious.

Those were the days of irresponsibility, the days when our very ignorance was sublime. We had not begun to see the ugliness of life yet, for ugly did our youth look compared to our childhood. My heart grew heavy with vague yearnings for the past.

We resumed our walking all at once, as though we had a cue. My mind kept wandering into the past.

I felt like a prisoner watching birds fly past his window : a beautiful, exalting sight, which would soon be no more. He would shake his head, and sigh, knowing he could never reach them...

We were in our first year in the High School then. It was a Saturday afternoon and we – Ram, Shah and I – had earlier decided on a long tramp into the country. When we reached the suburbs of the town the sun was still high over the horizon, glaring, not with heat, but warmth.

Within a short distance from the outskirts we left the highway and took to the lanes. We made our way through fields and rough country, without sticking to any particular path. Every thing around was green, not the bluish greenness of the morning, nor the transparent greenness of the monsoon, but the dark, haunting greenness of late November. Tiny birds sat in the bushes and on the ground, chirping busily and jerking their tails in a way that reminded us of circus clowns. We laughed and shouted and ran, stopping every now and then to smell a flower, or to take a shot at a stray bird with our catapults. Shah always lagged behind,

trying to take a peep at the landscape through his new binoculars.

The real object of our tramp was to find a good battlefield. The latest rage among boys at that time was a gun - fight. Nobody who had ever seen those "Bang! Bang!" American Westerns could resist the temptation. Of course we were armed with nothing better than catapults. Save this minor difference, we followed our Western heroes faithfully. We would go and 'take cover' behind rocks and trees and shoot at each other with pebbles. The game was so jolly exciting that even Shah, the most timorous soul in our gang, could not afford to miss it. Of course he would first retreat to a safe distance which our bullets could never cover, and if they ever did, landed upon him as gently as dead leaves.

By the by, if you could imagine a square ruddy face with a pink knob for a nose and a shock of thickly matted raven hair on the top - there you have Shah. As for Ram, he was a thick-set, rough chap whose temper was as short as his stature. He punched people's noses at the slightest provocation.

We had tramped for nearly two miles when we come upon the site of our adventure. It was a small hill - in fact a mere rocky bulge of the ground. I was the first to scramble to the top and 'discover' the place. The top was flat and spacious and there were three ditches full of filthy green water. The hill had a bleak, rocky surface on the side we had ascended, but on the opposite side it sloped down gently until it was even with the undulating fields. Just behind the ditches was the

most fabulous battle-field one could ever imagine. There was a sudden drop behind the pools and the slope was densely overgrown with Anona bushes. The copse was so thick that we could not see each other though we were only a few feet apart.

On one side of the ditches was an old ruined house. We all scrambled up to the stone roof. We were not afraid of the dirt because we were dressed in khaki which we had to wear for a morning A. C. C. parade. When we reached the topmost point of the roof an unexpected and breath-taking panorama opened in front of us. I was gazing wistfully into the horizon where our town lay enveloped in a smoky haze, when I heard Ram shouting.

"Hey! Where are they running?"

"Who?" Shah turned his binoculars in the direction pointed out by Ram.

Off to our left, I could just perceive a file of men running towards a distant copse and disappearing one after another.

"They must be cowherds - chasing cattle... Let's start the battle now", I said, jumping down.

Soon we were absorbed in our battle preparations and forgot all about those men we had seen running. When I was ready, I ordered "Take cover!"

Ram promptly hid himself behind a bush. In a frenzy of panic poor Shah started running to a safer distance. His foot steps suddenly stopped and there was a thud. I peered cautiously through the bush I was hiding in.

"O what a FALL was there, my country men!" I saw Ram shouting, with a malignant grin on his face. Shah got up and brushed off the red earth sticking to his elbows. He cast a furious glance at Ram and disappeared behind a bush.

Just when I was about to shoot Ram with a nice round pebble in my sling, I heard Shah's screeching voice hollering from a distance. "Hallo! Here's something cute!"

I dashed to the spot, with Ram closely following me. Shah was standing in a small clearing, his face all pink with excitement. In front of him was a freshly smothered fire. There were a number of queer looking earthen pots and bamboo and brass tubes. A sweet, cloying smell hung in the air. One could not make out the meaning of all that junk in that wilderness. Wondering, I removed the lid of a huge pot kept on the fire and peered in. It was half filled with some sweet-smelling, dark, liquid, almost boiling hot. THEN I knew.

"Moonshiners! Men, we have run into a moonshiners' hide-out", I shouted, no longer able to contain myself. "This must be their distillery".

There was an understanding nod from Ram, but Shah had gone white.

"Hic - m - mates. Let's run home! You know they would chop our heads off if they caught us fooling around here", he stammered in an undertone, trembling all over.

"What! Let the rogues go scot free!" I reproached Shah. (Incidentally I used to play the Sheriff in our gun-fights.)

"Run home? The suckling babe doesn't see that they were afraid of us", Ram said.

"Please don't rot, Shah", I continued, "We are in khaki and they must have thought we were police. Your binoculars must have scared them too because they were running like anything when we spotted them from the old house. And....."

"Hey you! Stop talking and help me here," Ram bellowed, cutting short my lecture. He was shattering a huge pot with a stone. I took the cue from him and started breaking another. By now, Shah had come round and we three were hard at work ruining the distillery. In less than ten minutes we were standing peering over the devastation we had caused. The place was a pile of wrecked pots, with the sticky mess spreading all over the ground.

It was then that panic seized us. We hastily wiped our hands on the leaves and clambered up the house again to see if anybody was about. There was nobody in sight.

I jumped down and shouted. "To horse, boys!" The next moment we were bolting down the hill towards the town at a tremendous gallop.

When we had reached the first houses, I said, "Really, you know, we must tell the matter to the Prohibition Cops".

"Somebody must speak to them," Ram agreed. But none of us had the courage to face those big, terrifying fellows. Obviously we were too scared to tell anybody that we had wrecked the 'distillery'.

When we neared Shah's house Ram said, "O. K. How would you like going to the place again? It will be enormous fun if we can scare them. We'll carry toy guns this time."

Shah, who alone had a gun, ran home to fetch it. When he did bring it we found to our dismay that it was painted in the most impossible colours. Apart from its unfortunate colours, its barrel dropped down loosely so that if you ever fired the gun, the bullet would hit your own toe instead of the enemy.

"Gosh! You can't scare babes with that thing," Ram burst out irritably.

"You are always contradicting, you pest," Shah put in fervently. "Only the other day I got a chocolate bar from my youngest brother with the help of that gun. Do you know that?"

Ram shook his fists ominously. There would have been a fight if I had not stepped in to soothe him down.

Our plans for a second visit to that place were never realized. I suppose at least one of the reasons why we shunned it was the lurking fear we all had for that hill. Besides.....

I stumbled over a rock and tottered.

Had Shah not caught me in time, I would have certainly crash-landed. Thus awakened from my reveries, I looked round me. We were on the top of the hill. The place had changed beyond recognition. The old house had crumbled into a heap of stones. There was no trace of the Anona copse. Fields had crept almost half the way up the hill on the other side. The only thing that remained unchanged was the filthy green water in the three ditches.

Watching the red glow of the sun in the horizon, I said, "Ram, don't you think the sun is looking almost as red as Shah's nose used to be those days"?

Ram smiled, but Shah burst into a guffaw. The tension that had been building up inside us suddenly snapped. We settled down on a rock, chatting merrily of old times.

A flock of cranes was flying across the horizon. A crane split from the flock and started flying towards us. Strangely lit up by the last rays of the sun, it came onwards until it was almost overhead, then turned to the left and flew off. We watched the patch of white as it grew smaller and smaller. Presently it merged with the darkness and we got up to go home.



# ANT 'GUESTS'

Y. DIVAKARA RAO, III B. Sc.

**A**NTS, as everybody knows, are usually dwellers in the soil, but anyone would be astonished to hear that there are 15,000 species of ants in the world. Almost all ants have their own guests, of course uninvited and parasitic. If a careful observation is made in any nest of ants, at least one type of guests will be seen dwelling there, contentedly and quite at home.

These guests are not at all observed by the ants as strangers and the ants notice nothing special in them, because they are good mimics and act just like the ants themselves. Thus ants take these guests to be one of their own family. And to our surprise the guests include spiders also. Spiders imitating ants! What a versatile actor even a spider can be!

There are some other visitors who are 'actors' in a very real sense. They enter the homes of ants after doing some skilful make up on their bodies. For example the tiny beetle covers itself with black soil by rolling in mud so that it looks just like a piece of earth, but has a fine pore which leads to its mouth. Now the beetle goes and leans against the wall of the ant nest, looking just like a soil particle with a hole in the centre. The pregnant ant in search of a secure place to lay its egg sees the beetle's mouth and mistaking it to be a small cavity in the soil, deposits its egg in the mouth of the beetle without any hesitation,

believing it to be secure. The beetle swallows the egg in one gulp, opens its mouth again, and waits for another ant preferably a pregnant one to come along.

Another set of fools among ants are fungus ants. They make their homes in mushroom gardens. The host here is considerably bigger than the beetle—a snake! Trinidad snakes (mildly poisonous) lay their eggs in these mushroom gardens and go their way! These foolish ants taking the eggs to be small stones, cover them up with earth and thus the essential moisture for the eggs is provided. When the period of incubation is over the newborn baby snakes come out; but their brains have so well matured that they never harm ants. They calmly crawl out of the bushes, may be with a feeling inside that they are leaving their nurses behind them.

Though the ants may be shaken at seeing snakes coming out of the apparent stones, they commit the same mistake time and again.

Still worse are mites riding on the backs of ants, of course without giving the slightest inconvenience to their porters!

All the examples cited above go to confirm the belief that the life of an organism is always one of give and take. Unobstrusively one species depends on the facilities afforded by its neighbours. ★

# I. N. S. NAUSAINIC

CADET CAPTAIN

G. DEVI PRASAD, III B. Sc.

**T**HE Nausainic Camp III was held at Bangalore from 2nd May to 16th May, 1966. Bangalore, the capital city of Mysore state, is a beautiful cool and healthy place. Our camp spot was at the Sainik School, which is one mile away from Bangalore city. The camp was the first of its kind to be held in South India. Cadets from all over the country participated in this camp, three students from our College being selected.

On the morning of 1st May, at about 4.45 a. m. we started on our journey by the Delhi-Madras Janatha Express. At 3.30 p. m. we reached Madras. There we set a sentry to guard our luggage on the platform and went to see Madras city. We were able to see only a few places as there was no time for sight seeing. The same evening at 8 o'clock we got into the Madras - Bangalore Mail for Bangalore. We had a very pleasant night in the train and the next morning at 6 o'clock we reached Bangalore Cantonment. The transport arranged by the camp authorities brought us direct to the camp site. Our Camp Commandant was Commander Ashirvadam I. N., who gave us a hearty welcome.

We were divided into sections called Arjun, Angre, Sivaji, Indira, etc. From the next day onwards our camp duties started in right earnest. Every day we got up at 5.30 a. m., had our tea, and went straight for P. T., after which we cleaned the barracks. After breakfast at 7 the different divisions went for their duties, some for boat pulling, some for sailing and others for parade training. Our section was fortunate to be selected for sailing. We first furled all the sails and protected ourselves with life jackets. Then we released the sails. If there was a fine wind the boat quickly picked up speed. Till noon we enjoyed ourselves sailing and then returned to barracks for lunch. At 4.00 p. m. we would have evening quarters. At this exercise the daily routine for the next day would be read out. From that time till 8.00 p. m. we were given free time to enable us to see the city. We were served North Indian food for supper. Then with the inspection of the O. O. D. our daily routine was completed. At 9.30 all lights would be off.

We had a great opportunity to know much about the Indian Navy in our Nausainic Camp. During the morning session we were taught about

the different branches and functions of the Indian Navy, damage control on board a ship, ship modelling, piping, and so on. We used to go sailing or rowing in Alsur tank. Near our camp site there was an aerodrome of the Indian Air Force. We could see Gnat fighter planes in action. These Gnats played a very important role in destroying Sabre jets at the time of the Pakistan Aggression.

During our stay at the camp we had a number of distinguished visitors. Included among the V. I. P.s were the Chief Minister of Mysore State, Sri Nijalingappa, the Director General of N. C. C., Major General Virendra Singh, and his successor, Major General Prem Chand, the Director of N. C. C. of Madras State, Commodore Douglas, I. N., the Director of N. C. C. of Mysore, the Vice-Chancellor of Mysore University, and the Home Minister of Mysore State. Two parties for boat pulling, one for sailing and another for anchor drill were main-

tained in readiness to demonstrate our skill to the visitors.

Unfortunately one of our students had to be sent home because he was suffering from jaundice. Cadets from the Medical College were assigned the task of looking after the sick bay.

On the 13th we had a sight seeing trip. We went first to a dairy farm, then to the Zoological museum and Visveswaraiah Museum. We also visited the Vidhan Soudha, Lal Bagh public gardens and the High Court. The whole outing was both educative and enjoyable.

On the evening of the 15th we began our return journey leaving Bangalore at 2 in the afternoon by Brindavan Express and reaching Madras the same evening. From there we left for Vijayawada by the Howrah Mail shortly afterwards. All in all my experiences at the Nausainic camp were so pleasant that the mere recalling them to memory fills me with joy.

Drawing by

Y. B. Krishna,  
I B. Sc.



# BOTANICAL TOUR

M. S. RAJU &  
D. GOPALA KRISHNA,  
II B. Sc.

**O**CTOBER 19th, 1966, brings back very pleasant memories. That evening we were assembled on the Vijayawada Junction platform waiting for the passenger train to Hyderabad. A batch of 40 students of the II<sup>nd</sup> year B. Sc., C. B. Z., were there eager to go to Warangal for a botanical field study trip.

A merry journey brought us to Kazipet at 10-00 p. m. Owing to the late hour we could not fix up any accommodation for the night and so we made ourselves comfortable along the platform. Gossipers held a mid-night session.

Next morning found us heading towards the famous Ramappa lake area. The road twisted and turned as it passed over the low hills. The sight of virgin forest on the shore of the vast lake relieved us of the fatigue of the bus journey. The rich vegetation provided ample opportunities for us to study the plants at close quarters. We made good use of the occasion by collecting many of them. Nearby were the ruins of the magnificent Ramappa temple. It is an everlasting monument to the artistic talent of our ancestors, the patronage of the past rulers to fine arts, and the religious faith of our forefathers. The basic notes of Indian music echo out from a single stone

pillar. The multifarious gods of the Hindu pantheon decorate the niches of this huge temple.

From the Ramappa area we moved on to Lakkavaram. We were greeted by another lake of immense proportions. It is believed to support numerous crocodiles though we did not have the misfortune of encountering these menacing reptiles. Accompanied by an official of the forest department we proceeded to Parkal forest on the following morning. Bravely overcoming such obstacles as thorny bushes and piles of stones, we managed to explore the area and collect the precious plants. Plants which look dead and uninspiring in the laboratory assume a glory all their own in their natural habitat. Time slipped by unnoticed in this enchanting land. Pangs of hunger brought us back to reality. So we retraced our steps and were back at Warangal late in the afternoon. Some of us ventured forth to survey the ruins of the Kakathiya period in the Hanumakonda area. We had our money's worth. Another leisurely train journey brought us back to Vijayawada.

We take this opportunity to thank the members of the Botany Department who arranged this tour for our benefit. ★

# The Harbinger of Peace

S. N. CHATTERJEE &  
C. RAVINDRA BABU,

II B. Sc.

THE light which has gone out at Tashkent, the man whom Fate has snatched away from our midst, is none other than our beloved Late Prime Minister Shastriji. At his sudden demise, Vice-President Dr. Zakir Hussain said, "He was a man of peace. His name will shine forth as one of the architects of peace in the world". Like Gandhiji who died fighting for Hindu-Muslim unity, Shastriji too sacrificed his life at the altar of peace, striving to the last to bring peace not to the Indian sub-continent alone but also to the world. His was a life of dedication and devotion to the service of the common man.

Unlike Jawaharlal he was not born with a silver spoon in his mouth, nor was he brought up and educated in foreign countries. Like millions of his countrymen he saw the first light of day in a poor family. It was 2nd October, 1904. From his boyhood days he led a simple life and had a firm determination to be a scholar of Sanskrit. When he came into contact with Mahatma Gandhi, during the latter's visit to Banaras in 1915, he

was deeply impressed by his personality and very much influenced by his speech. At the time he was but a boy of 11 years. The thought of serving the Motherland occupied the immature mind of the boy and he joined the Boy Scout movement. After completing his successful school career at Banaras Hindu Vidyalaya, he entered the Kashi Vidyapeeth, a nationalist University. He took his "Shastri" degree from this college, and it was there that the dream of his boyhood came true.

Soon after leaving Kashi Vidyapeeth, he enrolled himself as a life member of the "Servants of the People Society", founded by Late Lala Lajpat Rai. A couple of years later, because of his active part in the Civil Disobedience Movement, he was arrested and sentenced to two and a half years imprisonment. This was followed by frequent imprisonments at intervals of a few months each time. He was altogether more than nine years in jail. The fruit of one such imprisonment was the biography of Madam Curie, which he translated into Hindi. From 1946, when he first

served as Parliamentary Secretary, down to the year 1963 he held many portfolios and discharged his duties successfully. We would not have got our Shastriji, and his inner dynamic strength too would have remained unknown, if he had not become our Prime Minister. At Nehru's death only one question arose in everybody's mind - who would be the right person to step into the late leader's shoes and guide us in the right path. Then the curtain was lifted. We saw a small man, who undoubtedly appeared inadequate for the high office. Referring to this he said, "Even small men can do great things". In fact he did not boast when he said so. Physically he was small in stature, but morally and intellectually he was a giant. He did great things in steering the boat with its helpless passengers through the unruly sea of political and economic crisis. The way he handled the last confrontation immensely enhanced his prestige and projected him to India and to the world as a man in his own right. His inspiring slogan "Jai Jawan! Jai Kisan!" and the appeal to every citizen to give up eating once a week to tide over the food crisis, have had a tremendous effect on his countrymen. He was not like the belligerent prating politician mouthing slogans and never practising them himself. He was a sound man of action, not a man of mere words. But alas! The humble lotus which started to spread its fragrance was suddenly plucked by a malignant Fate!

#### Shastriji as a man :

Shastriji was the very incarnation of humility, politeness and self-respect. His transparent humility and dignity greatly heightened the bonds of affection between the Prime Minister and his people. It was his benevolent temperament and simplicity that conquered the hearts of millions. At his death distinguished guests from all over the country came to pay their last homage to this departed leader, who was small in stature but large in heart.

In this world some leave memories and a few memorials. Shastriji left both. The agreement which he signed a few hours before his last sleep remains a monument to his political genius.

Gandhiji—the father of our Nation, Jawaharlal, the architect of modern India, will remain alive as long as India lives. Following their grand tradition this champion of peace added a glorious chapter to the history of our land. Decades may pass, civilization may change the face of the things we know, but Indians will still read a name, written in golden letters, recalling the achievement of a man who till his last breath, tried his heart and soul to bring about peace in this sub-continent and above all in the world. The only fitting memorial to him that can be erected by us would be to honour and implement the commitments of the Tashkent agreement. Let us take the pledge to follow his footsteps and fight for the cause for which he strived to the last.



# NAVAL CAMP AT VEDAYAPALEM

K. SAMUEL BENHUR,  
I B. Sc.

**A**FTER our selection examinations in December, N. C. C. camps were conducted as usual for the three wings of the N. C. C. I belong to the Naval Wing. The Naval camp this year was organised at Vedayapalem in Nellore district from the 23rd December to the 4th January. Since our selection examinations continued up to the evening of the 22nd, we were allowed to postpone our journey to the next day. We all met that morning, each one carrying his kit-bag, on the eastern platform of Vijayawada Railway Station. The names of those who were participating in the navy camp were ticked off. The final count showed that fifty navel cadets were taking part from our College unit.

A railway compartment was reserved for us, in which we all arranged our kit-bags, boxes, etc. At about 11.00 a. m. the guard blew the whistle and the train started. Sub. Lt. Koteswara Rao gave us a hearty send-off, while Sub. Lt. P. Rama Krishna accompanied us. We enjoyed the journey thoroughly; jokes, quips and chatting helped to while away the time. At Tenali we had our mid-day meal. The train arrived at last at Vedayapalem, a small station, at about 9.30 p. m., where an N. C. C.

truck was ready to take us to the camp. We reached the camp about 11.00 p. m., where Lt. Chandran, the Deputy Camp Comandant, received us warmly. He arranged meals for us, after which we settled in our tents and slept soundly, being tired after the long journey in a passenger train.

The next day (the 24th December) we rose at 6.00 a. m. Fortunately our contingent was exempted from P. T., because we were new to the camp. Very soon Lt. Chandran and Sub. Lt. Rama Krishna told us about the duties and the rules of the naval camp. After breakfast we assembled on the general parade ground. When the parade was over a break of fifteen minutes was given for changing into P. T. dress. After that we gathered for the theory classes, which were meant for learning ship's construction, navigation and semaphore signalling. Dinner followed at 1.00 p. m., after which we were free up to 4.00 p. m., when we again gathered for roll call. This being the eve of Christmas, Christian cadets were permitted to go for Midnight Mass and the others to visit Nellore and see the town.

The 25th of December being Christmas day, the Christian cadets were

again permitted to go for the morning service. After the general parade was over, we were left free. A feast was arranged by the camp Deputy Camp Commandants. In the evening we were permitted to go to the town. Unfortunately for me on that particular day I was given sentry duty.

On 26th and 27th instant the usual daily routine continued, but cadets were not permitted to visit the town on these days. On 28th and 29th our cadets went for .303 and .22 firing practice by batches. The firing range was seven miles away from the camp site, so we were taken there in the N. C. C. truck. Officers, Instructors and policemen accompanied us. Police bandobust was provided in order to keep away trespassers.

The next two days, the cadets from Hyderabad, who were the only other cadets taking part in the camp, went for firing practice. On the 30 and 31st we were exercised in boat-pulling, which was arranged in a tank some two miles away.

On the 31st December a tour to Tirupati was arranged for all those who were interested in going there. About fifty cadets from both the units joined the tour. On the same day "general liberty" was given.

That night at exactly 12 o'clock we celebrated the beginning of the New Year. Lt. Chandran cut the cake. We all enjoyed ourselves very much on that day.

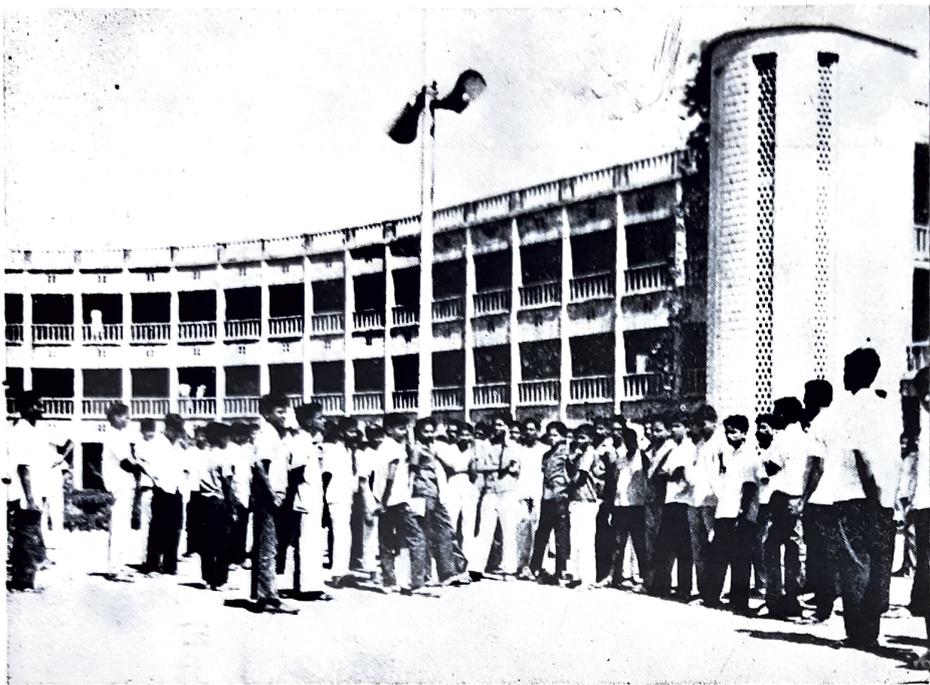
On 1st January we were extra busy because the next day we would be

inspected. We washed and pipecleaned our caps and polished our boots till they shone in readiness for the ceremonial parade. Lt. Col. S. Desai, the Group Commander of Tirupati, inspected us and I hope he was impressed, for we all wore white dress for the ceremonial parade and looked neat and smart. Lt. Col. Desai took the salute and in his address advised us to build up character and also to understand the real meaning and significance of the word "camp". He said that the praiseworthy characteristics of peaceful living in society could be cultivated here. He praised the cadets saying that we had done our part well.

On January the 4th we rolled up the tents and handed them over to the Camp Commandants. After dinner we were ready for our return journey. We took leave of the Hyderabad cadets, who had been our living companions for nearly two weeks, and at 4.00 p. m. were seated in the train. During the night we were lucky to get sound sleep and in the early morning found ourselves in Vijayawada.

In the camp none of us felt any difficulty: we found all the facilities good. Except during the parades we were left free use of our time. These camps teach us how to make friends and to live in society without distinctions of caste or creed. We learn to think of others and to serve our country. We are sure these lessons will stand us in good stead in the future also.





As the election results come in.....

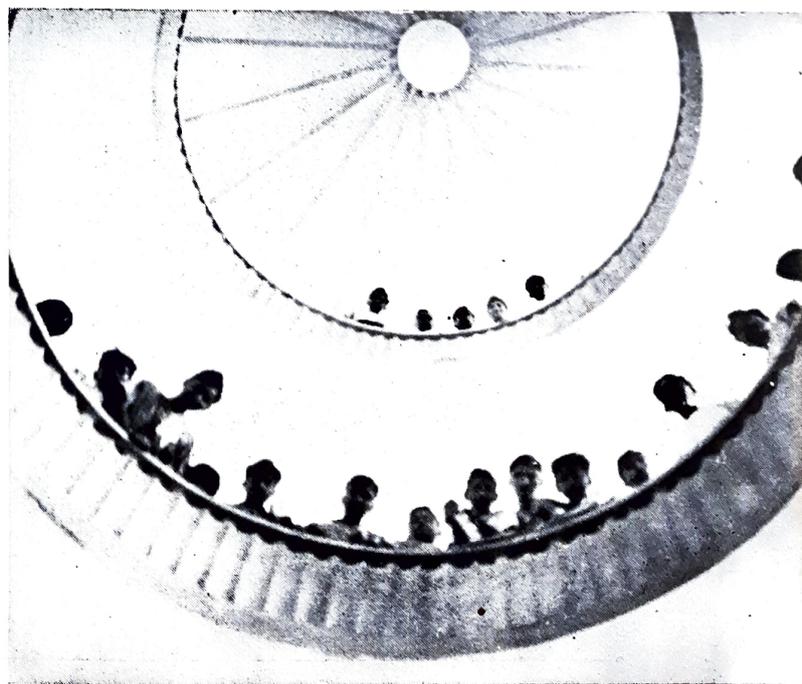


Surrealist architecture!



The College Church takes shape

## CAMPUS VIEWS



All aboard for a space flight ?



B. Sc. Final (1966-67) - Maths. (i) - (Maths. (ii) & Physics)

# UNPLEASANT COMPANY

V. MURALIDHAR,  
I B. Sc.

I wonder whether I shall ever come across Keval in my life again, when ever so often I remember the tough time he gave me. I have told this story with gusto, though it reveals my foolishness, to almost everyone of my friends.

Keval happened to meet me at Vijayawada, when I was trying to catch the train for Rajahmundry. He was a bulky young man with a face as dark as could be imagined. His nose was almost lost in his bulging cheeks and his eyes appeared to be no bigger than dots.

"Hallo!" he said in a voice, as sweet as honey, as I rushed to the booking window. The train was about to leave and I was in hot haste to purchase the ticket and catch the train.

"Going to Rajahmundry, Murali? Glad to meet you after a long time."

I could not help slackening my speed at being accosted so familiarly. "May be, may be, I said, without turning back, but his heavy hand was already on my shoulder and I could not move an inch. "Going to Rajahmundry, eh?" he chuckled, "one ticket for me too," and he let me go.

I was holding a tenner in my hand which he must have spied, but at that time I could not suspect his intentions.

It was after a good deal of elbowing and jostling that I could reach the window. Here a fresh difficulty arose. The clerk objected to my purchasing two tickets seeing that I was alone. It was only after some explanation that I managed to overcome the objection and obtain the tickets.

Keval had not arranged for a coolie and my own coolie had to carry his luggage also.

Getting into the train at any time is a herculean task, but one has only oneself to blame for undertaking a journey. I would have preferred to go by bus, boat, or even on foot, if I could have had my way, but one is so much a slave of tradition. In spite of the curses the whole world is hurling at the railway in India, the railway trains are still crowded. If half of those who condemn the railways were to travel some other way, things would be very much better.

Being thin and smart, I would have managed to get in somehow, but my companion was not easy to accommo-

date. He reminded me of the hunchback in the story of Sindbad. I could not throw him off: he stuck to me so tenaciously. By dint of pushing and pleading, I succeeded at last to get a place on the footboard and thought myself lucky.

The train whistled off and a kindly lady let me into the compartment where I found Keval sitting comfortably fanning himself. He had taken possession of a few magazines which I carried in the outer pocket of my bedding. As soon as he found himself at ease he let them slip into his own bedding, and snatched the daily paper from a fellow passenger.

As the train was approaching Rajahmundry, he again came up to me and had a pleasant chat. I was hoping he would bring up the subject of the money I had paid for his ticket, but he did not refer to it.

I was racking my memory to recollect who he was and where I had met him. Whatever he said proved that he did not know much about me. My name he had probably picked up from my hand bag and my destination from the labels on the luggage.

He said at last, "You have apparently forgotten me. My name is Keval Narayan Gupta, and I belong to Kakinada. May I note down your

address, for I cannot let you forget me this time. I shall be writing to you soon". He opened his note-book and pulled the Parker from my pocket. Hardly had he finished writing when the train came to a halt in Godavari station, He hurriedly got down and requested a passenger to pass his luggage along. I thought of my pen only when the train had steamed off and my voice could not reach Keval. Rajahmundry was the next station. I did not know his address and could do nothing about it.

My troubles did not end there. When I got down at Rajahmundry, I looked for my ticket, but Keval had taken both the tickets from my hand and made away with them. The humiliation I had to suffer, besides the penalty, made me feel miserable and, so much was I upset, that I left my box containing books and clothes in the tonga!

Some of those books in the box were rare; whenever I need one of them for reference, I remember Keval and bless him. I wonder whether we shall ever meet again and sometimes wish it, though I also fear lest he should relieve me of other things, if he ever happens to come my way. I am sure he is a clever rogue, but I doubt if Nature will ever punish such fellows.

# SHOULD INDIA MAKE THE ATOM BOMB ?

P. RAJAKUMAR,  
II B, Sc.

“MODERN Science is a queer blend of two glaring diversities—the creative impulse and the destructive passion, a mixture of a boon and a curse. On the one side, it has opened up vistas of celestial wonders, on the other it has been threatening mankind with utter destruction. The two-fold impact of modern science on our civilization is to be measured by the yard-stick of paradox—towards hell or onward to Paradise” (Herman Oule).

The tremendous advance of science into the thermo-nuclear age has resulted in the complete change of man's outlook on life, which is now conditioned by cosmic realities. The two most inspiring revolutions witnessed by mankind are the discovery of the atom and the conquest of space. The most disappointing sign of our age is the gross uncertainty about the future of modern man. In plain terms our age or civilization has become over-scientific. With the recent discovery of nuclear energy, man finds himself in possession of power beyond his wildest dreams, power so great that it is sufficient to level a

Himalayan peak or change the Sahara desert into green and fertile fields, producing enough food to feed the teeming millions of the continents of Asia and Africa.

Bearing these points in mind, one should have to look again at the title of this paper. Should India go in for the production of the atom bomb or not ? It is one of the most important issues before the Government representing the millions of the people of India.

Opinions are sharply divided on this vital issue. One section of the people is of the opinion that India cannot afford to make the atom bomb because of her utter economic backwardness. The other section strongly feels that we should possess the atom bomb as long as there is the threat from China to our freedom and national integrity. Its view-point is that the defence of the country is of paramount importance and that we must be prepared to face any sacrifice to meet the brutal aggression from China. Let us analyse these opinions.

The first group feels that India should not make the atom bomb for ethical and economic reasons. They feel that India all along has strongly discouraged the mad race for nuclear weapons. She played a vital role in bringing about the Partial Test Ban Treaty signed in Moscow. India has been the light of peace in Asia and a beacon of hope for the whole world. While all eyes are turned on India, it would be meaningless if she herself goes in for the production of atomic weapons, which threaten the very existence of human life on this planet.

Considered from the moral angle it is self-defeating to think of entering the mad race of stock-piling nuclear weapons. The atom and hydrogen bomb tests are already damaging the health of the present generation because of exposure to increased radio-active fall out from these tests. The atomic radiation from these tests affects the genetic constitution of men dangerously and is a terrible menace to the health of future generations. If this mad race is to be continued, the ultimate product will be a degraded human race, physically deficient and mentally infirm. Is this the net outcome of the tremendous progress that science has achieved, and the reward for the untiring labour of scientists, who sacrificed their lives for these discoveries ?

The economic reasons are as imposing. It is no small matter to produce atom bombs or other nuclear weapons. They cost crores of rupees and absorb large quantities of scarce materials. We can meet this expense only by

giving up our planning programmes. The choice therefore lies between atomic weapons and planning, between misery and prosperity. While millions of her people are deprived of the minimum necessities of life it is foolish for India to think of manufacturing atom bombs. The current rate of expenditure has already led to an unprecedented crisis, one fears to think of the consequences to the Indian economy if we start manufacturing these destructive monsters. All the hopes of millions of people would be shattered.

Even from the military point of view, we find that the atom bomb is not an asset but a liability. The possession of nuclear weapons by India may irritate others and worsen international relations. We have to clearly bear in mind that the mere possession of the atom bomb in no way improves our defense against China. It is a device for destructive purposes and can have meaning only as a deterrent. On the other hand it will certainly weaken our defence preparation because any diversion of the country's limited resources to the development of nuclear weapons will only serve to impede the badly needed build-up of our conventional armed strength. We can strengthen our defence only by building planes, tanks and fire-power, to aid ground forces.

Moreover there is every reason to believe that China will not use the atom bomb against India. China's conventional military strength is superior and, should she resort to aggression, she will attack with conventional forces. The aim of

China in possessing nuclear weapons seems to be to safeguard herself against America. "The development of nuclear weapons by China is for defence and protecting the Chinese people from the danger of the U. S. launching a nuclear war", says an official document. However, the working of Mao's mind is a mystery to all, and one can never be sure of what China is going to do next.

If through stupidity China resorts to nuclear war, she will be faced with the horrors of America's nuclear weapons, as President Johnson said in a recent statement. "Even if Communist China develops effective nuclear-capability, that capability would have no effect on the readiness of the United States to respond to requests from Asian nations for help in dealing with China". The U. S. A. has its own interest in India because the defeat of India will mark extinction of democracy in Asia.

Further, it is doubtful whether China has become a great nuclear power. The mere manufacture of atom bombs is of no great importance unless she develops an efficient delivery system. However, it is well known that China is going ahead with her nuclear programme very rapidly, and is causing real fears among her neighbours.

Coming to the political aspect, India has been strongly wedded to the policies of peaceful co-existence and non-alignment. In recent years, she stoutly stood for peace and has been trying to ban nuclear weapons. If India goes in now for the production of the atom bomb, what will

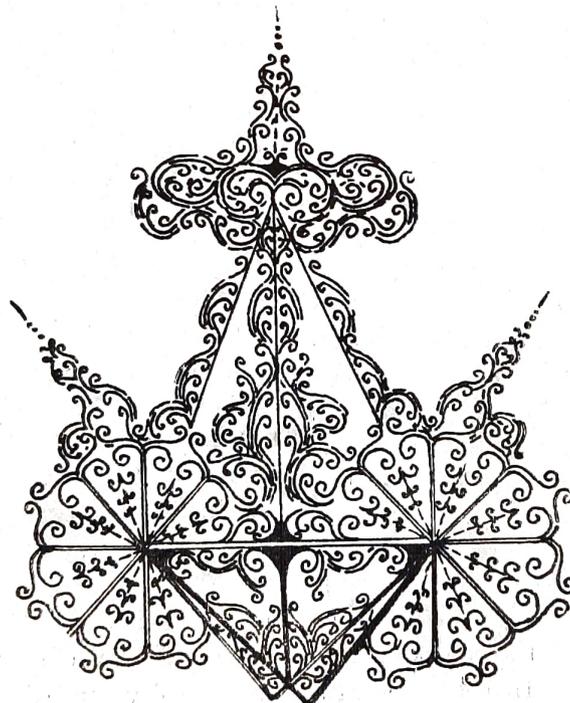
happen to her reputation in the world? We will lose the respect and honour we command. Our relations with major powers like the U. S. A. and U. S. S. R. will deteriorate and neither will stand by us in a war of Chinese aggression, if we resort to making nuclear weapons.

If we now decide to make a few atom bombs, they will count for nothing when compared to more powerful hydrogen and megaton bombs. In case China resorts to the bombing of India, the result will be a third world war, a thermo-nuclear war that might erase every vestige of human civilization. China will not venture to do this, however mad she may be. We have reached the point when we have to decide our future—to prosper or to perish. International tension is at its climax. "The world is swimming between two conflicting poles - Peace or War. On one side there gleams the distant beacon of hope for peace, while on the other dark clouds of war hover on the horizon. The world today is in the worst critical phase of its existence; no one can predict the future of modern man: whether he is to survive or become extinct, in the event of a global nuclear war," said the late Dr. Rajendra Prasad. Although western experts discounted the possibility of China developing notable nuclear striking power within the foreseeable future, her startling achievement did start a chain-reaction in favour of acquiring nuclear weapons. If India makes the atom bomb, the other fifteen countries able to do so may follow suit and the future will indeed be gloomy.

The atom can be used for human welfare and progress in the spheres of agriculture, industry, medicine, navigation and space technology. Atomic energy is vastly more powerful than any other energy harnessed by man. Prof. George Caster Watson, one of the most eminent of modern nuclear scientists is of the opinion that atomic energy can prolong man's life on earth, cure diseases and bring untold material benefits. How sad and what an irony of fate it is that this tremendously beneficial

energy is being used for destroying human civilization !

For all these reasons, Pandit Nehru rejected the idea of India manufacturing nuclear weapons. His successor Mr. Shastri also refused to be stampeded into a nuclear arms race with China, as it could be justified neither ideologically nor economically. Mrs. Indira Gandhi is following the same policy. Let us all support the Indian Government in its eminently reasonable position.



Design by : Md. Hussain,

II B. Sc.

# ADVANCED LEADERSHIP COURSE

## CAMP AT MANALI

U/o S. G. V. V. S. RAMARAJU,  
III B. Sc.

**T**HIS is a new scheme started by the Union Government just three years ago and intended to give advanced training to a few able cadets from all over the country. P. V. Sessa Sai and I were fortunate to be chosen by the concerned authorities from our college to attend the camp for the year 1965-66.

We started from Vijayawada on the 31st May along with two more cadets from the nearby college and reached New Delhi at midnight of the 2nd June, 1966. There we met the regular army officials who arranged our journey by train to Pathankot. On the 3rd June we started from New Delhi in the early morning reaching Pathankot the same night, and continued our further journey by a Government service bus, reaching the camp site, Manali in Himachal Pradesh, on the 4th.

Every morning we used to get up at 5-30. The day started with tent cleaning and after that we had to attend physical training till 9-30. From 10-30 a. m. to 12-30 theory classes were conducted on various subjects like sand-modelling, rock-climbing, platoon attack, etc. After lunch we were free till 4.30 p. m. and

then we had to attend the games, which were compulsory till 6.00. One of the training officers conducted the roll-call parade at 6.30 p. m. at which we explained our difficulties, if there were any, to the authorities. The next day programme was then given to us.

The camp area was about half a mile from Manali town. We pitched our tents under the tall Deodar trees. Obedience to rightful authority is the motto of every cadet and that was what we learnt. We were taught how to lead a platoon and how an officer has to play his role in conducting the jawans placed in his charge. We had three long route marches during this course which made us fit to climb any hill. Once we went on route march to Rohtang Pass at a height of 18,500 ft. and 19 miles from our camp. It took us three days to complete the route march and we thoroughly enjoyed it. We came to know that this pass has strategic importance, as it gives direct access to Ladakh.

The object of this course is to make the cadets physically fit, mentally alert, and to help them develop the qualities of leadership, self-confidence

resourcefulness, ability to accept responsibility, and spirit of co-operation. The training is so designed as to inculcate in the cadets the spirit of adventure by organising trekking, rock-climbing, and patrolling expeditions in mountainous regions.

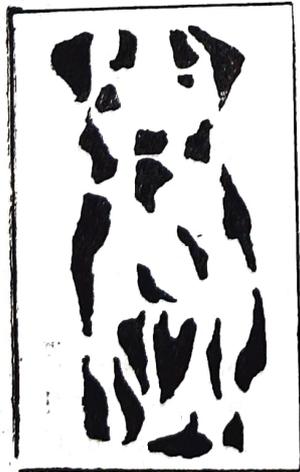
The place seems to be an earthly paradise with its natural beauty and resources. The famous Kulu valley is just half a mile from the camp site. Here the people are sturdy and hard-working. Fruits like apples, apricots and cherries are available here in abundance. They are exported to all parts of the country. There is also a big training centre for forest officers. There are many tea plantations all round. By attending this camp we could also know much about the customs and way of life of the local people, who are very hard working and generous.

I must add that we were much encouraged by the civil as well as the military authorities. We were all looked after well under the supervision of Lt. Col. Joginder Singh, our Camp Commandant. Every officer

and instructor did his best to train the young cadets. I cannot forget Capt. A. N. Dogra who really trained us as regular army people in the most advanced way. Having attended the camp, I am now of the opinion that every N. C. C. cadet should be given a similar opportunity.

We are thankful to Major S. Srimannarayana, our Battalion Commanding Officer, Capt. M. D. A. Ananda Rao, our second in command and Lt. A. V. Subba Rao, my own company commanding officer, for having given us such a wonderful opportunity to attend the camp.

I would like to conclude with the following piece of advice to my co-cadets. Unless we work hard, we cannot be successful in life. We must respect people placed in authority over us. Otherwise we ourselves will not be respected by future generations, which will result in the decline of our grand old culture and civilisation. Every young cadet should be ready to join hands with Government in safeguarding the frontiers of our motherland.



Drawing by  
L. Raja Ram, P. U. C.

# BIOLOGICAL EXCURSION

G. L. N. MALLESWARA RAO,  
III B. Sc.

**W**HEN a man sees things they are far more clearly imprinted in his mind, than when he merely hears about them. For that reason students of science must have practical knowledge in addition to merely theoretical or bookish knowledge. In the field of biological science students should get acquainted with specimens of plants and animals in various parts of the country. That is why a study tour is made compulsory for all students appearing for the B. Sc. examination in Biology.

For our biological excursion this year it was decided to take the students to Vizagapatnam area. We were waiting anxiously for the date which was finally fixed as the 26th December. At 4-00 p. m. that day we gathered at the railway station and took a passenger train in which we had been able to book sleeping accommodation. Next morning at 9 o'clock we reached Anakapalli, a small town not far from the sea coast. We secured a choultry for lodging purposes and at 2-00 p. m. we went to the seashore at Pudimadaka which is 14 miles from Anakapalli. The coast was rocky and the sea was at low tide when we arrived, a favourable condition for the collection of

specimens. With the guidance and help of the staff members we collected a few algae and some zoological specimens.

Next morning we visited the Sugarcane Research Institute. It is spread over a plot of 100 acres out of which 75 acres are under cultivation. The main crops cultivated are sugarcane and paddy, but the institute is also working on hybrid mangoes, bananas, etc., to get a better yield. The staff are also observing the influence of minerals on the growth and yield of plants, and working on the common pests of sugarcane, for example "Red rot", which is a very destructive disease. We felt proud that this institute is doing splendid work to improve sugarcane cultivation in the state. Lastly we visited the biochemical section.

On the same day we left Anakapalli and reached Vizagapatnam by bus. Lodging facilities were conveniently arranged in St. Antony's School. On the following day early in the morning we went around the beach. Owing to the disturbance caused by a cyclone we could not collect a single specimen. Then we visited the university area.

On the next day we visited the Caltex Oil Refinery. They were kind

enough to show us the various sections, taking us round in their bus. On the 31st we visited the Hindustan Shipyard where three ships were under construction, of which two were almost ready. Later at 2 o'clock in the same afternoon we were at "Simhachalam". While ascending the hill we made some plant collections also. On arrival at the shrine we had darshan of Lord Narasimhaswamy. The ancient architecture of the temple was most impressive.

On 1st January we started on our way to Araku which is 75 miles from Vizagapatnam. When we were passing through the ghat road section which is nearly 30 miles long, we had our first view of the valleys with thick ever-green forests. Through those hills and valleys the D. B. K. Railway line passes from Vizagapatnam to Bali-mella through a number of tunnels. We reached Araku by 2.00 p. m.

Next day we got up from bed reluctantly because the sudden change to a cold climate was a new experience for many of us. We visited the agricultural farm which is near Araku and gathered some new plants. That evening we went to see a small waterfall nearby and observed nature in its virgin beauty. Next day we went to Ananthagiri hills where we collected a large number of plants especially pteridophytes (ferns). Later in the day we descended into a deep valley where we saw the railway tunnel No. 38. In Araku we visited a small-scale silk industry where they are growing silkworms in big baskets. They are also tending

mulberry plants whose leaves are used as food for the silkworms. We observed different stages of development i.e., from the egg to the cocoon, which is the raw material for producing silk thread.

On the 4th January at 12 noon we started for Machkund by a bus which was considerably overcrowded. The bus goes to Machkund via Jalaput dam following a road made up of constant ups and downs. The ghat road begins only from Machkund and extends to Vanakadilli where the actual waterfalls occur. When one sees the consumption of electricity by the people in that colony, one can easily imagine that it is an electricity producing area. We took rest in the Travellers' Bungalow for that night, and early next morning we visited the hydro-electric project situated in a deep valley. The bus went down the slope slowly descending by tortuous hair-pin binds. The engineers in that project were very kind, explaining each and every part patiently. There are six generators, out of which one was under repair. The water from the generator rushes out like a cataract with a frightening roar.

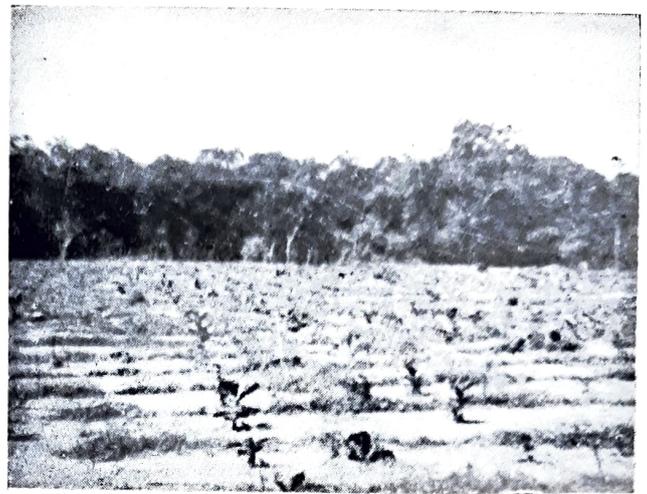
At 9-00 p. m. we got back into the bus, and returned to Vizagapatnam by 4-00 p. m. Train No. 76 was waiting for us on the platform. By 10- the next morning, the 6th January, we came to Vijayawada.

We would be failing in gratitude if we did not express our thanks to the members of the staff who made such a satisfactory tour possible.





Viscum on a tree - Pakhal forest



Teak plantation - Pakhal forest



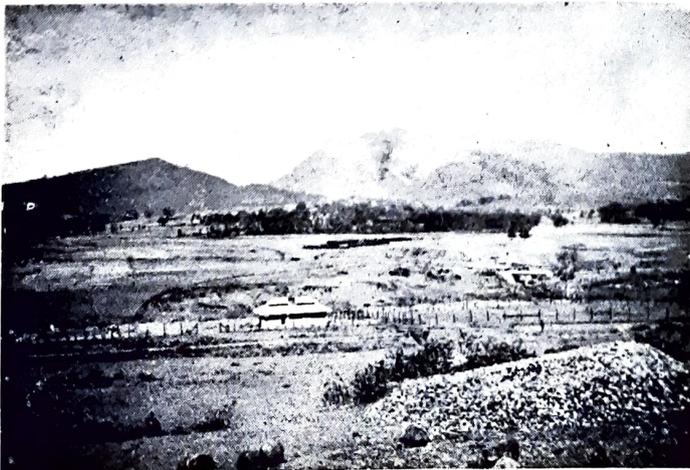
Solitary Sentinel - Pakhal forest



Eucalyptus Plantation - Tirupati

## *BOTANICAL EXCURSIONS*

(Photos by M. L. Narayana, II B.Sc )



Placid Avaku Valley - (G. V. N. Narasimham)



Aari plant - Tirupati garden



J. Narendranath : Highway man



Youth and old age



At the village well



K. Vyuhra Rao : Nurse

&  
Village Life



All set to start

# Nuclear Energy in Our Daily Life

V. KAMESWARA RAO,  
III B. Sc.

**N**UCLEAR energy has become a commonplace expression nowadays, for a reality which a few decades ago was only a possibility conceived by scientists. In this short period mankind has been able to free that energy and put it to practical use. This development was at first the result of research for military purposes and it is unfortunate that the first use to which nuclear energy has been put was destructive, when atom bombs were dropped on Japan. Since then, however, there has been a revulsion against the use of nuclear weapons and, although a great deal of money is still being spent on military uses, successful attempts have been made in many countries to harness the atom for peaceful purposes.

The source of nuclear energy is the mass of the atomic nucleus itself. Whenever the combination of two nuclei results in the formation of two or more other nuclei, (which may for our purpose be called a transformation), it is found that there is always a loss in mass. That is, the total mass of reactants in the beginning will be a little greater than the total mass of

the products obtained. This loss in mass is converted into energy according to the equation,  $E = mc^2$  where  $E$  is the total energy liberated,  $m$ , the mass that is lost and  $c$ , the velocity of light. For example, in a reaction when  $\alpha$  particles are bombarded against Lithium nuclei, Helium nuclei are obtained resulting in the loss of mass 0.0185 of atomic weight. This small loss in mass, which is equal to  $3.07 \times 10^{-26}$  gms on absolute scale, is found to liberate 17.3 Mev (million electron volts) of energy. On calculation it is found that when one gram of Helium is formed the equivalent of 200,000 Kilo-watt hours of energy is liberated. Matter can therefore be considered as a tremendous amount of frozen energy, locked up in the nucleus of the atom. Having described the source of nuclear energy we can now pass on to the methods by which this energy can be liberated.

## Nuclear Fission .

Nuclear Fission is one of the methods by which nuclear energy can be obtained. When the nuclei of certain metals are bombarded by fast moving particles like  $\alpha$  rays and

neutrons, it is found that the original nucleus splits into two halves, forming two new elements with the release of some additional energy.

Thus, when the nucleus of U-235 of atomic number 92 is bombarded with a fast moving neutron, it breaks up into two nuclei of atomic numbers 56 and 36, in addition to the release of three free neutrons. The element corresponding to the atomic number 56 is Barium, of atomic weight 137.35, and that corresponding to atomic number 36 is krypton, of atomic weight 83.7. It can be clearly seen that the total mass of the products in Barium and Krypton nuclei is less than the mass of the nucleus of U-235. This missing mass is converted into energy.

The reaction is further carried on by the three free neutrons that have been evolved. The three neutrons split three more Uranium nuclei thus liberating 9 free neutrons. These 9 neutrons in turn split 9 more Uranium nuclei liberating 27 neutrons. This process is called a chain reaction which continues so that a very large amount of energy is liberated. For a chain reaction to start and maintain itself a certain mass, known as the critical mass, is necessary.

The principle of chain reactions is used in the preparation of the atomic bomb. The bomb consists of two sheets of U-235 of a size which is a little more than half the critical size that is needed. The two sheets are separated by a suitable screen. When the bomb is to be exploded, the screen is removed and at once the sheets come together by a mechanical device.

Immediately the chain reaction is started by the bombardment of free neutrons and a tremendous amount of energy is released almost instantaneously.

#### Nuclear Fusion :

Nuclear fusion is another method of liberating nuclear energy by the principle of thermo-nuclear fusion between two light elements. For example, when Heavy Hydrogen of atomic weight 2 and Tritium of atomic weight 3 are fused at a temperature of 20 million degrees, Helium of atomic weight 4 and a free neutron are formed.



Here also the final mass is less than the initial mass of the reactants. In this process, large amounts of energy will be liberated from the annihilation of matter.

The principle of fusion is used in the preparation of the Hydrogen bomb in which two hydrogen nuclei are combined into a helium nucleus by fusion. That is to say, an atomic weight of 4.03252 is converted into an atomic weight of 4.00389. Thus there is a loss of 0.02863 in atomic weights. This loss in mass is converted into energy.

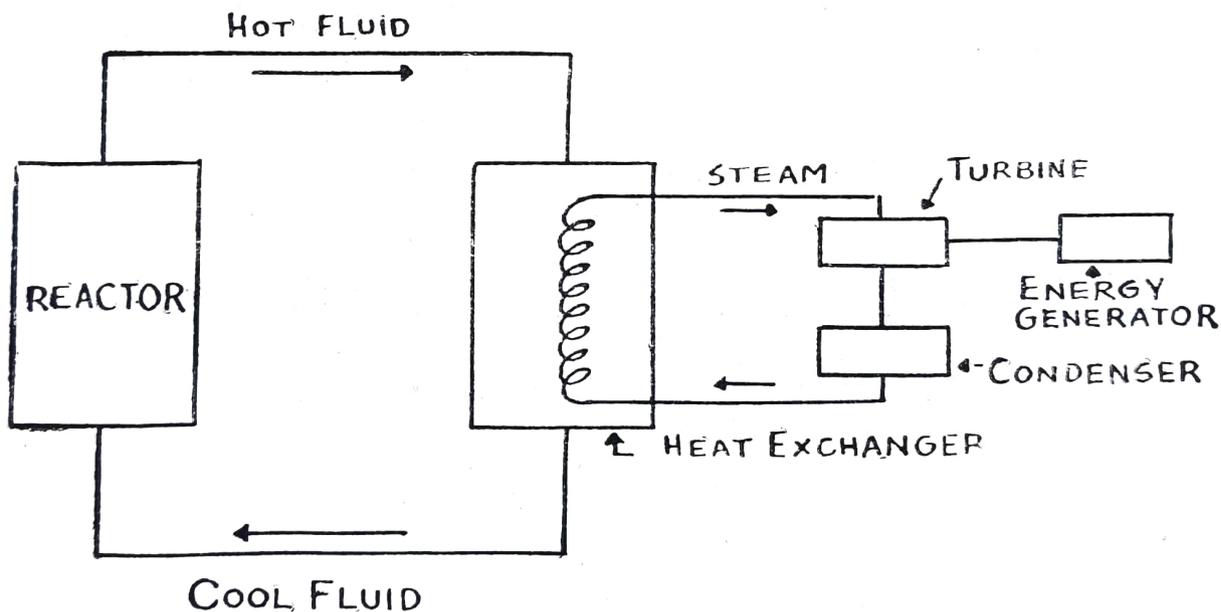
By the two methods described above we can therefore obtain energy in large amounts. This vast release of energy is to be harnessed and made useful. There are many methods by which this may be done. The nuclear reactor is one such device in which nuclear energy is first converted into

heat energy and then heat energy is converted into electrical or mechanical energy.

**Nuclear Reactor :**

It consists mainly of two sections, Reactor and Heat Exchanger. The reactor which is connected at the bottom and at the top by means of tubes to the heat exchanger, contains a volatile fluid (cooling agent). The cooling agent keeps circulating through the heat exchanger. The heat exchanger contains another more volatile liquid circulating in it. When

the fissionable material undergoes fission, a large amount of energy is produced which is converted into heat energy. The cooling agent gets heated. The hot fluid passes into the heat exchanger and gives up its heat to the circulating liquid which thereby gets vapourised. The vapour from the heat exchanger is made to turn turbines and thus the required form of energy is obtained. Thus, a nuclear reactor can be considered as a furnace in which heat is produced from the energy liberated during fission. The outline of the nuclear reactor can be represented thus :



It is clear that nuclear energy provides us with great possibilities of doing things which were till now considered impossible, for lack of energy resources. The generation of enormous power for huge industrial projects, the undertaking of schemes, like space travel, which call for engines and fuel comparatively small

in bulk, but able to work for long periods without replenishing, are now distinct possibilities. If only governments would eschew the destructive use of nuclear energy and concentrate on its peaceful uses, then a new era of prosperity and happiness opens out before mankind.



# NATIONAL UNITY

D. APPA RAO, II B. Sc.

**A**FTER nineteen years of independence, nineteen years of hard work, of considerable success and occasional failure, we have arrived at a critical phase in our national existence. Indeed this critical phase applies to the international scene also, and no man can say what the future may bring to this fast changing world. Our immediate concern, however, is inevitably our own country and the hundreds of millions of people who inhabit it. Even our service to the world can best be achieved through serving our own people.

We have faith in the "Five Year Plans" because we have faith in our people. It is their hard work and cooperative spirit that will bring success and advancement towards greater prosperity through equality of opportunity. The "Five Year Plans", we hope, will take us out of the rut of poverty that has brought so much misery and degradation to our millions. Each one of us must realise that the only future for India and her people is one of mutual tolerance and cooperation, which have been the basis of our culture from ages past.

We have laid down in our Constitution that India is a secular State. That does not mean irreligion. It means equal respect for all faiths and equal opportunities for those who profess any faith. We have, therefore, always to keep in mind this vital aspect of our culture which is also of the highest importance in the India of today.

Those who put up barriers between one Indian and another, or who promote disruptive tendencies, do not serve the cause of India or her culture. They weaken us at home and discredit us abroad. Therefore, it is of the utmost importance that we should work for the emotional integration of India.

This applies to linguistic differences also. It is our proud privilege to have several languages, intimately connected with each other. Let us serve them all and not consider any language, which is not our own mother-tongue, as something alien. All these languages have grown up through ages and are of the flesh and blood of India. If any of them is injured that injury is done to India herself.



# Students and Social Service

B. VENKATRAYUDU, I B. Sc.

**T**HERE is a proposal that Social Service for one year should be made compulsory for students before they are given the degree at the end of their academic course. Many students develop a feeling of false prestige and think that it is below their dignity to do manual work in villages. The main aim of education is to make the students play their significant role in national development as doctors, engineers, teachers, health and sanitation workers, agriculturists, etc. The fact that India is a vast sub-continent with the bulk of the population living mainly in the villages, depending upon agriculture for their livelihood, should make us alive to the need of educated men and women settling down in villages. Hence it is necessary to insist upon Social Work in rural areas by students, in order to open their eyes to realities.

Social work is of different kinds: child welfare work, night schools for adult labourers, propaganda work for health and sanitation, prevention of diseases, etc. In addition to this the workers can teach the villagers about family planning, savings, cooperative effort, the enforcement of prohibition, solving the beggar problem, etc., all matters of concern to them.

In the course of their student life,

young men and women should be introduced to some kind of social work. The students can visit hospitals and help the patients to write their letters, or read to them from magazines and thus help them to forget their pain and dreariness. Also during the short and long holidays students can be made to organise Labour Camps in villages for building roads, digging wells, etc. All these kinds of social work would help the students to take an interest in selfless work later on in life wherever they may be. The qualities of discipline, organisation and leadership can thus be developed in the young men and women in our schools and colleges.

Grants are provided by the Union and State Governments for the Social Welfare Programmes, and these should be utilised with proper care and supervision by the agencies disbursing them. In Madras and other great cities we find that there are schools of Social Work giving training and awarding diplomas to post-graduates who specialise in the subject. Students of today who will be the citizens of tomorrow can contribute their share to the building up of a New India by doing Social Work while they study, in the hope that when they are older they can engage in something more significant. ★

# More and Better Food for the Millions

K. S. RAMADAS, II B. Sc.

THE research worker in chemistry has saved millions from premature or sudden death. Millions more have been provided with better food and enjoy good health by the efforts of the chemists. Their contributions have enriched the soil and satisfied the demands of its tiny inhabitants. Effective measures suggested by them have saved our food crops from the onslaught of destructive fungi and the depredations of insect pests. War on the food front is growing keener every year. The world production of food has been stepped up by 10% in 30 years, whereas the population growth has leapt upward by 30%. A man's average daily food requisite is about 2800 calories. Comparatively few get that much. You may be surprised to learn that one-third of the world's population goes to bed every night hungry.

Chemists are ceaselessly engaged in keeping themselves one step ahead of disaster. Years of painstaking work have revealed that small quantities of iodine are essential for the human body. Iodine deficiency leads to the birth of misshapen human monsters. In order to supply iodine enough, soluble iodides are given to chickens, cattle and also to food crops, so that man may get his iodine through his food.

Elements of diverse nature are necessary for healthy plant life. Bean plants wither from boron deficiency. Without a trace of nickel in its diet, the orange tree gets stunted. Additional manganese supply improves the vitamin C content of tomatoes. Nitrogen, Phosphorus and Potassium are often inadequately available to crop plants. The following figures are self-explanatory :

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1 acre of corn removes from	the land	15 lbs of Potassium
"    barley                  "		5 lbs of Phosphorus
"    wheat                  "		2 lbs of Nitrogen.

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Such continued impoverishment of land year after year culminates in making it barren and sterile.

A century ago Liebig exploded an age long theory regarding the nutrition of plants, that they can live only

on organic matter. He demonstrated that plants thrive well if fed with ordinary inorganic compounds such as sodium nitrate, calcium phosphate, etc. He succeeded in proving among other things that, since plants assimilate K, N, and P, they must be supplied to them through the soil. This fundamental discovery has revolutionised agriculture all over the globe.

Nitrogen, an important plant nutrient, is removed in large amounts by the cultivation of crops. Just about half the depleted quantity is returned by way of fish scrap, manure and other organic waste. Following Liebig's example, nitrogen came to be added to the soil as sodium nitrate ( $\text{NaNO}_3$ ). Germany depended heavily on imports of Nitrate. When World War I cut off such imports, Kaiser Wilhelm II called upon his scientists to devise methods of manufacturing  $\text{NaNO}_3$  indigenously. Dr. Fritz Haber succeeded in perfecting a process of making ammonia, utilising the abundant nitrogen in the atmosphere. Ammonia thus obtained was treated with suitable mineral acids to give a variety of compounds. Some of them are outstanding fertilisers like ammonium nitrate. Similar advances in chemistry led to the manufacture of cheap and plentiful fertilisers. Such chemical fertilisers help to keep the soil rich in its mineral wealth so essential for healthy crops. The modern practice is to develop fertilisers which can meet a variety of demands from a particular soil: 4-12-6 fertilisers, for example, contain 4% nitrogen, 12% phosphorus and 6% potassium. Often special mixtures are added to correct

the peculiar defects of a field or a locality. Improvement and reclamation of uncultivable land is a big challenge to the soil chemist.

Well over 7000 different kinds of pests wage constant warfare against cultivated crops. The loss in terms of money due to these pests runs to several billions of dollars all over the world. Among such pests insects form a big majority. Insect predators range considerably in size and numbers. Any crop is susceptible to several of these insect parasites, from the seedling stage to the ripe harvest. Chemists employ insecticides to destroy these insects. The problem is very complicated. On the one hand any natural or synthetic chemical should not harm the crop plant. On the other, helpful insects may be killed by these chemicals. Prolonged and indiscriminate application of pesticides may induce resistance in the pests. Therefore insecticide application for any crop needs careful study and expert advice before it is undertaken. Here is a case study for tomato.

- a) Toxaphene against cutworm in seedling stage.
- b) Aldrin (2.5% mixture) against darkling beetle in early fruit stage.
- c) D. D. T. against fruitworm in mature fruit stage.
- d) Parathion against leaf miners in vegetative stage.

Prophylactic treatment of seed shields the plant from insect infection before it reaches the open air. Corn seeds treated with benzene hexachloride are safe from wireworm. However,

we are by no means in a happy position in this tussle between crops and insects.

Crops in the field are attacked by another group of enemies. No field is free from weeds. Weeds in cultivated land rob it of considerable nutrition that would be supplied to the crop plant. Herbicides are selective in action. The chemical 2-4-D annihilates broad-leaved weeds but does not damage narrow leaved grasses, i. e. cereal crops.

Bacterial, fungal and viral diseases take their toll of crops in the field. Once again a large array of chemicals are now in the market to fight these diseases. Antibiotics like streptomycin have been pressed into service. Even village farmers are learning to rely on these chemicals to safeguard their crops against pestilence and disease.

Stored food grains are set upon by weevils and beetles. Carbon tetrachloride, methyl bromide, etc., ward off these enemies in storage bins. As we understand the metabolism of a plant better, there is a possibility of chemical control of flowering and fruiting in crops. Naphthalene acetic acid

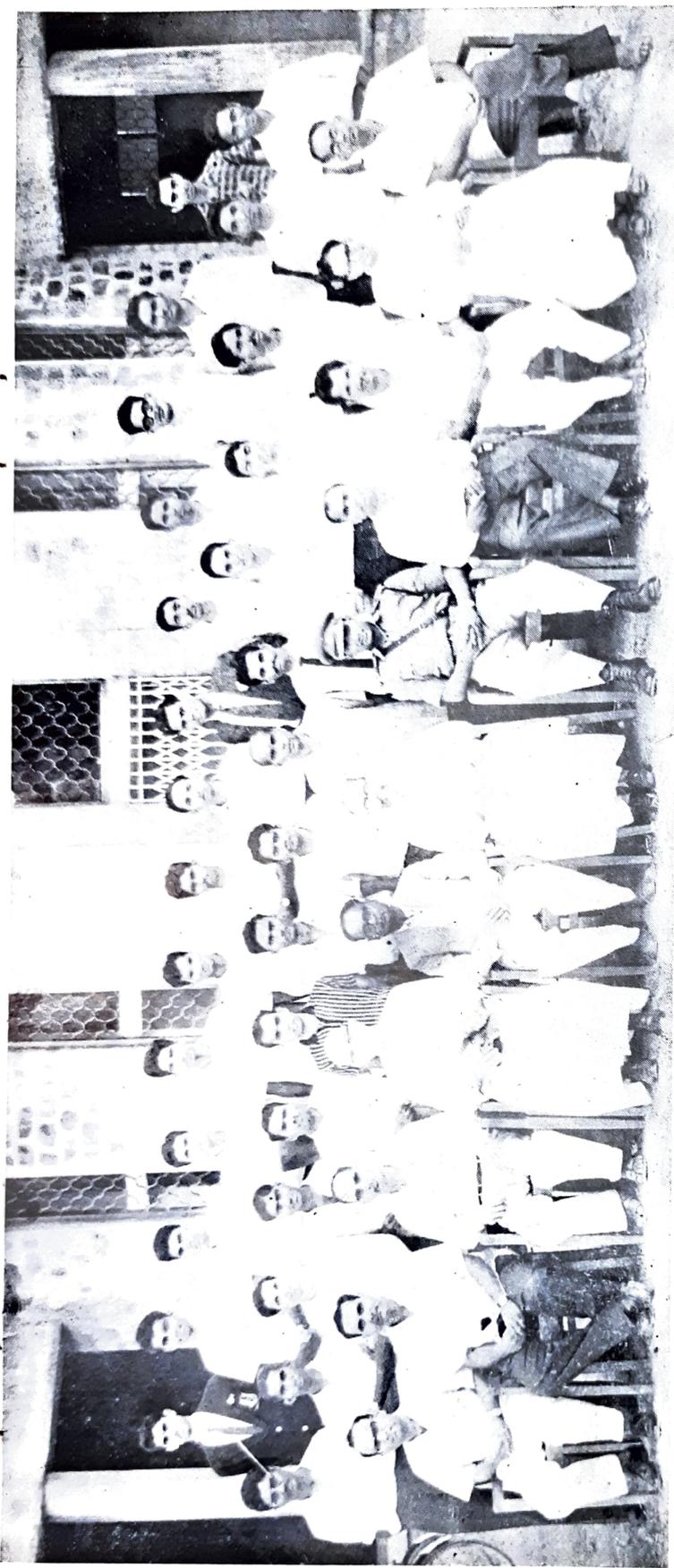
hastens ripening of pineapples. Premature dropping of apples is curtailed by spraying the trees with synthetic plant hormones. Proper chemical treatment keeps stored potatoes from sprouting and spoilage.

Synthetic chemists are also interested in improving livestock and poultry. Improved breeds lead to more eggs from hens, more milk from cows, better meat from pigs and cattle. Drugs and prophylaxis keep the animals healthy, thereby enhancing their productivity.

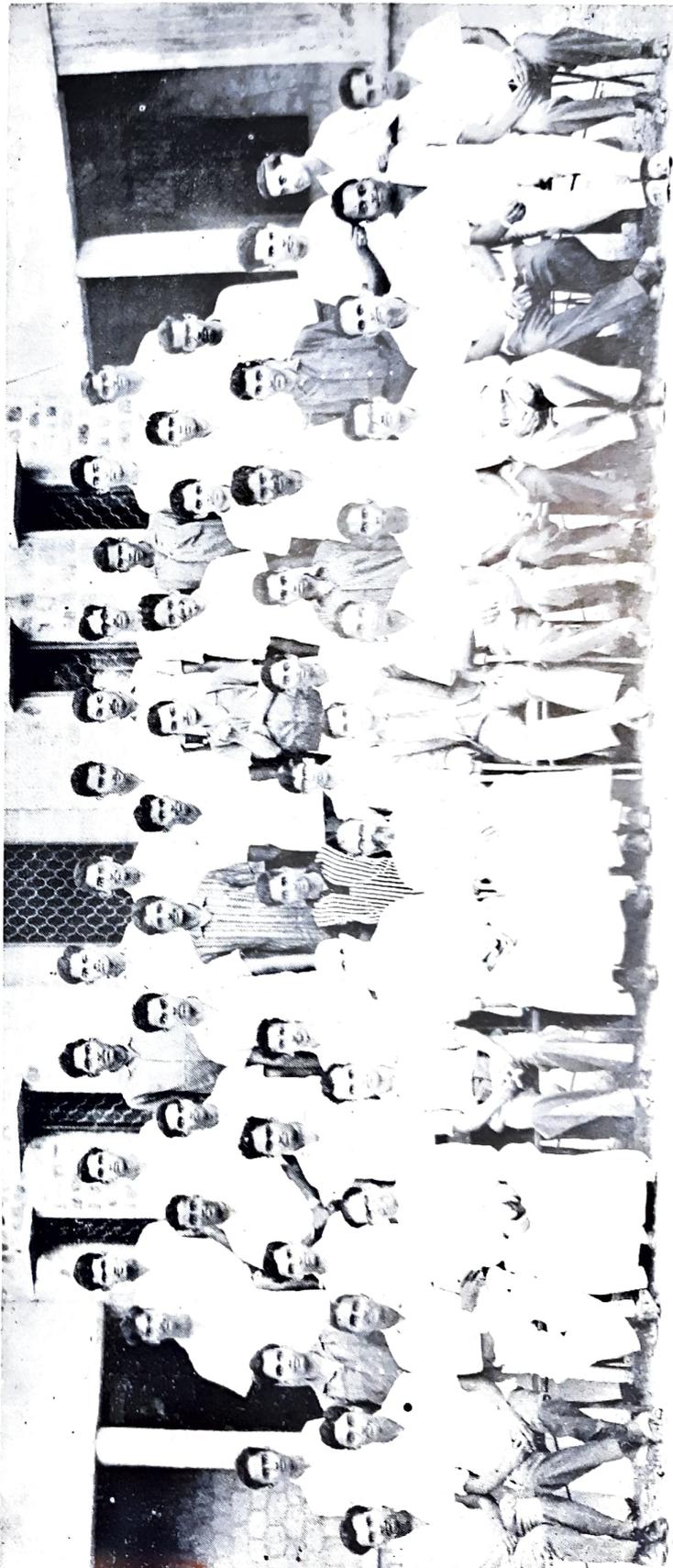
This brief account goes to show that the scientist in the laboratory is as vital as the farmer in the field. Sir Alexander Fleming, the discoverer of penicillin, said, "It is the glory of a good bit of work that it opens the way for better things and thus rapidly leads to its own eclipse. The object of research is advancement of knowledge". Hats off to the great and glorious scientists and chemists, those men and women, whose lives of sacrifice and hard work stand out as beacons of hope to untold generations of mankind in their unending march towards progress and happiness in this world.



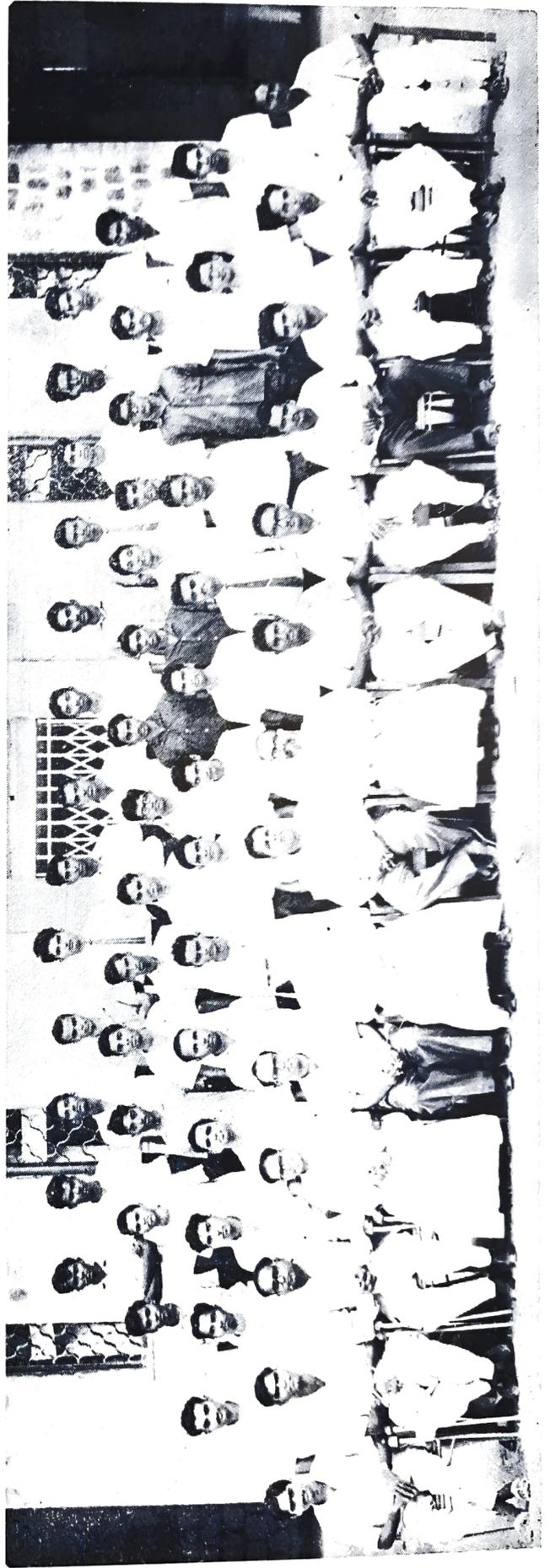
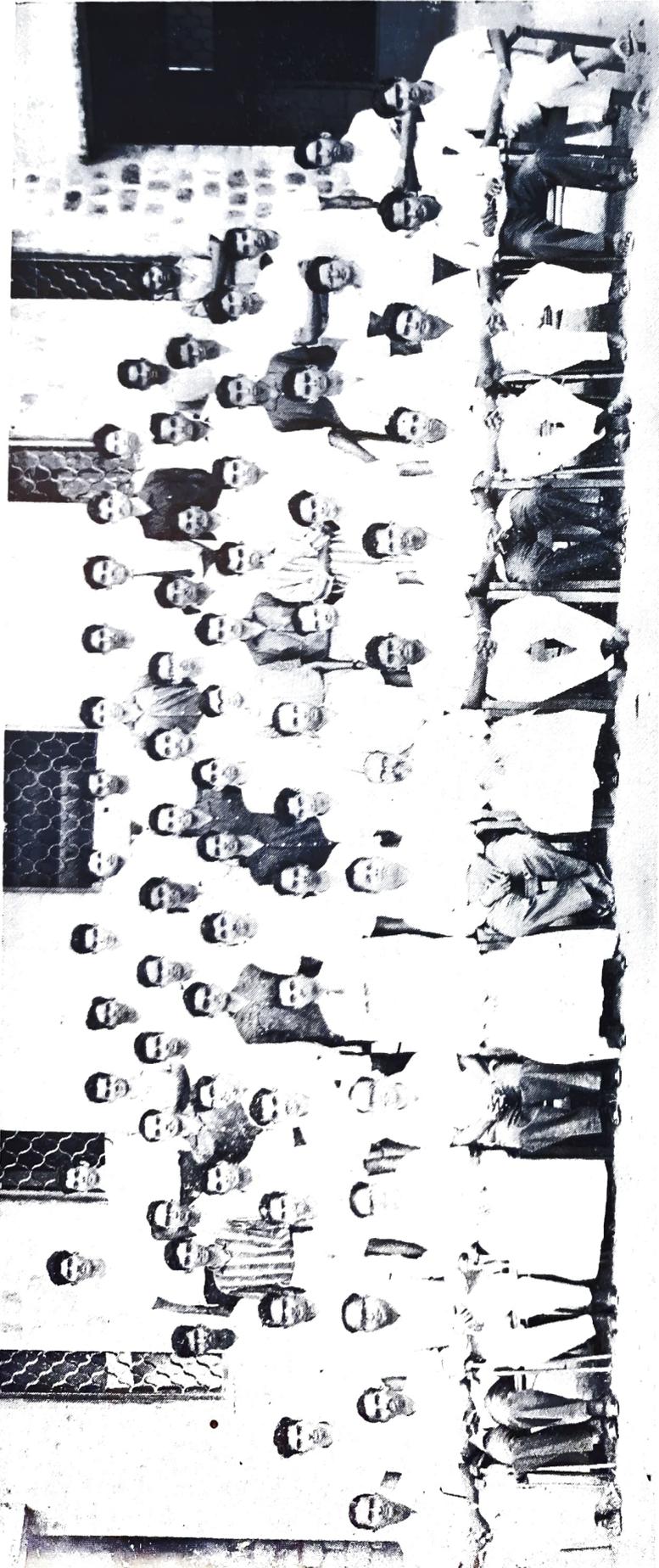
B. A. Final Class  
(1965 - 67)



B. Com. Final Class  
(1966 - 67)



B Sc. (Chemistry,  
Botany, Zoology  
I Section) Final  
Class (1966 - 67)



B. Sc. (Chemistry  
Botany, Zoology  
II Section) Final  
Class (1966 - 67)

# Devaluation of the Rupee

D. AUDISESHA REDDY,  
III B. Com.

**B**EFORE going into the details of the devaluation of the rupee let me first of all explain the meaning of the word devaluation. Devaluation means lowering the external value of the currency of a country. The currency of every country has two values, internal and external. External value is the rate at which the currency of one country normally exchanges for the currency of other countries. The rate at which the currency of one country is exchanged for the currency of another depends upon the gold content of the respective currencies under the gold standard. That is to say if Rs. 4/- is convertible into the same amount of gold as 1 dollar, then the rate of exchange between the Indian rupee and the American dollar is Rs. 4/- for \$ 1. This calculation is not possible in modern times because no country is on the gold standard. The rate of exchange today between two currencies will depend upon their respective purchasing power. For example, if x amount of goods costs Rs. 4.76 in India and the same x amount of goods costs in America \$ 1 00, the rate of exchange between the currencies is Rs. 4.76 for \$ 1.00. Devaluation of the rupee therefore implies having to offer more Indian currency than before in exchange for the currencies of other countries.

I now pass on to consider the devaluation of the Indian rupee twice in recent times, and the implication of such action and the problems that arise. The Government of India announced on September 19, 1949, their decision to devalue the rupee in terms of U.S. dollars by 30.5% because all other countries except a few had devalued their currencies. The new ratio that was fixed was 0.1862 grains of fine gold per rupee. From 1949 to 1966 the rate of exchange between India and America and between India

and Britain remained at the rates of \$ 1.00 for Rs. 4.76 and £ 1 for Rs. 13.33 respectively.

We need not spend time on the devaluation of the rupee in 1949 but examine rather the devaluation in 1966. I was shocked to hear Sri Sachindra Chaudhuri, the then Union Finance Minister, broadcast at midnight on the 5th June the decision to devalue the rupee. The Finance Minister announced the par value of the rupee had been changed, effective from 2 a. m. on 6th June, from 0.186621 gm. of gold to 0.118489 gm. The new rate of exchange between India and America and between India and Britain would be Rs. 7.50 for \$ 1.00 and Rs. 21 for £ 1. It is obvious that prior to devaluation we could exchange Rs. 4.76 for a dollar, whereas after devaluation we would have to pay Rs. 7.50 for the same dollar. Why should we have to pay more all of a sudden for the same thing ?

#### What are the reasons for the devaluation ?

The present value of the rupee is not what it was 10 years ago. One of the fundamental reasons that has led the Government to the decision to devalue is the political pressure from the United States and the International Monetary Fund. The second reason is that there is inflation in the country. Prof. Cassel says inflation is the cause for devaluation (but not vice versa). The value of the rupee has fallen by 80% in the last decade. That is to say if a certain amount of goods cost Rs. 100 ten years ago, the present value of the same amount of

goods is Rs. 180. Indian prices have arisen by 80% as compared to a rise of between 10 and 20% in advanced countries like U. S. A., U. K., West Germany, etc. Consequently Indian exports are priced out of the world market. Thirdly, the Government of India has been spending more than it has been earning, importing more than exporting, and consuming more than the country produces. Fourthly, the fact that our five year plans mostly depend on foreign aid, has increased our indebtedness to other countries. Fifthly, in the early part of 1965 the country began to witness a virtual foreign exchange crisis. It was about this time the Bell Mission came to India to study the state of India's economy. It recommended the devaluation of the rupee. Sixthly, the agricultural collapse in the later part of 1965 and the economic drain of the Indo Pakistan conflict served to aggravate the inflation in the country. Seventhly, it was hoped devaluation would boost exports and cut imports and help to improve the balance of payments position.

#### Can devaluation increase exports ?

It is true that in the case of price-elastic goods (i. e. whose demand changes according to the changes in price) devaluation would increase exports. In the case of inelastic goods, whose demand will not increase owing to a fall in price, devaluation will not lead to increased exports. In the long run, especially in an underdeveloped country like ours where productive machinery has to be imported, it is not possible to sell goods at low rates because the cost of production increa-

ses owing to devaluation. Then the advantage of a better export price for the product may be counter acted by the disadvantage of a higher import price for machinery, etc.

#### **Can devaluation reduce imports ?**

One of the important consequences of devaluation is to reduce imports. The Indian importer who used to pay Rs. 4.76 for an article worth \$ 1.00 imported from America prior to devaluation, must now pay Rs. 7.50 for the same article. The immediate consequence of devaluation on imports is the rise in the value of imports in rupee terms by 57.5%. The general apprehension is that this drastic increase would be reflected in an increase of production costs and of prices. It is true to say that the burden of replacement of capital machinery and of debt obligations towards foreign countries already incurred, are enhanced by devaluation. Some people argue that high import costs would encourage import substitution. This argument does not hold good for India, because import substitution will give rise to demand for new products which are not available from indigenous sources. Especially for a country like ours which is underdeveloped, we cannot but import machinery and scarce materials for our industrial development. Where imports are apt to exceed exports in value, devaluation is not desirable.

#### **Does devaluation cause inflation, i. e. a rise in price ?**

The question often put by ordinary people is whether devaluation raises prices within the country. There is no

truth in the argument that the prices of all goods will increase within the country. It is more correct to say that the prices of those goods which are produced by imported machinery, or from foreign raw material, or with the help of foreign countries, will rise and not the prices of those goods which are produced by our machinery and labour, or from indigenous sources.

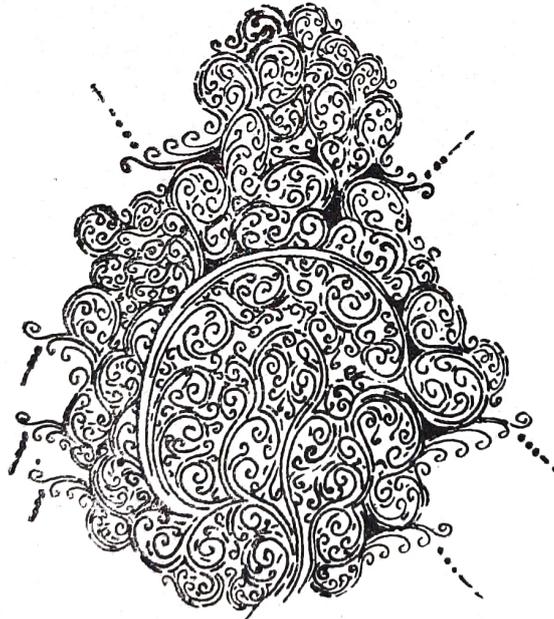
#### **Was the Government of India justified in devaluing the rupee in 1966 ?**

The answer to this question depends upon the views of each person. In my point of view the Government of India was not fully justified in devaluing the rupee in 1966. One can argue as much in favour of devaluation as against it. Our experience shows that none of the European countries which devalued their currencies were so miserably poor at the time of devaluation as India. It is true that devaluation increases exports but the surpluses which India has are mostly of goods whose demand is inelastic. We may put it in another way: we do not have large enough surpluses, or sufficient capital resources, or industrial capacity, to exploit the so-called price advantage offered by devaluation. Devaluation is supposed to discourage imports, but we are badly in need of imports. The larger and more expensive imports will increase our trade deficit. When a country's import needs are great, one would think overvaluation is desirable. Devaluation is helpful only if the Government takes reasonable and effective steps to control inflation and imposes a careful restriction on imports.

Shri C. Rajagopalachari said that "devaluation of the rupee is the consequence of mismanagement of affairs during the last 15 years and cannot be helped." It is no exaggeration to say that India will be fleeced to the skin by devaluation of the rupee. The loss in external value of the rupee involves loss of the country's prestige. It has been humourously said that it is not so much the devaluation of the rupee but the devaluation of the Congress Government and party.

Summing up I may say that devaluation is much like a surgical operation to set right the balance of payments

problem of a country which has surpluses to export but find its exports priced out. It presupposes that the condition is curable and that post-operative care will be taken for a quick recovery. The former Finance Minister Shri T. T. Krishnamachari stated that there was no other way for the Government than to do what it has done. All I can say is that if we are not to blame the Government for the devaluation of rupee, we can certainly blame it for allowing the circumstances which led to devaluation. Devaluation seems to be too big a dose for the country to absorb suddenly.



Design by  
Md. Hussain, II B. Sc.

# VITAMINS

B. MURALI KRISHNA,  
III B. Sc.

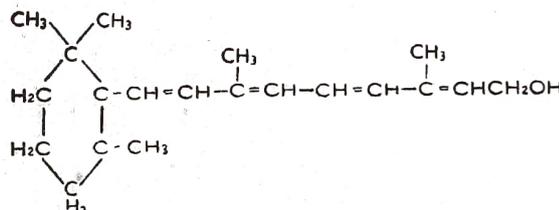
ONE of the most notable problems of biochemistry is the process of human nutrition and the factors involved in the maintenance of health. Until the early part of this century, the problem of nutrition seemed to be a simple one and scientists were of the opinion that proteins, fats and carbohydrates together with the salts and water, which are necessary to build up the tissues of the growing body, were sufficient to supply the required amount of energy for the maintenance of body temperature and for the performance of mechanical work. In the beginning of the 18th century, it was known that the disease scurvy could be cured by the administration of lemon or orange juice. In due course, it came to be realised that other diseases, like beriberi and rickets, could be cured by dietary measures. In other words, it is understood that diseases are due not only to the presence of toxins or other harmful substances in the diet, but also to the absence of certain essential substances.

It has been definitely proved that the presence of small quantities of some specific organic substances, together with proteins, carbohydrates, etc., is necessary for the upkeep of health. Funk proposed the general name 'Vitamine' for such 'accessory factors', since he believed that the antidote for beriberi is an amine essential for life. Later, the final 'e' was dropped to remove the implication that the active substances are amines. The improvement of health, vigour and happiness in life may be brought about by an increase of vitamins in the diet. It is now believed that some minor ailments are the result of deficit feeding and the lack of vitamins. For this reason today great attention is being paid to increase the vitamin content of food-stuffs.

The discovery of the existence of vitamins initiated a search for and an investigation into the sources and the nature of these 'accessory food-stuffs'. Already, some fifteen vitamins have been distinguished and their number is continually increasing. The physiological effects of these vitamins have been investigated, and their chemical composition and constitution have been the subject of intense study. A number of vitamins are now produced synthetically on an industrial scale. Ignorance of the nature and chemical individuality of the vitamins, when they were first discovered, led to their being designated by the letters of the alphabet. Some of the vitamins which were originally thought to be single, however, have been shown to be a mixture of several vitamins represented by numerals, (e. g. vitamin B<sub>1</sub>, vitamin B<sub>2</sub>, etc.).

**VITAMIN A :** Vitamin A obtains chiefly in carotene, milk, butter, eggs, etc. The richest natural source of vitamin A is fish liver oil. It is also present in tomatoes, bananas, carrots, grass, etc.

Chemical analysis has shown that the forerunner of vitamin A is a hydrocarbon, which has a large complex molecule and a composition represented by the formula C<sub>20</sub> H<sub>30</sub> O. This compound is widely distributed in the vegetable kingdom. The molecule of vitamin A is built up as indicated by the formula :



The structure for vitamin A was given by Karrer who deduced it mainly from the observation that geronic acid is obtained on ozonisation, indicating the presence of a β-ionone ring. It is formed by the splitting of the carotene molecule into two parts and the combination of each part with two atoms of hydrogen and one atom of oxygen.

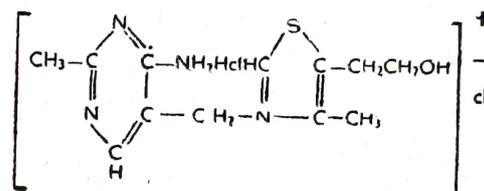
Vitamin A is essential for the normal growth of mammals and it has also a specific function in 'photoreception' in the retina. It has been found that daily doses of carotene relieve eye-strain. It also improves the bodily health and the mucous membrane of the respiratory passages. For this reason it offers greater resistance to bacterial infection. If vitamin A is absent from the diet for a prolonged period, night blindness and later 'xerophthalmia', a dry, lustreless condition of the eyes, supervene.

### VITAMIN B<sub>1</sub> : (Thiamine)

Vitamin B<sub>1</sub> is the anti-beriberi factor. The water soluble B fraction of yeast, rice polishings, etc., was found to cure avian polyneuritis and is required for normal growth. Both effects initially were thought to be due to

only one factor, but in 1926 the B fraction was separated into two components : a thermostable one showing the growth effect and thermolabile one containing the antiberiberi factor B<sub>1</sub>. Foodstuffs rich in vitamin B<sub>1</sub> are yeast, wheat germ, egg yolk, lentils and ox liver. Large amounts of this vitamin are obtained from unpolished rice. Since this vitamin cannot be stored in the body for a long time, sufficient amounts of it must be supplied in the daily diet.

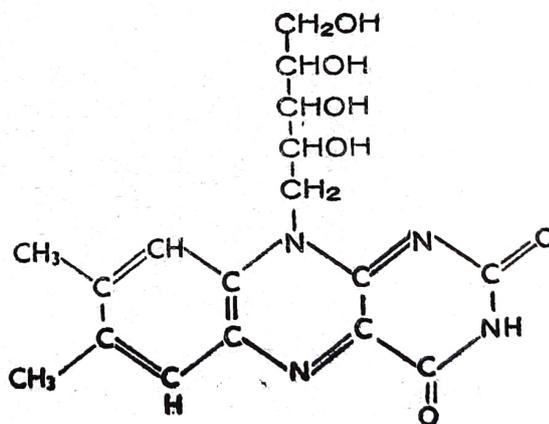
The chemical composition and the molecular structure of vitamin B<sub>1</sub> have been ascertained by R. R. Williams and it is the compound C<sub>12</sub> H<sub>18</sub> N<sub>4</sub> SOCl<sub>2</sub> to which the name "aneurine" is given. The structure of Thiamine chloride hydrochloride can be represented as :



Absence of this vitamin leads to the dangerous neuritic disease known as beriberi. The vitamin is present in the germ or embryo of rice and so long as the natural rice is used, beriberi does not occur.

#### VIVAMIN B<sub>2</sub> (Riboflavin) :

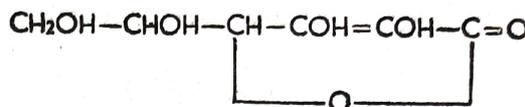
This vitamin, present in yeast, egg white, tomatoes and other substances, has been shown to be a complex of two vitamins. One of these is a growth promoting vitamin and the other is effective in preventing the dread disease 'pellagra'. In formula and constitution it is found to be identical with the yellow pigment 'riboflavin' obtained from whey. Its formula is C<sub>17</sub> H<sub>20</sub> N<sub>4</sub> O<sub>6</sub>. It is structurally represented as follows :



The riboflavin content of milk is rapidly reduced by exposure to bright sunlight. The latter constituent was found to be identical with 'nicotinic acid'.

**VITAMIN C** : Scurvy, an ancient disease of mankind, is characterised mainly by hemorrhage and some structural changes in the cartilage, bones and teeth. It is caused by the deficiency of vitamin C in food. This vitamin, found in fresh fruits and green vegetables, is also called ascorbic acid or antiscorbutic

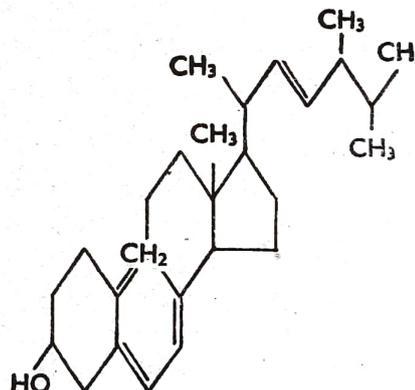
vitamin. Isolation of a pure crystalline antiscorbutic substance from lemon juice was finally achieved in 1932 and the material was later identified as hexuronic acid,  $C_6H_8O_6$ . The substance was renamed as ascorbic acid. It has the following structure :



Although acute scurvy is very rare, many people suffer from a partial lack of the vitamin, resulting in abnormal tooth structure, anorexia, anaemia and a predisposition to some infectious diseases. The healing of wounds and fractures is hastened by the administration of ascorbic acid. The minimum daily requirement for an adult is about 30 mg. It is now produced industrially from glucose. It is optically active.

**VITAMIN D :** The most effective natural source of vitamin D is cod liver oil or halibut liver oil. This vitamin is present in milk, butter and eggs also.

Rickets, which is generally associated with an imperfect calcification of bones and teeth, is now brought about not only by the absence of necessary calcium and phosphates but also by the absence of vitamin D. In 1919, it was discovered that rickets could be cured by exposure to sunlight or to light of short wave length (ultra-violet light). The explanation for the activity of light is that a substance ergosterol, which is present in plants, yeast, etc., is converted by the light into a compound which is antirachitically active. This was isolated in pure crystalline state first in 1932. Its structure is given below :



The initial preparation was found to be a mixture. The pure material was called vitamin  $D_2$  by the Germans and calciferol by the English.

Calciferol is not as antirachitically potent as the natural vitamin, referred to as vitamin  $D_3$ , present in cod liver oil and formed by the action of light on cholesterol present in the fat glands of the skin of animals. Pure calciferol is now used as supplementary to the vitamin D in the diet.

#### VITAMIN E : (Tocopherols)

Prof. Evans observed that young rats on a restricted diet ceased to grow and lost the function of reproduction. He demonstrated that no defi-

ciency of any one of these substances (vitamins A, B, C, D) was involved. The new material vitamin E is found in certain vegetables and particularly in seed-germ oils. Two derivatives of this are obtained as active, pale yellow oils and named  $\alpha$  and  $\beta$  tocopherols. The two forms are found to be almost identical in chemical and physical properties and the empirical formulae indicate that  $\alpha$  tocopherol  $C_{29}H_{50}O_2$  differs from  $\beta$  tocopherol  $C_{28}H_{48}O_2$  only in the presence of an extra  $CH_2$  group.

The tocopherols are powerful anti-oxidants and are used to protect foodstuffs from oxidation. They are believed to function in the organism as anti-oxidants for fats.

Besides the vitamins discussed above, there are certain other vitamins known as Pyridoxine ( $B_6$ ), biotin (H), vitamin K, etc. The number of known vitamins is continually on the increase.



Sketch by  
Liaquat Ali Khan, P. U. C.

# Reports of College Associations

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## REPORT OF THE STUDENTS' SOCIETY FOR THE YEAR 1966-67

**T**HE office bearers of the Students' Society for this academic year 1966-67 were elected on the 15th of July, 1966. K. Wajid Ali Khan was elected Chairman and R. V. V. K. Prasad was elected General Secretary, Rev. Fr. Principal later selected the Secretaries and Joint-Secretaries of the various other Associations from among those who were nominated as candidates for those offices.

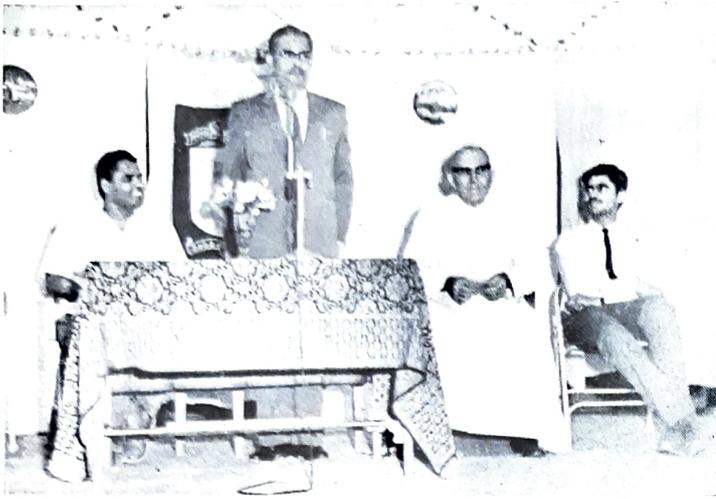
The inaugural function was presided over by Mr. Narla Venkateswara Rao, Editor of the Andhra Jyothi. He gave us an interesting speech on the freedom struggle and his contacts with great freedom fighters. He stressed the value of national unity and the need of better discipline and good moral character among the students. He told us also about the behaviour of Indian students in other countries, and concluded by saying that caste and religious differences should not influence our outlook.

On the 19th of August, an exciting debate was held under the auspices of the Students' Society, with Fr.

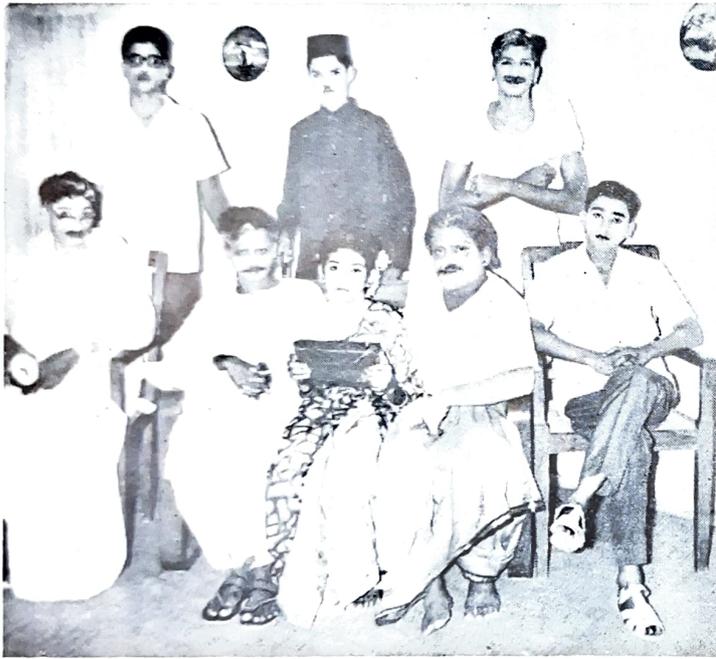
Principal in the chair. The subject for the debate was "That Compulsory N. C. C. should be abolished." Members of the staff as well as many students took part in it. Neither party could clinch the issue, but it was all the same thought-provoking and interesting.

It pains us to mention the demise of five of our dear friends and companions of the final year, who were drowned while bathing in the river Krishna. A meeting was held to condole their death and to send a resolution of sympathy to their parents.

On the 28th of October, at a largely attended meeting we passed a resolution in which we pleaded for justice, by demanding that the steel plant be located at Visakhapatnam. On the 29th the Chairman and Secretary and student leaders of other colleges rallied together, when our Chairman spoke to the student gathering about the peaceful and democratic way of achieving our ends. Apart from this, we did not take part



Dr. F. W. Burghall speaks on Science Day

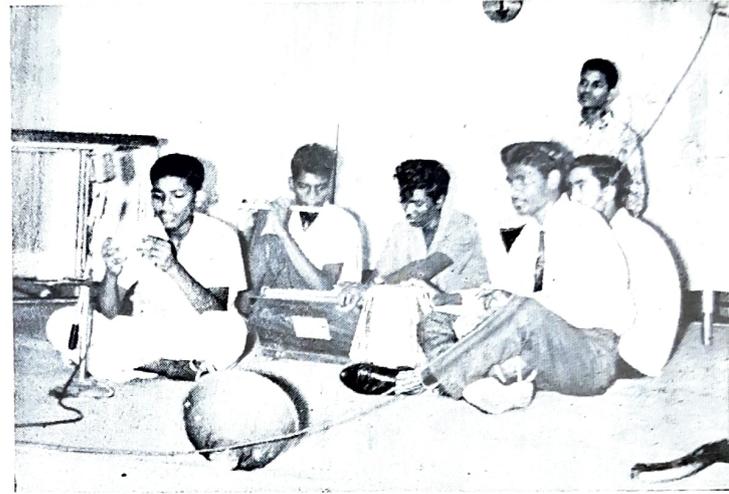


Actors in the Telugu Play "Pattalu Thappina Bandi"



Dr. G. V. Krishna Rao of A.I.R speaking on Arts Day

# Associations' Week



Orchestral Item

# and Sports Day



Sri R. Narayanaswamy, I.P.S., Deputy Inspector General of Police, presides over Sports Day

(Photo by N. Lalita Prasad)



Vijayawada from Mallikarjuna Temple  
(N. Venugopal)



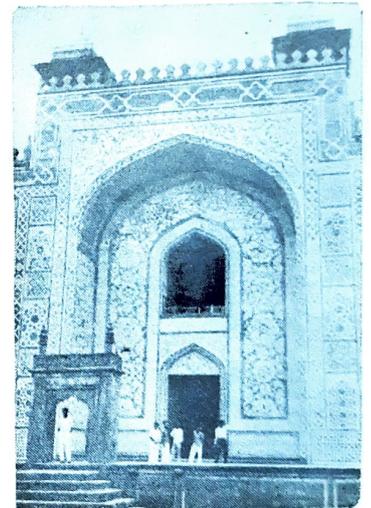
D. B. K. Railway Tunnel  
(G. V. N. Narasimham)



Hanumakonda Nandi  
(M. V. S. Raju)



Ramappa, Thousand Pillars Temple  
(M. V. S. Raju)



Mandir (Agra)  
(N. Jagannadh)

## AMATEUR PHOTOGRAPHY



Agra, Detail of temple architecture  
(N. Jagannadh)



Pride of the Village  
(Ch Radhakrishna)

in any activities violent or otherwise. On the 31st a procession consisting of students and others, led by professional political leaders, came to our College and tried to force us to join their procession. We did not join it because we were disgusted by the violence they indulged in, even in our College campus.

The Cultural Week was celebrated on the 28th and 29th of November. Dr. F. W. Burghall of St. Anne's Hospital presided on the Science and Mathematics Day. He spoke about the development of Anaesthetics and medicine. The Arts Association Day was presided over by Dr. G. V. Krishna Rao. He spoke about the cultural value that lies in Telugu literature.

The College Day was celebrated on 2nd of February. His Excellency, Most Rev. J. R. Knox, Apostolic Internuncio to the Republic of India, presided. His Excellency advised the

students to help spread literacy, so necessary for any national progress. He said that youth has a responsibility to promote worthwhile activities, though it would take time to achieve sizable results. He suggested the increased use of the regional language in the activities of different associations and attributed importance to the teaching of English, which is the present medium of instruction and should be given greater attention. On the lighter side, one English and two Telugu playlets were enacted.

We are proud of the achievements of our elocution and debating teams and of the successes of our N. C. C. cadets in Hyderabad and Delhi.

I conclude my report, thanking Rev. Fr. Principal, Rev. Fr. Vice-Principal, the Wardens, the members of the staff and all the students who actively cooperated with us and without whose help it would have been very difficult to manage.

R. V. V. K. PRASAD, II B. A.  
*General Secretary.*



## REPORT OF THE HINDI LITERARY ASSOCIATION 1966-67

THE activities of the Hindi Literary Association for the academic year 1966-67 started with the election of Mr. K. Hari Kumar, II B. Sc., as Secretary. Sri U. S. Ramakrishnaiah, M. A., B. Ed., was the President of the Association.

On the 13th of August the inaugural address was delivered by Sri V. C. Ramaswami, M.A., Head of the Hindi Department, A. N. R. College, Gudivada, while Sri U. S. Ramakrishnaiah presided. Sri P. Sivanarayana, M. A., introduced the Chief Guest.

On the 5th December a debate in Hindi was held, the subject being, "Which language should be the medium of instruction?" Sri P. Sivanarayana, M. A., was in the chair.

On the 6th February another debate in Hindi was held, the subject being, "Students should take part in Politics". That day Sri K. T. Paniker, B. A., Sahitya Ratna, was in the chair.

On the 22nd February an essay contest was held under the guidance of Sri Ramakrishnaiah and the following were adjudged winners.

I Prize . K. V. Subrahmanyam,  
II B. Sc.

II Prize : D. Satyanarayana Raju,  
P. U. C.

On the 27th February an elocution contest was held in Hindi under the guidance of Sri U. S. Ramakrishnaiah. The following were the prize winners:

I Prize : M. S. Krishna,  
II B. Sc.

II Prize : Abid Hussain,  
P. U. C.

I specially thank the President of the Association, Sri U. S. Ramakrishnaiah, for his kind and able guidance in conducting the meetings and his encouragement to the students. I thank all the students who participated in all the activities of the Association.

K. HARI KUMAR, II B. Sc  
*Secretary.*

## REPORT OF THE HISTORY, POLITICS, ECONOMICS AND COMMERCE ASSOCIATION 1966-67

THE History, Politics, Economics and Commerce Association began its activities in the first week of August, 1966, with the nomination of M. V. L. Narasimha Rao, III B. A., and M. Vasundara Rao, II B. Com., as Secretary and Joint-Secretary res-

pectively. Sri K. Basaveswara Rao, M. A., kindly consented to be the President of the Association.

The inaugural meeting of the Association was held on the 8th of August, 1966, with Rev. Fr. D.

Gordon, S. J., Principal, as the President and Sri N. V. Seshaiyah, Editor, Andhra Prabha, as the Guest Speaker. He spoke about 'Journalism and its role in a democratic country.' He also pointed out the significant role played by the newspapers during the freedom struggle.

On the 3rd September the Association conducted a symposium on the "Devaluation of the Indian Rupee". Rev. Fr. Principal presided over the symposium. Among the speakers Sri N. Bala Shouraiyah, M. A., gave briefly the history and background of the devaluation. Sri P. T. Thomas, M. A., explained how devaluation is not justified, while Sri D. Satyanarayana Murty, M. Com., described the effects of the devaluation. Sri N. Guruprasada Rao, M. A., and Sri S. N. Ramaswamy, B. Sc. (Hons.), spoke on how the common man has to face the circumstances due to devaluation. Concluding the symposium, Rev. Fr. Principal pointed out that the Government ought to check the rise in prices immediately.

On the 10th of October, a symposium on "Student Unrest" was conducted in which both students and staff members took part. Among the student speakers the main participants were N. Peri Sastry, I B. Com., A. Narasimhacharyulu, III B.Sc., and K. V. Subba Rao, III B. Sc. They felt that students should keep away from active politics and should concentrate more on their studies. Sri S. N. Ramaswamy and Sri P. T. Thomas described how the students are affected by the religious, social and economic factors of society. Sri T. V.

Sastry, M.Sc., spoke on the present educational system, while Sri M. Venkateswara Rao, M. A., spoke on the student - teacher relationship. Rev. Fr. Principal pointed out the administrative responsibility for student unrest, Rev. Fr. Kuriakose, S J., Rector, summing up the symposium, suggested some immediate remedies.

In the second term on 27th October, Mr. D. Hodgson, Representative of the British Council, South India, Madras, paid a visit to our College and gave an illuminating talk on "Books and the University Student". He described the educational system in the British Universities and also gave suggestions for the teaching of English in countries like India, where it is not a mother tongue.

During the Associations' Week celebrations the Arts Day was celebrated on the 3rd December. Dr. G. V. Krishna Rao of All India Radio, Vijayawada, was the Chief Guest. Sri M. Venkateswara Rao, M. A., presided over the celebration. Dr. G. V. Krishna Rao spoke on the "Standards of Literary Criticism".

The usual essay writing competition was conducted on the 16th February 1967. The following were awarded prizes :

- I Prize : P. Rajkumar, II B. Sc.
- II Prize : R. Ramesh Babu,  
III B. A.

The Association had to call off many programmes owing to the closing of the College during the steel plant agitation. In conclusion

we offer our sincere thanks to the staff and students who cooperated with us to make the activities of the Association

a success. We hope that next year the Association will work better for the benefit of its members.

M. V. L. NARASIMHA RAO, III B. A.  
*Secretary.*

## REPORT OF THE MATHEMATICS AND SCIENCE ASSOCIATION 1966-67

THE Association started its activities with the election of office bearers. Sri S. N. Ramaswamy, B. Sc. (Hons.), became the Hony. Vice-President of the Association for the academic year. Mr. K. C. Bhujanga Rao, III B. Sc., and Mr. H. Deva Rajan, II B. Sc., were nominated Secretary and Joint Secretary respectively.

We started the meetings of our Association with a very homely function. On 19th August, Sri A. V. Subba Rao (Chemistry Department), Sri E. Bhaskara Rao (Zoology Department) and Sri P. Madhava Rao (Botany Department), who had undergone some training in summer institutes conducted at Hyderabad, enlightened the students on "Summer Institutes and the latest developments in Science." Sri S. N. Ramaswamy presided over the meeting.

Ten days after, on 29th August, we conducted a general quiz contest open to all the students. Six teams participated in it. Mr. N. E. L. Narasimha Rao and team and Mr. Siva Sankara Reddy and team came first and second respectively. Sri Y. Raja Gopala Rao, M. Sc., conducted the quiz. A large gathering of students enjoyed the first quiz of the academic year.

Hardly two days after the quiz programme we arranged another meeting on 31st August meant for Mathematics students. Dr. M. Madhusudhana Rao, Professor of Mathematics in Carnegie Tech., U. S. A., delivered a lecture on "Modern Mathematics in the undergraduate classes in the Universities of U. S. A." He explained in a simple manner the superiority of American Universities over Indian Universities in modernising various subjects even at the elementary level. Mr. P. Sivanarayana of Mathematics Department presided over the function.

After a long interval of nearly one and a half months we resumed our activities once again in the second term. Dr. G. Subba Raju, Homoeopathic Practitioner, who was awarded Rs. 5,000 by the Central Government for his researches and discoveries on *Penicillium Notatum*, addressed the students on 12th October. Sri Subba Raju spoke on the use of *Penicillium Notatum* as a drug in Homoeopathy. Sri S. Narasimha Swamy of Telugu Department presided over the meeting. Sri S. N. Ramaswamy introduced the Guest Speaker to the audience. A big gathering enjoyed the talk and found it useful.

As an additional item to our usual programme we arranged a debate on 28th October on one of the most burning problems of the day: "Whether India should manufacture atomic weapons or not." More than 15 students took part in the two hours long debate. Some of our staff members like Sri A. V. Subba Rao, B. Sc. (Hons.), and Sri K. Basaveswara Rao, M. A., set the tone with an accurate approach to the subject. Sri V. V. Krishna Rao, M. Sc., Head of the Physics Department presided over the meeting. The house finally came to the unanimous conclusion that India need not manufacture atomic weapons.

As usual this year also we celebrated Mathematics and Science Association Day on 28th November, during the Cultural Week celebration. Owing to the sudden and enforced vacation in the middle of the second term, the most convenient period for association activities, we had to postpone the Cultural Week celebrations till the end of November. Sri S. N. Ramaswamy, who presided over the Science Day function, welcomed all present. Dr. Burghall, Chief Medical Officer of St. Anne's Hospital, was the Guest Speaker of the day. Dr. Burghall is a popular and well-known personality to both staff and students of Loyola College, since he is our Medical Officer. He talked about the development of ultra-modern surgery and how scientists helped physicians in that respect. His interesting lecture entertained the gathering very much.

After the Chief Guest's speech, a Science Quiz was conducted by Sri

E. S. R. K. Prasad, which kept the audience in a thrill of excitement for a long time. Out of the seven teams which took part in the quiz, H. Deva-  
rajan's team came first and V. Badari-  
nath's second. After the quiz, a  
variety entertainment consisting of  
songs, monoaction, orchestra, mimi-  
cry and so on, followed. Owing to  
bad weather, we were forced to sus-  
pend the last items of the entertain-  
ment, which were gone through on a  
later occasion.

We had many ambitious plans reserved for the III term, but they remained mere plans for lack of time. We were forced to restrict ourselves to conducting only one essay writing competition on 13th February on the following three topics: a) Reorienta-  
tion of Science Education in India, b) Your favourite Scientist, c) Space research in the service of man. V. Badarinath, II B. Sc. and R. T. Jairaj, III B. Sc, gained the first and second places respectively. That brought us to the end of our activities for the academic year.

It is my duty to thank all those who helped us in carrying out our activities very smoothly this year. First of all I thank Rev. Fr. Principal, the honorary President, for kind help rendered; next our able Vice-Presi-  
dent, Sri S. N. Ramaswamy, who was always at our disposal to give valuable advice, and last, all the respected members of the faculty and the stu-  
dents who helped us in many ways in carrying out our activities success-  
fully throughout the year.

K. C. BHUJANGA RAO, III B, Sc.  
*Secretary.*

*LOYOLA College*

## REPORT OF THE PLANNING FORUM AND SOCIAL SERVICE LEAGUE 1966-67

THE Andhra Loyola College Planning Forum and Social Service League commenced their activities for the year with the nomination of new office bearers, R. Ramesh Babu, III B. A., and K. B. Nageswara Rao, III B. A., as Secretaries for the Planning Forum and Social Service League respectively.

The inaugural meeting of the Planning Forum was held on August 22nd 1966, when Sri K. V. V. Subba Raju, B. Com. (Hons.), Principal, S.R.R. & C. V. R. Government College, Vijayawada, who was the Chief Guest speaker of the day, explained the role of the Planning Forums, their objectives and the means to attain them. He also made some useful suggestions about the activities of the Forum.

On the same day an Information Bureau was formally declared open by him. This Bureau consists of planning literature, books which will give information to students on various matters and periodicals. This Bureau is open from 1-00 to 2-00 p.m. everyday and several students make good use of it.

Before detailing the other activities of the Planning Forum, we wish to point out that much of the programme of practical work which we had planned for the year did not materialize for reasons beyond our control. The activities of the Forum during the year were mostly academic in character.

On September 7th Mr. P. T. Thomas, M. A., our Vice-President,

*LOYOLA College*

presided over a special meeting of the members to clarify the objectives, aims and responsibilities of the Planning Forum.

The Forum held a meeting on November 24th with Rev. Fr. Principal in chair. Mr. Venkatrama Reddy, the District Agricultural Officer, was the Chief Guest. He spoke about agricultural progress in India and about the set-up of the agricultural department.

On January 25th we had another meeting which was presided over by Rev. Fr. Principal. The Chief Guest was Mr. A. Lakshminarayana, B. Com. (Hons.), Head of the Department of Commerce, S.R.R. & C.V.R. Government College, Vijayawada. He spoke on the population explosion, a burning problem of the nation.

The Forum held a Quiz Contest on November 21st. Seven teams participated in the quiz with Mr. S. N. Ramaswamy, B. Sc. (Hons.), as Quiz Master. H. Devarajan and team and N. E. L. Narasinga Rao and team stood first and second respectively.

On February 17th an Essay Writing Competition was held in which ten students took part. R. Ramesh Babu, III B. A., and M. Soundara Rajan, II B. A., stood first and second for their essays on devaluation and the population explosion respectively.

An Elocution Contest was held on February 24th. The topic was that "India can attain self-sufficiency without foreign aid". Seven students took part in it, among whom N. Peri

Sastry, I B. Com., and R. Ramesh Babu, III B. A., stood first and second respectively.

Not all our activities were of an academic nature. Under the Social Service League our members did manual work in the College vegetable garden which was inaugurated by Mr. Venkatrama Reddy, the District Agricultural Officer. But the fact remains that not much physical work was done. This was mainly because of the disturbances in the College calendar caused by the steel plant agitation. In this connection I thank Rev. Br. Susai Arul who gave his

R. RAMESH BABU, III B. A.,  
*Secretary, Planning Forum.*

helping hand to the Forum in organizing this venture.

Before concluding this report, we wish to thank Rev. Fr. Principal, Rev. Fr. Vice-Principal, Rev. Br. Susai Arul, and our Vice-President, Mr. P. T. Thomas, for their wise counsel and help. We thank His Excellency, Most Rev. Knox, Internuncio, for his kind contribution of Rs. 1,000 to the Social Service League. Last but not least I thank those members, especially G. V. Subba Rao, I B. Sc., who helped us in organising various activities of the Forum.

K. B. NAGESWARA RAO, III B. A.,  
*Secretary, Social Service League.*

## REPORT OF THE COLLEGE DRAMATIC ASSOCIATION 1966-67

THE College Dramatic Association began its activities this year with the election of office bearers, Y. Harshavardhana Rao, III B. Sc., as the Secretary and Y. Divakara Rao, III B. Sc. as the Joint-Secretary.

On 18th of August the inauguration of the Association was done by Sri Natyacharya Korada Narasimha Rao, who gave a demonstration lecture on Indian styles of dancing.

After the selection of the actors, the regular rehearsals started for enacting the dramas during the College Cultural Week.

On 28th November the first day of the College Cultural Week celebrations, a Telugu play "Evaridi Mosam?" written by Sri Yerramsetty and directed by Sri V. Narayana Rao,

B. Com. (Hons.), was enacted. It was a grand success. Shaik Iqbal Ahamed, III B. Sc., and P. Kesava Rao, I B. Sc., got the first and second prizes respectively. A special prize was awarded to G. Ravindranath Babu I B. Sc. G. Anjaiah, II B. Com., portrayed as "Duryodhana", offered a monoact which was also much appreciated.

On 29th the play, "Pattalu Thappina Bandi" written by Sri Ravi Kondala Rao, was staged and it received loud applause from the audience. It was directed by Sri A. S. N. Murthy, B. A. (English Department), who also took a role in the same. The first prize was won by Y. Divakara Rao, III B. Sc., and the second prize by P. Gopi, I B. Sc. A special prize was given to P. L. S.

Baba, III B. Com. On the same day a monoact performed by P. Kesava Rao, I B.Sc., as "Karna" entertained the audience. The College orchestra proved its merit on both these days.

The English drama "I Want My Money Back", directed by Sri K. Chandramohan, M. A., was enacted on 2nd February, the College day, and was enjoyed by all. Next was a Telugu drama, "Gayyaleeyam", written by Sri B. V. Ramana Rao, and directed by Sri N. Guruprasada Rao, M. A., which made the audience split their sides laughing. Written by Sri Bhamidipati Radhakrishna and directed by Sri V. Narayana Rao, B.Com. (Hons.), "Manasthathvalu", a Telugu playlet was the last of the day's programme, which sent the audience home well content.

In this connection we must place on record our deep appreciation of Sri V. Narayana Rao, B. Com. (Hons.), the Vicepresident of the Association, who helped us much not only this year, but in guiding this Association for the past 9 years. His valuable suggestions and advice in staging "Manasthathvalu", in which he also took a major role, made it an outstanding success. It was one of the special attractions of the Association this year.

In the English drama, on the College Day, Anup V. Ambrose, P. U. C., and Aubrey Hoyle, I B. A., got the first and second prizes respectively. In the Telugu drama, P. Gopi, I B.Sc., and K. Syam Sunder,

I B. Sc., received the first and second prizes, in that order. In the Telugu playlet, Y. Divakara Rao, III B. Sc., got the first prize and P. L. S. Baba, III B. Com., the second prize. Sri N. Appanna M. Sc., helped us very much in training our singers and took part in our music programmes delighting the audience. Anup V. Ambrose, P. U. C. represented the college in the Tagore Memorial Competition at Masulipatam and won the first and only prize of Rs 120.

As in every other year, this year also we wanted to compete for the Nataraja Vighraha (which we had won during the past two years) in the Inter Collegiate Drama Competitions. Unfortunately the University did not hold the competition this year, which was a great disappointment to our keen actors. Still we have the consolation of keeping the Nataraja Vighraha with us for one more year.

There ended our activities for the academic year 1966-57.

Finally now we wish to thank Rev. Fr. Vice-Principal, Messrs. V. Narayana Rao, B. Com. (Hons.), N. Guru Prasada Rao, M. A., K. Basaveswara Rao, M. A., N. Appanna M. Sc. and A. S. Murthy, B. A., for helping us with guidance and advice.

Our thanks go also to all the writers of the above mentioned plays for permitting us to enact them, and to all those who took part in the various cultural activities of our Association.

Y. HARSHAVARDHANA RAO, III B. Sc.  
*Secretary.*

# VALEDICTORY FUNCTION - 4th MARCH, 1967

## LIST OF PRIZE WINNERS - 1966 - 67.

### Telugu Literary Association :

- ESSAY WRITING COMPETITION : I Prize : V. Badarinath  
II Prize : B. Subba Rao  
ELOCUTION CONTEST : I Prize : V. Mohana Kumar  
II Prize : P. Gopi

### Hindi Literary Association :

- ESSAY WRITING COMPETITION : I Prize : K. V. Subrahmanyam  
II Prize : D. Satyanarayana Raju  
ELOCUTION CONTEST : I Prize : M. S. Krishna  
II Prize : Abid Hussain

### History, Economics, Politics & Commerce Association :

- ESSAY WRITING COMPETITION : I Prize : P. Rajkumar  
II Prize : R. Ramesh Babu

### Mathematics And Science Association :

- ESSAY WRITING COMPETITION : I Prize : V. Badarinath  
II Prize : R. T. Jairaj  
GENERAL QUIZ : I Prize : N. E. L. Narasinga Rao & Team  
II Prize : P. S. Sankara Reddy & Team  
SCIENCE QUIZ : I Prize : H. Devarajan & Team  
II Prize : V. Badarinath & Team

### Planning Forum :

- ESSAY WRITING COMPETITION : I Prize : R. Ramesh Babu  
II Prize : M. Soundara Rajan  
ELOCUTION CONTEST : I Prize : N. Peri Sastry  
II Prize : R. Ramesh Babu  
QUIZ CONTEST : I Prize : H. Devarajan & Team  
II Prize : N. E. L. Narasinga Rao & Team

### Dramatic Association :

- EVARIDI MOSAM : I Prize : Shaik Iqbal Ahmed  
II Prize : P. Kesava Rao  
PATTALU THAPPINA BANDI : I Prize : Y. Divakara Rao  
II Prize : P. Gopi  
Special Prize : P. L. S. Baba  
GIVE MY MONEY BACK : I Prize : Anup V. Ambrose  
II Prize : Aubrey Hoyle  
GAYYALEYAM : I Prize : P. Gopi  
II Prize : K. Syam Sunder  
MANASTHATHWALU : I Prize : Y. Divakara Rao  
II Prize : P. L. S. Baba



## ANNUAL REPORT OF THE N. C. C. INFANTRY 1966-67.

DURING last summer two volunteer cadets, U/os T. A. S. Sarma and Anbe Rao, were sent to the Kashmir border to be attached to the regular army for a period of one month. Cadet Sgts. Rama Raju and Seshasai attended the advanced leadership camp at Manali. We also sent cadet U/o Leela Prasad to the All India Summer Training Camp at Bhowali and Cadet Sgt. Williams to the All India Combined Training Camp at Bangalore.

We started recruitment to the N. C. C. Infantry as early as July 13th, 1966, a week after the commencement of classes for Junior students. We have been recruiting only six companies since last year in our College Infantry Wing, under the command of six Coy Commanders. To suit the College Hostels all the Pre-University students were asked to enrol themselves in the Infantry only, while the first degree students were allowed to join in any wing of their choice, Infantry, Navy or Air Wing. The senior cadets continued in their respective wings. The first four companies were almost all raw recruits of Pre-University class with a handful of senior cadets in each company to help the coy commander, while the remaining companies had a fair complement of degree students.

For the last two years, since there was a pooling of all instructors available in Vijayawada, we had parades for only two days in a week for all the coys. This academic year, that practice had to be waived. Owing

to lack of instructional staff this year the Infantry parades were conducted on four consecutive days, two days for Pre-University and the remaining two days for degree students along with the Navy and Air Wing. Only instructors of the 15th (A) Bn., who were less than the authorised strength, took the parades for all the companies spread out over four days.

A little more than a thousand cadets had been enrolled in the Infantry by September. Many students, especially of the degree classes, do not seem to realise the spirit of the N. C. C., so that it has become a hard task to induce these unwilling boys to join. In this enrolment I am greatly indebted to Rev. Fr. Principal, who took special interest in speaking to all the boys in person who had failed to join from the beginning, and even informing their parents, warning them of the consequences if their wards did not join the N. C. C. At last N. C. C. Infantry recruitment was more or less completed a few days before the closing of the College for the first term.

During the first term we conducted a series of practices in shooting and bayoneting. Our College team took part in the Earl Roberts shooting competition conducted at Secunderabad in the month of October 1966 (I have already explained in detail the Earl Roberts shooting competition in my report of last year). Our team stood first this year also and won the shooting shield. The best shot was also from our team: cadet U/o S. S. R. Anjaneyulu, judged the best shot in

the state. The laurels for the best team and the best shot have thus accrued to Andhra Loyola College for two years running. By a narrow margin we lost the title of the best shot in India, which we won last year. We shall try our best to regain that title at least next year.

We also stood first in bayoneting and come second in the Burdhan shooting competition with cadet U/o Leela Prasad as the best shot in that competition. Cadet U/o T. A. N. Sarma was declared the best bayonet fighter in the state for this year. Last year our senior cadet U/o Ravinder won that title. This year he was not allowed to participate according to the rules of the competition.

Besides the above creditable activities, we had a number of combined parades of all three wings of the College such as "Promise Parade", "Independence Day Parade", "Solidarity Day Parade", "N. C. C. Day Parade" and "Republic Day Parade". Rev. Fr. Gordon, Principal of our College, took the salute on all these occasions and contrived to have something new and useful to tell the cadets each time. The majority of the cadets of all the wings, Infantry, Navy and Air Wing, took part in these parades.

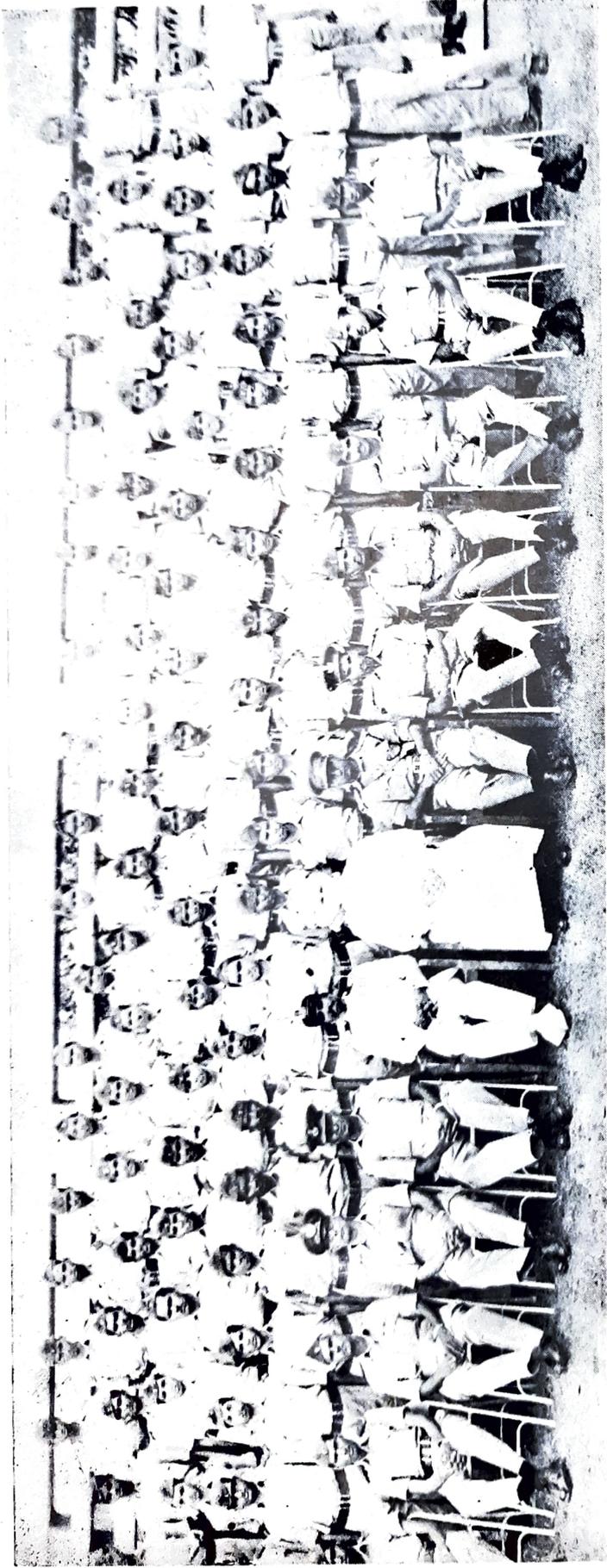
Owing to the steel plant agitation, a number of important functions like N. C. C. Rally at Secunderabad and combined central N. C. C. day parade were cancelled. Our cadets were very well-behaved and well disciplined during those days of agitation. I must congratulate all my cadets for their excellent disciplined behaviour at a most difficult time. We followed demo-

cratic methods of expressing our opinion without indulging in hooliganism, or destroying public and private property.

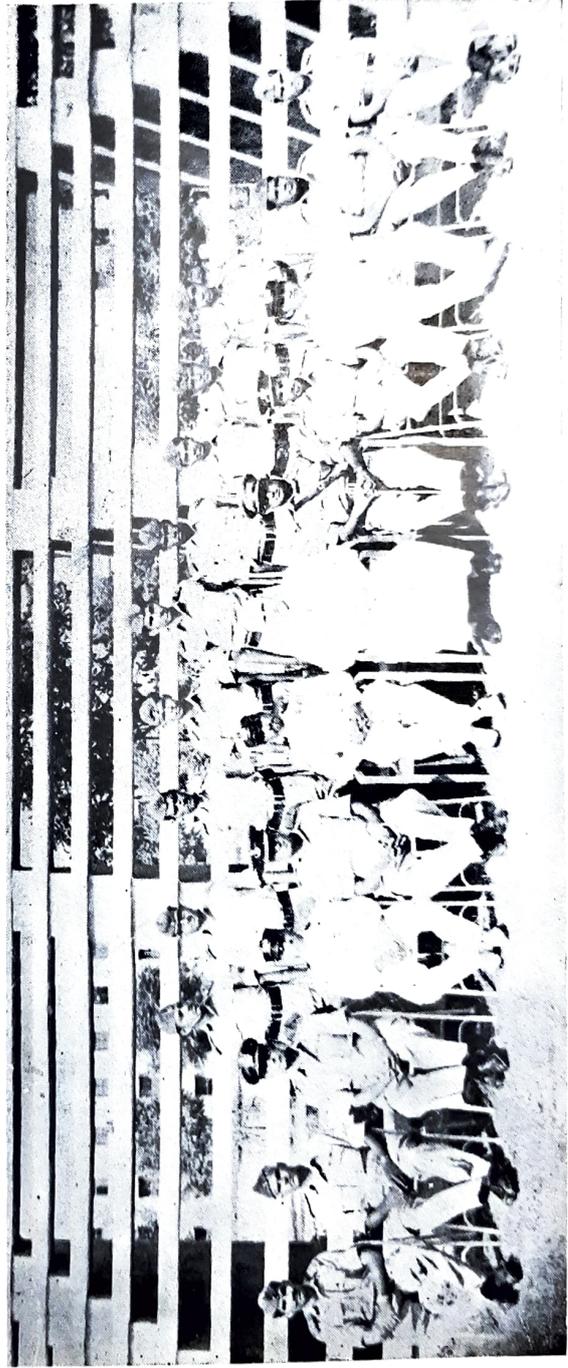
The Annual Training Camp was held at Nambur from 23rd December, 1966, to 1st January, 1967. The allotted strength of our cadets attended the camp which was conducted by Major Srimannarayana, the O. C. of the 15th (A) Bn. All the cadets expressed to the V. I. P's who visited them such as Rev. Fr. Rector, Rev. Fr. Principal and officiating group commander Major O. P. Chari, that they much enjoyed their camp life. The other cadets who failed to attend felt sorry for missing such a happy experience. It is worthy of note that our College was one of those very few institutions in the Andhra University area which participated in the Annual Training Camps, not only in Infantry but in Navy and Air Wings also. This really shows how it is possible with a little co-operation to accommodate the N. C. C. activities in the curriculum without interfering with the regular academic work. This year we sent four of our cadets to Secunderabad for the selection of the Republic Day Contingent, of whom three cadets, T. A. N. Sarma, S. S. R. Anjaneyulu and Jaya Kumar Basu, were selected for the contingent while the fourth cadet, Leela Prasad, was kept in reserve. It is really a great achievement for an institution to have three of its infantry cadets included in the small contingent of the state. Our state contingent won the N. C. C. banner of the Republic Day, 1967, in the Inter Directorate Competition.



Andhra Loyola College - N.C.C. Infantry Wing - B & C Certificate Examinees



Andhra Loyola College - N.C.C. Air Wing



N.C.C. Air Wing - Under Officers and Certificate Holders

For all the N. C. C. laurels won by Andhra Loyola College I congratulate heartily the cadets who participated in the events. I thank very much my Battalion Commander, Major Srimanarayana, who helped in arranging a number of special parades for competition. I would fail in my duty if I did not acknowledge the efforts and keen interest evinced by my Subedar Major Dhilip Singh and other Subedars and P. I. Staff under his command who took all pains to help our cadets win glory.

N. C. C. Certificate Examinations were conducted on the 5th of February, 1967, when a large number of our cadets appeared both for 'B' and 'C' Certificates. I hope that our passing percentage in the above

examinations will reach a new record.

Our Group Commander Lt. Col. Bharat Singh was transferred to Punjab in the month of October, 1966. He has not been replaced yet. Major O. P. Chari, the administrative officer of the group, has been officiating as group commander.

Above all, I thank Rev. Fr. Principal for his guidance and advice and also the Rev. Fr. Wardens for their co-operation in releasing the hostel boys so that they could take part in public parades. I am greatly indebted to them for inducing the cadets to attend the N. C. C. camps; without their help and co-operation, I could not have maintained the present standards in the N. C. C.

Capt. M. D. A. ANANDA RAO.

## N. C. C. AIR WING ANNUAL REPORT 1966-67

THIS year our activities began as usual with the enrolment of cadets. As in previous years there was a great rush for admission to the Air Wing. We could not avoid sending many applicants away disappointed. After the enrolment was completed, the training was conducted according to the syllabus. Since the inception of this unit, there have been no facilities to impart training in gliding and power flying. Even without these facilities our squadron is second to none among the N. C. C. Air Squadrons in the state. About fifteen of our cadets have joined the regular Air Force as commissioned officers in various branches. Without considering all these facts, the unit was kept in suspended animation during August

1966. The reason given for this was that there were no facilities for gliding and power flying. With the kind intervention of Rev. Fr. Principal the unit is retained permanently.

Our cadets took part in ceremonial parades on August 15th, October 20th and January 26th. They have proved themselves the best in all respects at the last four training camps. This year 125 cadets attended the combined annual training camp. Unfortunately, both our Air Wing N. C. C. officers could not attend the camp. Our squadron proved to be the best in discipline, kit - layout and drill, even without the guidance of their own officers. This was revealed by Sqdn. Ldr. A. M. Mehta at the camp and

again during his visit to Vijayawada to conduct certificate examinations. Out of 30 cadets, 28 passed the 'B' Certificate examination, and 13 cadets out of the 15 that appeared passed the 'C' Certificate examinations. Cadet U/o K. Devendra Prasad and Cadet Warrant Officer K. Koteswara Rao were selected to represent our state at the Republic Day parade at Delhi.

I must express my deep thanks to Rev. Fr. Principal for his able guidance and kind help, readily given whenever required. I must also express my appreciation to the Hostel Wardens for their kind help in relieving the boys at odd times. I thank Rev. Br. Susai Arul for his ready help in supplying refreshments to the cadets. I am grateful to all the P. I. staff, particularly Flt. Sgt. Dutta and Sgt. Narayanan, who gave of their

best throughout the year and especially during the camp.

Recently orders have been received by the Superintending Engineer P. W. D. to acquire a site for the construction of hangars at Gannavaram Air Field. The construction of hangars may be completed in the next academic year. Aeromodelling instructor A. Bhavani Prasad is transferred to No. 1 Andhra Air Sqdn. N. C. C., Secunderabad. In his place our old cadet P. Janardhana Rao is appointed. We hope cadets will be able to learn aeromodelling under his guidance. Cadet Warrant Officer P. S. N. Murthy was adjudged the best Aeromodeller during 1966-67. During this year Flying Officer K. Gopala Rao completed his first refresher course at Air Force Technical College, Jalahalli, Bangalore.

*Flying Officer K. GOPALA RAO*

## ANNUAL REPORT OF THE N. C. C. NAVAL WING 1966-67

COMING events cast their shadows before. This has proved true in the eventful year 1966-67 which began on the pleasant note of the announcement of the results of 'B' and 'C' Certificate examinations of the previous year. We secured 80% pass in 'B' and 100% pass in 'C' Certificate examinations. With the receipt of this news the morale of the Naval Wing registered a marked increase.

Even before we could enrol cadets, we were in receipt of reports from three of our young sailors, Cadet Captains K. Wajid Ali Khan and

G. Devi Prasad and leading cadet B.V.S.S. Sastry, who represented our College at the Nau Sainik Camp held at Sainik School, Bangalore, on an all India basis. They described the highlights of their stay there from 2nd to 16th May. They were given special training in sailing and were privileged to visit Indian Aeronautics and Bharat Electronics. They had also a pleasant trip to Mysore where they visited places of historic interest. It is a matter of pride that they had a number of high dignitaries to visit them, all enumerated in the account of the camp given elsewhere in the magazine.

After the normal routine of enrolment was over our Naval Wing plunged into a series of activities and it is needless to say that the boys were busy the whole year round. The special feature of this year is that special arrangements have been made for boat pulling exercises at Poranki. The cadets have benefited from this facility and took part in all the exercises.

The cadets were present in strength on the 15th of August when a ceremonial parade was conducted to mark Independence Day. The Principal took the salute. On National Solidarity Day the cadets fell in line with the rest of the country to pledge their loyalty once again to the Nation. On 21st November, N. C. C. Day, the Naval Wing attended in full strength and had the privilege of being addressed by our Principal, who commended the part played by the N. C. C. and stressed the need for self-discipline.

From the normal routine of regular parades our cadets had a welcoming change at Vedayapalem near Nellore, when 49 of them, led by Sub. Lt. Ramakrishna, represented our College in the combined annual training camp. While at camp they were given exercises in boat pulling, and shooting, and a detailed knowledge of Naval Science was also imparted to them. It was a merry Christmas and a happy New Year to the boys when the Unit Commander Lt. Chandran read out the greeting from the Principal before cutting the cake.

On 26th January, Republic Day, all our sailors enthusiastically participated in the parade in full ceremonial dress. Their neat white uniforms added distinction and glamour to the entire programme.

The year would have been a very pleasant one but for the sad death of one of our active young sailors, P. O. cadet N. V. L. Narasimha Rao, who was involved in a drowning accident. We could scarcely believe our ears when we heard the sad news which pained every heart that knew and loved him. May his soul rest in peace!

I thank the Commanding Officer Lt. Chandran for his valuable guidance and for arranging the truck to take the cadets whenever boat pulling exercises were conducted. I thank the instructional staff for taking keen interest in imparting good training to the cadets.

I must end this report by thanking Rev. Fr. Principal for all his advice during the year and for his kind help in aiding us to organise the unit. It is a real encouragement to officers and cadets to see our Principal so often on the parade ground. Also I thank the Wardens of the College Hostels, Rev. Fr. J. Kuriakose, S. J. and Rev. Fr. A. Theckemury, S. J., for their kind cooperation in allowing the Hostel cadets to attend the camps and parades whenever wanted. We wish all our cadets success in their University Examinations.

Sub. Lt. B. KOTESWARA RAO

## REPORT OF THE DEPARTMENT OF PHYSICAL EDUCATION 1966-67

Mr. President,\* Ladies and Gentlemen,

I am happy to place before you the report of the Department of Physical Education of Andhra Loyola College for the year 1966-67. This year we started our activities as early as the month of July, 1966. The following players were nominated as Captains and Vice-Captains in the last week of July, 1966 :

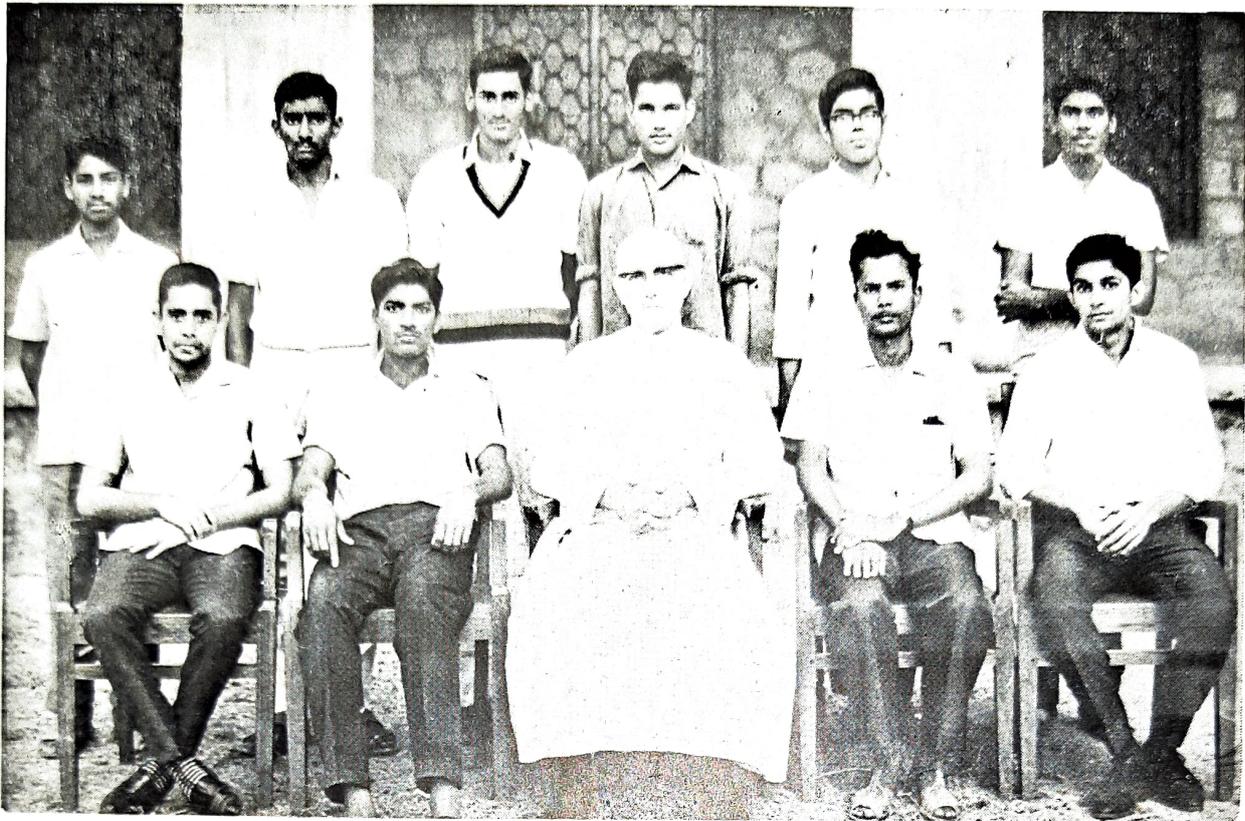
<b>Football :</b>	T. L. Prakasa Rao	— Captain
	P. K. S. Suvisham	— Vice-Captain
<b>Volleyball :</b>	N. Anjaneyulu	— Captain
	Md. Munwar Shareef	— Vice-Captain
<b>Basketball :</b>	R. T. Jaya Rao	— Captain
	M. Vasundara Rao	— Vice-Captain
<b>Hockey :</b>	D. Jaya Prakash Narayana Reddy	— Captain
	P. Bheemeswara Rao	— Vice-Captain
<b>Badminton :</b>	A. L. N. V. Prasad	— Captain
	Md. Hyder Ali	— Vice-Captain
<b>Kho-Kho :</b>	M. George	— Captain
	K. Vasudeva Rao	— Vice-Captain
<b>Table Tennis :</b>	H. Deva Rajan	— Captain
<b>Athletics :</b>	A. Sridhar	— Captain
	N. David	— Vice-Captain
<b>Weight lifting :</b>	V. Umamaheswaram	— Captain

Secretary to the Dayscholar's Recreation Centre : N. Pardha Saradhi.  
D. Jaya Prakash Narayana Reddy of III U. C. was elected General Captain unanimsously.

This year we played a number of matches with both local and outside teams on our College grounds and elsewhere in the following games : Hockey, Cricket, Basketball, Volleyball, and Kho-Kho. We participated in the Vijayawada Cricket League tournament and came out runners-up in the league.

A record number of our players was selected to represent the Andhra University in different games this year. H. Ramaswamy, J. Narendhranath and R. V. V. K. Prasad were selected for both the Andhra State Junior Cricket Team and Andhra University Cricket Team. Prasad was nominated

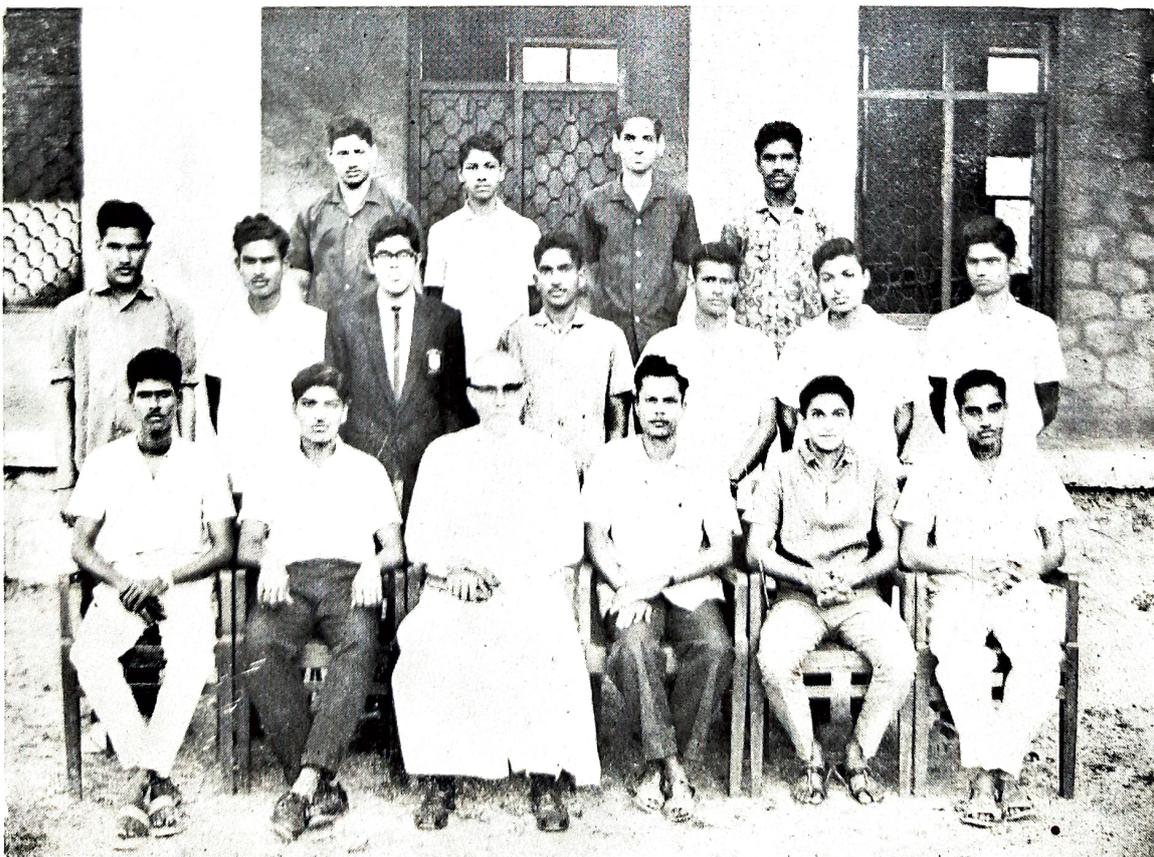
\* Sri R. Narayanaswamy, I. P. S., Deputy Inspector General of Police.



**Selected to represent the University :**

*Seated :* G. Ramakrishna (Cricket), J. P. Narayana Reddy (Hockey), Fr. Principal, P. Rayanna (Manager, Hockey), R. V. V. K. Prasad (Cricket, University Captain).

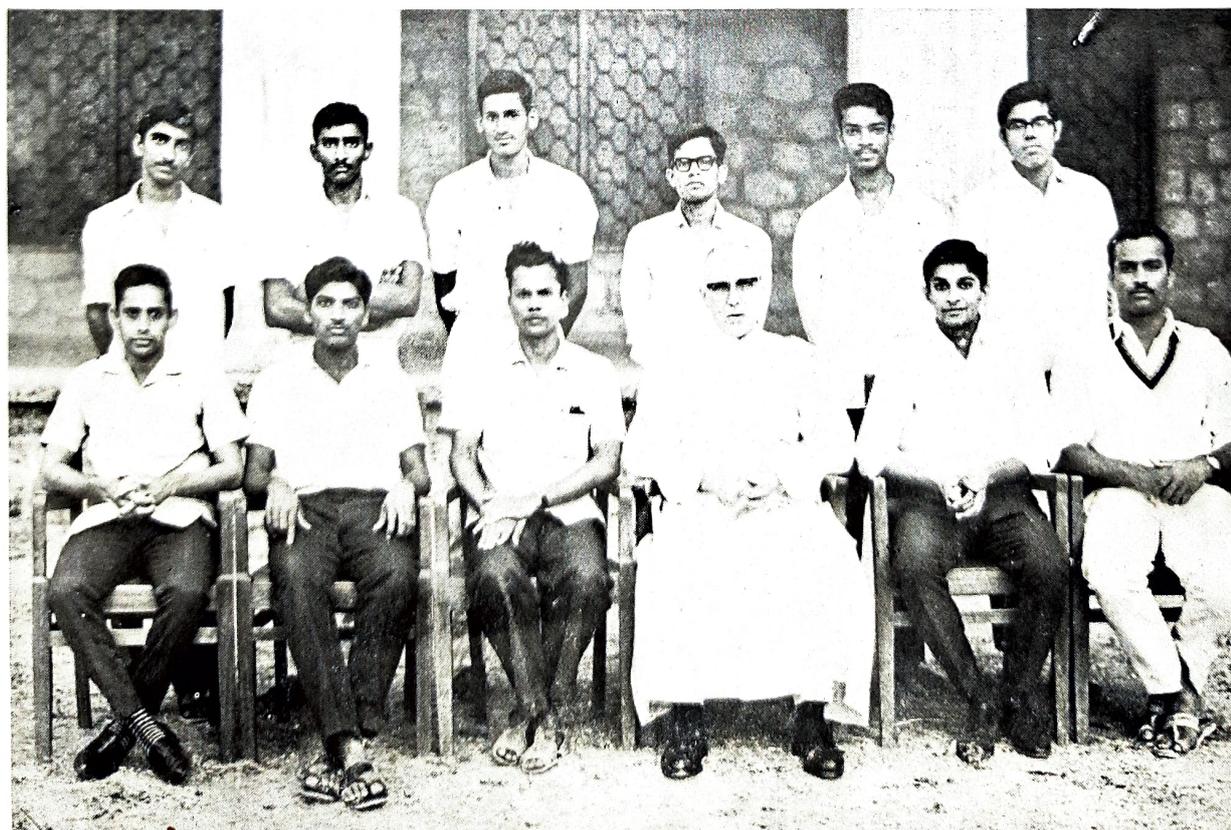
*Standing :* M. George (Kho-Kho), J. Narendranath (Cricket), H. Ramaswamy (Cricket), K. Vasudeva Rao (Kho-Kho), H. Devarajan (Table Tennis), N. Samuel Prasad (Hockey and Athletics).



**Captains and Vice Captains of College Teams**



College Kho-Kho Team : University Champions



College Cricket Team : University Runners-up

as the Captain of the Andhra University Cricket Team. G. Rama Krishna was also chosen for the Andhra University Cricket Team. D. Jaya Prakash Narayana Reddy, our General Captain, P. Bheemeswara Rao, and N. Samuel Prasad were chosen to represent the Andhra University in Hockey. N. Samuel Prasad was selected to represent the Andhra University in Athletics also. H. Deva Rajan was selected to represent the Andhra University in Table Tennis. K. Vasudeva Rao was chosen to represent the Andhra University in Kho-Kho and M. George as standby.

We have conducted the Andhra University Hockey selections on 28th, 29th and 30th December, 1966, on our College grounds. After a week's coaching camp in our College the team left for Tirupati to play against Bangalore University in the South Zone Inter-University Hockey Tournament. Mr. P. Rayanna, Physical Director of the College, accompanied the team as coach and Manager. Andhra University lost the match by the narrow margin of 3 : 2. Later on Bangalore became the winners in the South Zone. In the All India Inter-University Hockey Tournament Bangalore Team were the runners-up.

We could not conduct the Andhra University Inter-Collegiate Tournaments at the usual time owing to the steel plant agitation in Andhra Pradesh. Our College participated in the following games in the "C" Zone : Basketball, Volleyball, Hockey, Cricket, Shuttle-Badminton, Tennis, Table Tennis and Kho-Kho.

We lost in Basketball, Volleyball, Hockey, Tennis and Shuttle - Badminton in the first round. We were zonal champions in Kho-Kho, Cricket and Table Tennis doubles.

Our College participated in Kho-Kho, Cricket, Table Tennis doubles, Table Tennis singles, Weight lifting and Athletics in the Andhra University Central Zone. We were winners in Kho-Kho, runners-up in cricket and Table Tennis doubles. V. Umamaheswaram secured second place both in weight lifting and body building. T. L. Prakasa Rao secured third place in Hop Step and Jump, and fourth in 110 Mts. Hurdles. I should be failing in justice if I did not pay a tribute to our college Kho-Kho team. These players, under the captaincy of M. George, practised seriously and regularly from the beginning of this year, without any goading from the Physical Director. There was splendid team spirit among them and they cooperated wholeheartedly with their Captain, which explains their outstanding success.

This year we conducted the Intra-Mural Tournaments on a class wise basis, i. e., the teams being drawn from the Pre-University, I year, II year, and III year classes in the following games : Football, Volleyball, Basketball, Hockey, Kho-Kho, Badminton and Table Tennis.

The following are the results of the Intra-Mural tournaments :

	Winners	Runners-up
Football	III Year	II Year
Volleyball	II Year	P. U. C.
Basketball	P. U. C.	III Year
Hockey	II Year	I Year
Kho-Kho	P. U. C.	II Year
Badminton	III Year	II Year
AND		
Table Tennis	II Year	P. U. C.

I am thankful to Rev. Fr. Principal for his encouragement and able guidance. I wish to express my thanks to Rev. Fr. Rector and the Wardens for all their cooperation in getting the Hostel students to take full part in games. I thank Mr. K. Nageswara Rao and Mr. B. S. M. Suresh Babu for their ready help to this Department. Lastly I have to thank the General Captain, Captains, and Vice-Captains of the teams and all the players for their sincere cooperation throughout the year and especially during the time of the Sports Meet.



# 12th ANNUAL COLLEGE SPORTS MEET 1966-67

## PRIZE WINNERS

### SENIORS

Event	Ist Place	IInd Place
100 Mts.	N. Samuel Prasad	S. Shariff Ahamed
200 Mts.	N. Samuel Prasad	S. Shariff Ahamed
400 Mts.	A. Hoyle	T. L. Prakasa Rao
800 Mts.	A. Hoyle	E. John Suryodayam
1500 Mts.	A. Hoyle	E. John Suryodayam
5000 Mts.	A. Hoyle	E. John Suryodayam
110 Mts. Hurdles :	T. L. Prakasa Rao	S. Shariff Ahamed
400 Mts. Hurdles :	S. Shariff Ahamed	T. L. Prakasa Rao
Long Jump	N. Samuel Prasad	T. L. Prakasa Rao
Hop Step & Jump:	T. L. Prakasa Rao	M. B. J. R. K. Prasad
High Jump :	M. Rama Mohana Rao	N. Samuel Prasad
Pole Vault	N. Samuel Prasad	K. Kotaiah
Shot Put	David Nazareth	K. V. Subba Rao
Javelin	N. Samuel Prasad	K. V. Subba Rao
Discuss	J. Honeyford	N. David
Hammer	N. David	J. Honeyford
4 x 110 mts. Relay :	S. Shariff Ahamed	T. L. Prakasa Rao
4 x 400 mts. Relay :	1. S. Shariff Ahamed	1. T. L. Prakasa Rao
	2. B. Balanna	2. M. B. J. R. K. Prasad
	3. E. John Suryodayam	3. G. Koteswara Reddy
	4. G. Ambe Rao	4. G. Bala Showry
4 x 100 mts. Open Relay :	Vijayawada Greens	Andhra Loyola College

Senior Champion : N. SAMUEL PRASAD

### JUNIORS

Event	Ist Place	IInd Place
100 Mts.	M. George	O. Prakasam
200 Mts.	M. George	K. Sitaram Naidu
400 Mts.	M. George	K. Ananda Rao
110 Mts. Hurdles	M. George	G. Satyanarayana Reddy
Long Jump	M. George	N. Rangaiah
High Jump	H. Franklin	K. Balaiah
Pole Vault	G. S. Reddy	V. David Raj
Shot-Put	O. Prakasam	P. R. B. Obula Reddy
4 x 100 Mts. Relay	1. H. Franklin	1. M. George
	2. S. N. Reddy	2. N. Rangaiah
	3. Joseph Anselm	3. S. Subba Reddy
	4. G. Satyanarayana Reddy	4. N. Samuel

Junior Champion : M. GEORGE

## SUB - JUNIORS

Event	Ist Place	II Place
100 Mts.	S. Kannan Naidu	K. Anthony Reddy
200 Mts.	S. Kannan Naidu	K. Anthony Reddy
Long Jump	S. Kannan Naidu	K. Anthony Reddy
Sack Race	K. Anthony Reddy	P. Satya Prakash Reddy
Three Legged Race	K. Anthony Reddy	P. Jojaiah
	K. Rajendra Prasad	P. S. P. Reddy
Cricket Ball throw	P. Jojaiah	S. Kannan Naidu
4 x 50 Mts. Shuttle Relay	1. P. Jojaiah	1. S. Kannan Naidu
	2. P. Satya Prakash Reddy	2. L. P. Sekhar Rao
	3. K. V. R. Murali Krishna	3. B. V. S. Prakash Rao
	4. P. Nagabhushana Rao	4. Ratna Gopal

Sub-Junior Champion : S. KANNAN NAIDU

## COMMON EVENTS

Event	Ist Place	IInd Place
Obstacle Race	T. L. Prakash Rao	S. Shariff Ahamed
Sack Fight	R. V. V. K. Prasad	K. Ananda Rao
Fancy Dress	P. R. K. Prasad	P. Gopi
Old Boys 100 mts.	Ch. Rama Rao	Ch. Bhavani Sankar

## STAFF TOURNAMENTS

	Winners	Runners-up
Volley Ball	Physics Department	Chemistry Department
Badminton	Physics Department	Chemistry Department
100 mts.	Sri B. S. M. Suresh	Sri E. S. R. K. Prasad
Slow Cycling	Sri B. S. M. Suresh	Sri E. S. R. K. Prasad
Musical Chairs for Guests	Sri K. Venkateswara Rao	Sri T. Ponniah
College Attenders Race	B. Yesudas	B. Joji
Hostel Attenders Race	Appala Konda	Sleevaiah
Building Workers Race	P. Das	P. Ananda Rao
Tug of War :	Staff	Students



# విశ్వజ్యోతి



గురుదేవుని కవితాకన్య గళమెత్తి మంజులస్వరమున  
నాలపించె నొక దేవగీతి

అలకించిన మహాత్ముని హృది పరవశించి పాడినది  
“నా మాతృభూమియందు నా స్వర్గమందని”

“ప్రభూ : ఇది నా దేశము, నా బంగరుకలల కాధారము  
నీ చరణధ్వనికి నాహృది వివళమగుటకు ముందు  
నే వెల్లింపవలయు నొక “విశ్వజ్యోతి” అనెను జవహర్

ఏ ప్రభాత సమయము నవలోకించినను  
ఏ స్వాతంత్ర్య సమరము జ్ఞప్తికి వచ్చినను  
ఏ దేశపు టున్నతి తిలకించినను  
వీరు విద్యుల్లతలవోలె భాసించురు  
భారతజననీ : ఎంతటి ధన్యచరితవు నీవు !



M. V. Subba Rao, P. U. C.

## IN MEMORIAM

The second week of September 1963 will go down in College history as one of heart-rending sorrow because five of our final B. Sc. students lost their lives during those fateful days, in two drowning accidents in the River Krishna. The first two to be lost on September 7th were N. V. L. Narasimha Rao and B. Venkata Reddy, hostellers and block leaders in the Gogineni Hostel. The next three to die on September 12th were N. Satyanarayana Murthy, B. Hector Paul and M. Ranga Rao, dayscholars. They were all carried away by the current at the same spot in the river and in almost identical circumstances while bathing. What makes the tragedy all the more poignant is that as many as three of them were drowned trying to save their companions who were in difficulty.

Narasimha Rao joined the College in 1963 in the Pre-University course and had been four years with us. Though quite intelligent, he was less interested in his books than in other curricular activities. He distinguished himself as a cadet in the N. C. C. Navy Wing and was selected for the trip to the Andamans 1965. He was always a cheerful companion entertaining others with his conversation and jokes. His numerous friends were greatly saddened by the news of his untimely demise.

Venkata Reddy was also with us for four years. Of a more retiring temperament, dutiful and hard-working, he was very fond of hostel life, took great pains to arrange for functions, and in general made himself useful. His friends and the authorities knew him to be a loyal and responsible young man.

Satyanarayana Murthy was a student of this College in the Pre-University course and first year degree and a member of the hostel also. During the second year degree he tried another College, but returned to us in the final year of the B. Sc. course. Of average intelligence, he found studies burdensome. Characterised by a friendly disposition, he would sympathise with anyone in distress and was therefore quite popular among his classmates.

Hector Paul joined the College from the Pre-University course and was also in the hostel for the first two years. He was an intelligent student whose performance in class was quite creditable. Fond of music, his talents were frequently utilised for instrumental items at College and Hostel functions. By temperament cheerful and extroverted, his friends knew him as a jolly companion, ready for fun; for that very reason his loss is harder to bear.

Ranga Rao was a student of the College for full four years and a member of the hostel for three of them. Intelligent above the ordinary, he managed his studies with little difficulty. Imaginative and adventurous, frank and disarming, he was always a pleasant companion and conversationalist. He was known also for his generosity and would readily help anyone temporarily out of pocket.

We grieve over the sudden end to these promising young lives and extend their our heartfelt sympathies to their bereaved parents. May God rest their generous souls!

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# జ య కౌ ర ము



1. సిరులకొటారమై ప్రభుతచెల్లు కులమ్మునఁ బుట్టి, గట్టి రా  
చటికము చేసి, దేశహిత చర్యలలో గడిదేటి, తెల్లుకై  
సరులకు నల్లవారయి, ప్రజాసచివుండగు నీ ప్రసాద భూ  
వరుని దెలుంగురాయఁడు కృపామయ దృష్టిని జూచుఁగావుతన్
2. అరువదియేండ్ల పండువొక యబ్బురమా : శివరామ భూపతీ :  
యరుదుగ నీవు పూర్ణపురుషాయుష జీవన శాలివై, యితః  
పరము మహాంధ్రరాష్ట్ర విభవమ్మునకున్, భరతోర్వరా రమా  
గరిమకు మీఁదుకట్టెదవుగాక : ధనాది సమస్త శక్తులన్
3. ఈ దివి సీమయందు నొకయేలిక తిల్లికవెట్టి, యాంధ్ర రా  
జ్యోదయ భూతికై యసుఱులొడ్డి. జయమ్ముగడించె; నీవు దు  
ర్వాదములొత్తి, నాఁడు బెజవాడ సభన్ నిజరాష్ట్ర సిద్ధికై  
వేదన పొందినాఁడ; విది వింతయె ? దేవరకోట నాయకా :
4. దేవరకోట క్రొందెలుఁగు తీరుల సౌరుల కాటపట్టుగాఁ  
గావలెఁ; గృష్ణవేణ్ణ యిరుగట్టుల చాయలలో సరస్వతీ  
దేవి వయాశి చేయవలెఁ; దెల్గుపొలానఁ బరిశ్రమల్ కళల్  
నీవలనన్ రహింపవలె; నీకుఁ బ్రజల్ జయవెట్టుఁగావలెన్
5. కాకుళపట్టణమ్మున నొకానొకనాఁడు తెలుంగు బావుటా  
యాకసమంఠె; బుద్ధ వచనామృత మొల్కెను ఘంటశాలలోఁ;  
బ్రాఁకె మహాంధ్ర సభ్యత ధరాస్థలి హంసలదీవి నుండి; యా  
పోకడ నేఁడు నై తము ప్రబుద్ధము గావలె నీ కతంబునన్

6. నిలిపెన్ నన్నయ రాజరాజు యశమీనేలన్; కవిబ్రహ్మ ప  
 ల్కులలోఁ బొల్చును మన్మసిద్ధి నరపాలుం; డెఱునామాత్యుకై  
 తల. శ్రీనాథుని వాక్కులన్ స్థిరత చెందంగల్గి రారెడ్డి రా  
 జులు; బ్రహ్మయువు పోయనేర్తురు కవీశుల్ చల్లపల్లీశ్వరా !

7. తెలుఁగుంగై తలు చెప్పనేరిచిన గాంధీయోగి మద్దేశికుం  
 డనవద్యంబగు రాష్ట్రగానమును నీకర్పించె; నాసత్కవీం  
 ద్రుని వాక్కారవిచంద్ర తారకముగా శ్రుత్యుక్తియై నీ మహ  
 త్తను జాటున్ శివరామ పార్థివకులేంద్రా ! యేర్ల గడ్డాన్వయా !

8. తెలుఁగు నదీనదమ్ములు వట్టిపోలేదు  
 మంచినిటికి దేవురించవలయు  
 భూగర్భ సంపత్తి పొరమాలి పోలేదు  
 వివిధ పరిశ్రమల్ వృద్ధిగావు.  
 పౌరుష ప్రతిభలు పాడటి పోలేదు  
 బ్రహ్మాండ యశము కై వసముగాదు  
 ఆత్మావలోకనాభ్యాసంబు పోలేదు  
 త్రికరణ పరిశుద్ధి దీటుకొనదు.  
 ఈ తెలుఁగువారి ద్వంద్వ ప్రవృత్తికేమి  
 హేతువో ? యే శనిగ్రహ మీ తెలుంగు  
 గడ్డకుం బట్టెనో ? యీ వికారమెట్లు  
 సమయునో ? శివరామ ప్రసాద భూప !

[చల్లపల్లిరాజా షష్ఠి పూర్ణుత్సవమున నా పఠించిన పద్యములు]

నాగళ్ల గురుప్రసాదరావు,  
 యం. ఏ.

# ప్రార్థన

గౌరెపాటి రామచంద్రం  
బి. యస్. సి. (తృతీయం)

ఓ భగవాన్ :

రసమయమైన ఈ జగత్తులో

రసాస్వాద చిత్తుడనై

ఆనంద దోలికలలో విహరించుటకు ఆనుమతించు.

రసోక్తంతతో పరితపిస్తున్న నన్ను  
రసమయి అయిన ప్రకృతిపరిష్కంగములో  
పసిపాపవలె సంచరించనీయి

రసాభాసకాకుండా రసోపలబ్ధి యగునట్లు ఆశీర్వదించు.

రసమయమైన జగత్తును ఆరాధించుటకు

ప్రకృతి శక్తులను చేరి పూజించుటకు

వలసిన సంస్కారము నాకు ప్రసాదించు.

ఆశలనే అంతరిక్షంలోకి

అజ్ఞానమనే అగాధంలోకి

అస్తిత్వమనే అసత్యాగ్నిలోకి

నన్ను త్రోసివేయకు.

ముళ్ళమయమైన జగత్తులో

విరాళకు చేర్చే మార్గాలలో

కాలు జారకుండా నన్ను కనికరించు.

స్వార్థమయమైన ఈ లోకంలో

సమానత్వమనే వెన్నెలతిన్నెలల దరికి

నిస్వార్థమనే వెలుగు బాటను

స్పష్టముగా నా కెరింగించు.

ఆకసాన కెగత్రాకే ఆశావాదుల  
అడవులపాలై న నిరాశావాదుల  
స్మృతులనుంచి నన్ను దూరముగా ఉంచు.

సగ్గుశరీరానికి వస్త్రమూ  
కాలేకడుపుకి కొంచెమాహారమూ  
చంచలమైన మనస్సుకు స్థిరత్వమూ ప్రసాదించు.

మందులు లేని మనోవ్యాధులనుంచి  
మందులు చాలని ఇతరత్రములనుంచి  
వాటికి కారణమైన స్థితిగతులనుంచి నన్ను కాపాడు.

బూజుపట్టిన పాత సిద్ధాంతాలనుంచి  
నాగరికత అనే నిస్త్రాణనుంచి  
అనుకరణ అనే స్వప్నావస్థలనుంచి  
సంస్కారమనే ఉషస్సులో నన్ను మేల్కొలుపు.

నివురుగప్పిన విప్పువంటి సత్యాలను  
ప్రబోధచేసే సూక్తి ముక్తావళులను నన్ను విననియ్యి.  
వాటిని కనుమరుగుచేసే అజ్ఞానపు మంచు తెరలను చేదించు.

సత్యాన్ని సర్వత్రా  
మభ్యుచ్చి మోసగించే అసత్యాన్ని  
మా దరి చేరనివ్వకు.

సత్యాన్ని నమ్మే మాకు  
'సత్యమేవ జయతే' అనే మాకు  
వర్తమాన కాలంలో  
అసత్యమే గెలుస్తోందనే సత్యాన్ని విన్పించకు.

వికృతమైన ప్రకృతులకు  
విశేషముగా తలవంచేమాకు  
నిజమైన జ్ఞానాన్ని ప్రసాదించు.

నూతన మారణాస్త్రయుగంలో  
భయవిహ్వాలై యున్నప్రాణికోటి  
నిర్భయులై, ఆశాచితులై వర్తించునట్లు వరమియ్యి.

ప్రతిదినము వింతగొలిపే  
విజ్ఞాన సోపానములను  
అనవరతము ఆధిరోహించుటకు  
ఆవకాశము కల్పించు.

మేం సంఘజీవులం  
మంచి పనులూ చెడుపనులూ చేస్తున్నాం  
ప్రతిఫలంగా వచ్చిన మంచిని చెడునీ  
నీ విచ్చిన హృదయంలో భద్రపరుస్తున్నాం.

ఆదేమిటో...

వయసు పెరిగేకొద్దీ హృదయంలో దుర్గంధం ఎక్కువ చేరుతోంది !!  
మంచిని దాచుకోమని సువ్విచ్చిన మనస్సులో  
దుర్గంధం గూడు కట్టింది...  
దాన్ని పారద్రోలడానికి నాకు మార్గోపదేశంచేయి.

స్వీయలోపాన్ని తెలుసుకున్ననాడు  
హృదయంలోని మురికిని కన్నొన్ననాడు  
మనస్సులో దాగిన అమావాస్య చీకటిని తెల్చుకున్ననాడు  
అహం అనే మిత్రుడితో వైరం తెచ్చుకున్ననాడు  
నాలోని భావాలు నిరభ్యంతరంగా బహిర్గతమైననాడు  
సంస్కార సౌధం కన్నాపుమేరలో కన్పించిననాడు  
అమితంగా ఆనందించాను...  
ఆ ఆనందం నా కెల్లప్పుడూ ప్రసాదించు స్వామీ !!  
ఆ రోజు నే నీ జన్మలో మరువలేను !

గమనిక ఈ గద్యకవిత కళాశాల సాంస్కృతిక వారోత్సవములలో చదువబడినది.



# కాలం మారింది

[ గీతమాలిక ]

చదువరు లిదివరకు భక్తి గల్గియుండి  
దైవమంచు నెంచిరి, నేడొ, లేదు భక్తి  
గురువుపై నకటా! యెంత మార్పునొందె  
నాటికిన్ నేటికిన్ కాలమహిమ నెపుమ.

1

అరిగిరి గురువుల దరికరుదుగ నాడ  
తి ప్రయాసతో; చేసిరి భక్తి యలర  
నేవ నాడతి వినయత, గలరె యిప్పు  
డట్టి విద్యార్థు లింక నిజగతి యందు.

2

చేయరే! సమ్మెలన్ నేడు; గురువులన్ కృ  
తఘ్నత నెదిరింపరె మీటి; దిగుచు రాజ  
కీయముల నాశ మొందరే, యాహ! కలరె  
యిట్టి విద్యార్థు లప్పుడేజ్జగతి యందు.

3

మారె కాలంబు నేటి కిగ్గతికి, లేక  
మారునే? యట్లు నన్యోన్యమగుచు నొప్పి  
నగురు శిష్యాను బంధ మీనాటి కౌర!  
చక్రములు లేని శకటంబుబోలె ననగ

4

ఇట్లు మార్పునొందిన కాలమింకముందు  
నిట్టి మార్పునొందు ననుచు తెలిసి చెప్ప  
గల సమర్థు డిజ్జగతిన్ గలందొ, లేదొ  
యనుచు నామనంబున సంశయంబు దోచె.

5

బి. యస్. అప్పారావు,  
పి. యు. సి.

# నవ్వు !

ప్రేమించినపడతి పరాయి సొత్తుకాగ  
ప్రేమకు ఫలితం జీవితం చీకటికాగ  
ప్రేయసి ఓదార్పు మాటలు విని  
పేలవంగా నవ్వుతాడు భగ్నప్రేమికుడు.

కట్నమిచ్చే తాహతులేక  
కరువు కాలంలో అల్లుణ్ణి తేలేక  
కన్నతండ్రి కడు ముసలికి కట్టబెడితే  
కడసారి నవ్వుతుంది పేదవాడి కూతురు.

చాలీచాలని బత్తెంతో  
చచ్చిచావని బ్రతుకీడుస్తూ  
చిరునవ్వు నవ్వుతాడు చిన్నయుద్యోగి.  
దొరకని ఉద్యోగంకోసం  
దొరుకుతుందనే 'రికమండర్'తో  
దొరగార్ల ప్రదక్షిణం చేస్తూ  
'దొంగనవ్వు' నవ్వుతాడు నిరుద్యోగి.

జీవితంలో... ..

నవ్వాలి మానవుడు  
నవ్వకపోతే దానవుడు  
నవ్విస్తే బౌతాడు హాస్యగాడు  
ఏదేవువాళ్ళను నవ్విస్తాడు తెలివైనవాడు.

ఎందుకో మానవుడు -

సుఖంగా ఉన్ననాడు

పగలబడి నవ్వుతాడు -

తన్నుతాను మరుస్తాడు

మఱునిముషపు మార్పునే

మఱచిపోతాడు

ఇతడేగదా నిజమైన వెట్టివాడు

కాదు - కాదు, ఇతడే నిజమైన విజ్ఞుడు

కారణం ! ప్రతిదానికి నవ్వగలడు.

కె. వి. సుబ్బారావు,

III బి. యస్సి.



# కాచిత్ కాంతా ....

సంకా శివరామకృష్ణయ్య,

బి. యస్. సి-2

ఉ॥ ఎవ్వరిదానవమ్మ! ఎట కేగెడుదానవు? ఈ యెడారి తో  
డెవ్వరు లేక నీ విటుల ఇట్టి మహాంధనిశీధికాలమం  
దెవ్వరికోసమమ్మ! పరుగేల పురమ్మ పరిత్యజించి! ఏ  
దవ్వలనుండి ఒంటరిగ తల్లడపాటున వచ్చుచుంటివో!

తే॥ గీ॥ చెదరిపోయిన హృదయమ్ము పదిలపరచి  
కరిగిపోయిన కన్నీరు మరుగుపరచి  
వన్నెవాసిన వదనమ్ము వాల్చివేసి  
బేల! ఎటకేగు దాన వీ కాళరాత్రి!

సీ॥ చిన్నారి చిరునవ్వు చిందు నీ నెమ్మొము  
చిన్నబోయిన దేమి చిన్నతల్లి?  
జిలిబిలి వెన్నెలల్ చిలికించు నీ కను  
లెఱుబారిన వేమి వెఱ్ఱి తల్లి?  
తీర్చిదిద్దిన నీదు తిలకపు రేఖలు  
చెరిగిన వేమమ్మ చిట్టితల్లి?  
కలువపూరెమ్మలవోలు నీ పాదముల్  
కమలిన వేమమ్మ కన్నతల్లి?

తే॥ గీ॥ కన్నవార లేమైనను కనలినారో?  
కుమతులై కష్టమిడిరో చేకొన్నవారు?  
ఆదరమ్మున నిన్ను రమ్మనుచు పిల్చు  
వారు ఎవ్వరై నను నీకు దూరులైరో?

తే॥ గీ॥ మేను కంపింప నెమ్మొము మేల్మిపోవ,  
ధారలొనట్లు కన్నీళ్ళు కారిపోవ,  
చిరుగు చెరగుల ధరియించి శీఘ్రగతిని  
బేల! ఎట కేగుదాన వీ కాళరాత్రి?

ఉ॥ అక్కట! తల్లిదండ్రులును అందరు బంధువు లన్నదమ్ములున్  
ఎక్కడ కేగెనోయనుచు ఏడ్చుచునుందురు నిన్నుగానకే,  
చిక్కుల నొందుచున్ దరుణి చెప్పమ నీవిటు లేల ఏగదో  
ఇక్కటి రాత్రి పొద్దు - ఇట్లు లిమ్మహిమిద అనామకమ్ముగా.

# కోరికలు

ఎం. వి. కె. మోహనరావు,  
బి. యెస్.సి. - 1

మధ్యాహ్నం 11 గంటలయి ఉంటుంది. అన్నయ్య, అమ్మా, వదినా, గోపీ, రాణీ అంతా రండి అని కేకలు వేశాడు, హాల్లోనుంచి చిట్టి బాబు. ఏంరా ఏం జరిగింది? ఎందుకలా అరుస్తావ్? ఏంకావలి మరిదీ? ఎందుకుచిన్నాన్నా అంటూ అదేక్రమంలో చిట్టిబాబు అన్నా, అమ్మా, వదినా, గోపీ, రాణీ అనబడే బాలబాలికలు ఎక్కడ పనులక్కడే వదలివచ్చారు కంగారుగా. చిట్టిబాబు ఒక శుభవార్తతో కూడిన టెలిగ్రాం నవ్వుముఖంతో వారికి చూపించాడు. మద్రాసులోని ఒకానొక Art academy వారు conduct చేసిన, 17 సం॥ వయస్సులోపు బాల బాలికల చిత్రలేఖన పోటీలో చిట్టిబాబుకు మొదటి బహుమతిగా 500 రూ॥ వచ్చిన వన్నడే ఆ శుభవార్త.

ఆవార్త వినగానే అన్నగారి మనస్సు తమ పాతసైకిలువైపు, అమ్మగారి మనస్సు అలా అలా కాశీ, బదరీనాథ్ మున్నగు పుణ్యక్షేత్రాలవైపు, వదినగారి మనస్సు ప్రకీంటి పిన్నిగారు కట్టుకున్న క్రొత్త టిన్యూచీరవైపు, గోపీమనస్సు తన క్లాసులో జడ్జీగారబ్బాయి క్రొత్తగా కుట్టించుకున్న టెర్రిన్ షర్ట్ వైపు వెళ్ళిపోయాయి. చిన్నమ్మాయిరాణీ మనసెటుపోలేక చివరికి ఎదురింటి ప్లీడరుగారమ్మాయి క్రొత్తగా కొనుక్కున్న పెద్ద సైజు పాపాయిబొమ్మ వైపు వెళ్ళిపోయింది.

వాళ్ళ మనసులు తిరిగిరావటానికి చాలాసేపు పట్టవచ్చేమో. ఈ లోగా ఈ కుటుంబ విషయం చెబుతా.

చిట్టిబాబు అన్నగారైన శంకరంవద్దే ఉంటూ I B.Sc. చదువుకొంటున్నాడు. శంకరం ఏదో ప్రైవేటు కంపెనీలో గుమస్తాపని చేస్తున్నాడు. జీతం 190 రూపాయలు. ఇకనేను వారి నెలసరి లోటు బడ్డెటునుగురించి మీకేమాత్రం తెలుపనవసరంలేదు. ఆజీతంతో కుటుంబంలోని వారి కోరికలు తీరుట అసంభవమని అందరకూ తెలుసు. ఇంతలోనే అందరిమనస్సులూ యథాస్థానాల్ని అలంకరించాయి. అంతా చిట్టిబాబును మనసులోనే పొగుడుతున్నారు. కొంతవరకూ పైకే చెప్పేశారు కూడా.

వీరందరికోర్కెలూ చిట్టిబాబుకు తెలుసు. ఎవరి కోరిక తీర్చాలా అనిసందేహం వచ్చిందతనికి. డబ్బుచేతికి వచ్చాక చూదాంలే అనుకొన్నాడు. ఒక వారం రోజుల్లో బహుమతి గ్రహించడానికి మద్రాసు వెళ్ళవలసి ఉంటుంది. వెంటనే తన బట్టల సంగతి జ్ఞాపకంవచ్చింది. వెంటనే బజారు కెళ్ళి తమ కాతాదారుడి బట్టలకొట్టులో రెండు జతల బట్టలకు గుడ్డలు ఆరుపు తీసుకొన్నాడు. అన్నకీసంగతి మెల్లగా చెప్పుదాంలే అనుకొన్నాడు. గుడ్డలు దర్జీకిచ్చి యింటికి నడిచాడు.

మర్నాడు శంకరం ఆఫీసులో తానొక పది

రోజులల్లో కొత్త సైకిలు కొనబోతున్నట్లు చెప్పాడు. అంతావని ముకుందం నీవెక్కడ కొంటావులే అన్నట్లు నవ్వాడు. శంకరానికి ఒళ్ళు మండింది. కొత్తసైకిలు తేకపోతే తనకి విలువయివ్వ నక్కరలేదని ఆఫీసులోనే Lady typist పద్మ ఎదుటే ప్రతిజ్ఞ చేశాడు.

శంకరంభార్య సరోజ ఇరుగు పొరుగు వారితో లోకాభిరామాచార్యకాలమందు త్వరలో తాను టీన్యూచీర కొనుక్కోబోతున్నట్లు సగర్వంగా చెప్పింది. ఆమె అత్తగారు కూడా ఏమీ తక్కువ తినకుండా తీర్థయాత్రల కవసరమైన సరంజామా జాగ్రత్త పెట్టుకొంటూ ఉంది. గోఫీ తనకొత్త టెర్లిన్ షర్ట్ గురించి క్లాసంతా చెప్పేశాడు. రాణీ రాబోయే తన బొమ్మను గూర్చి కలలు కంటూ ఉంది.

చిట్టిబాబుకి ప్రైజు వచ్చిన సంగతి అందరికీ తెలియడంతో స్నేహితుల పార్టీలకు శంకరం ముకుందం దగ్గర 50 రూ॥ అప్పు చేయవలసి వచ్చింది. మద్రాసునుంచి పిలువెప్పుడు వస్తుండా యని అంతా ఎదురుచూస్తున్నారు. 5 రోజులు గడిచాయి రివ రోజునకు మధ్నాహ్న వేళ టెలి గ్రాం అన్నకేకతో అంతా హాల్లొకివచ్చారు. చిట్టిబాబు సంతకంపెట్టి టెలిగ్రాం తీసుకొన్నాడు.

టెలిగ్రాం చదివిన చిట్టిబాబు ముఖంపాలి పోయింది. ఆర్ట్ ఎకాడమీవారు పెట్టిన షరతు లలో ముఖ్యమైనది పోటీదారునివయస్సు 17 సం॥ మించకుండా ఉండుట. పోటీకిపంపే చిత్రంతో పాటు గెజిటెడ్ ఆఫీసరుగారిచే attest చేయ

బడిన Birth certificate పంపాలి. చిట్టి బాబు అలాగే పంపాడు. కాని చిత్రంబాగా గీశాసుగా, ప్రైజునాకే వస్తుందన్న ధీమాతో కూడిన సంతోషంలో తన Date of birth కర్ర క్లుగా వేసి Birth certificate మామూలుగా గెజిటెడ్ ఆఫీసరుగారిచే attest చేయించి పంపాడు.

ఈ టెలిగ్రాంలోని సారాంశమేమిటంటే "Birth certificate ప్రకారం మీవయస్సు 19 సంవత్సరములు. అందుచే మీరు బహుమతి పొందుటకనర్హులు. ఈ బహుమతి మరొకరికి ప్రదానం చేయబడింది" యని.

ఈ సంగతంతావని ఇంట్లోనివాగంతా నిశ్చేష్టులైపోయారు. ఇప్పుడు ముసలావిడ కనులముందు తీర్థయాత్రాస్థలాలు గిర్రున తిరుగుతున్నాయి. సరోజమ్మ కంటిముందు టీన్యూచీర గాలికి ఎగిరినట్లు కన్నడుతోంది. శంకరం కళ్ళముందు తన మసలి సైకిలూ, ఆఫీసులో తానుచేసిన ప్రతి జ్ఞాకాక ముకుందం దగ్గర అప్పు తీసుకొన్న 50రూ నాట్యంచేస్తున్నాయి. గోఫీ, రాణీల మనస్సుల్లో టెర్లిన్ షర్ట్, పెద్దసైజు బొమ్మలు మెదులు తున్నాయి. అందరి ముఖాల్లోనూ ఒకటే కన్నడుతూంది అదే? ప్రశ్నార్థకం. చిట్టిబాబు కళ్ళకు బట్టలబిల్లు 40 రూ॥ రెపరెపలాడుతూ కన్నడుతోంది. చేతిలో దీనికంతకూ కారణమైన టెలిగ్రాం దీనికి కారణం, నేనుకాదు. ఎకాడమీ వారి పొరపాటు, నన్నేం చేయవద్దని భయ పడుతూ వణుకుతున్నట్లు రెపరెపలాడుతోంది.



# ప రి కౌ ము

పి. బాబూసుధాకరరావు,

బి. యస్.సి. - 1

చిరంజీవి సత్యంకు—

నాన్న ఆకీర్వాచనములతో వ్రాయునది—

నీవు వ్రాసిన ఉత్తరం అందినది. ఎక్స్ కర్షన్ కు డబ్బు పంపమన్నావు. నీవు వెళ్ళనక్కరలేదు. నీ మార్కులు చూస్తూంటే నాకే సిగ్గువేస్తుంది. మరి నీకెందుకు కోపం రావటంలేదో తెలియుట లేదు. డబ్బు నీళ్ళలా ఖర్చుచేసేతత్వం మార్చుకో. మొదట నీ పరీక్షల సంగతి చూచుకో, విహారాల విషయం తర్వాత. మొన్న పంపిన డబ్బుకు అకౌంటు వ్రాసి పంపు. దుస్సహవాసాలుమాని జాగ్రత్తగా చదువు.

నాన్న,  
మాధవరావు.

సత్యం విసురుగా పచార్లు సాగించాడు తన గదిలో. నైలెస్సు అవరు కావడంచేత నిశబ్దంగా ఉంది హాష్టలంతా. ఆ నిశబ్దంలో సత్యం అడుగుల ధ్వని తనకే కఠోరంగా ఉంది. కుర్చీలో కూల బడ్డాడు. టేబుల్ మీద కవరు తనను చూచి నవ్వి నట్లనిపించింది - అతడికి. కోపం ముంచుకు వచ్చింది.

ఛీ! ఛీ!! నాన్నను నమ్ముకున్నంత బుద్ధి తక్కువపని మరొకటి యుండదు. ఆయన పంపు తారులే అన్నంత ధీమాతో ఎక్స్ కర్షన్ లిస్ట్ లో తన పేరుకూడా ఇచ్చేసాడు. ఇప్పుడేమో పెద్ద నీతి బోధక లేఖ యొకటి వచ్చింది. ఇక ఫ్రెండ్స్ లో తన పరువు ఏమవ్వాలి?

అసలు నాన్న ఎప్పుడూ యింతే! వార్డెన్ తో 'మా వాడిని ఓ కంట కనిపెట్టి ఉండండి' అని చెప్పి వెళ్ళాడు - పోయిన నెలలో వచ్చినపుడు. అప్పటినుండి వార్డెన్ తనమీద నిజంగానే ఓ కన్ను వేసాడు. ఆదివారాలతో సహా ఏదో ఒక వంకమీద తన దగ్గరకు పిలిచి ఏదో పని చెప్పి సినిమాలకుకూడ వెళ్ళే భాగ్యం లేకుండా చేసి వేసాడు. ఏమిటో గొడవ!!

అసలు మొన్న మాత్రం ఏంచేసాడు నాన్న? తమ ఊరివాడే ఎవరో ఒక కుర్రవాడు బి. ఏ. లో ఉన్నాడట. అతడిని తనకు గైడ్ గా నియమించా నన్నాడు. నిజానికి ఆ బి. ఏ. ఒట్టి చవటదద్దమ్మ. కాంటీన్ లోకి వెళ్ళి కూర్చొని పాలు తెమ్మం టాడు. ఎటికెసీ కోసమైనా కాఫీ త్రాగడు ఫ్రెండ్స్ లో. సిగరెట్ల వాసన చూసి ముఖం చిట్టించుకుంటాడు - ఆడపిల్లలా! ఇక సినిమాల సంగతి చెప్పనే అక్కరలేదు! ఆఫ్ కోర్స్ - చదువులో తెలివైన వాడేననుకో - అయితే మాత్రం - మరీ బొత్తిగా యింత పల్లెటూరి గబ్బిలాయి సలహాలను తనెలా పాటించగలడు?

ఏమిటసలు నాన్న ఉద్దేశ్యం? తనేం చిన్న పిల్లవాడి ననుకుంటున్నాడా? వారమంతా అలసి పోయిన వాళ్ళకు వారాంతంలో ఏ సరదా లేక పోతే ఎలా? ఆహ్లాదం కలుగవద్దూ మనసుకు.

సత్యం ఆలోచనలు పూర్తికాకముందే స్టడీగంట కొట్టివేశారు.

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సత్యం చిన్నన్నయ్యకు వ్రాసాడు డబ్బు పంపమని. “అయామ్ సారీ - నాన్నకు వ్రాయి. నా దగ్గర ప్రస్తుతం యాభై రూపాయలు కొడు గదా - అన్ని పైసలుకూడ లేవు. ఏమీ అను కోకు” - అని జవాబు వచ్చింది. పెద్దన్నయ్యకు వాడి జీతం వాడికే చాలదు. ఇంకేంపంపుతాడు? ఇప్పుడేం చెయ్యాలి?

సత్యానికి ఉక్రోశం వచ్చింది. బల్లమీద బలంగా గ్రుద్దాడు. చెయ్యి మంట పుట్టింది. అంతకన్నా ప్రయోజన మేమీ కలుగలేదు. ప్రతి పైసకూ లెక్క చెప్పాలి! ప్రతి విషయానికీ ఆంతుల నెదుర్కోవాలి! ఛీ! ఛీ!! ఈ బ్రతుకు కన్నా చావు నయం! అవును, చావు నయం... చావు నయం... నయమే - ఆ మాటలే బాగా నచ్చాయి సత్యానికి. అవును - తను చచ్చిపోవాలి. అప్పుడుగానీ నాన్నకు బుద్ధిరాదు - తన కఠినత్వానికి కుమిలిపోడు. చేతులారా చంపుకున్నానని నాన్న మనసు కుళ్ళి, కుళ్ళి ఏడుస్తుంది. అన్నయ్యలుకూడ ఏడుస్తారు. అప్పటికిగానీ తన కని చల్లారదు. లేకపోతే ఏళ్ళంతా కలసి తన నిలా ఏడిపిస్తారా! - ఉక్రోశంగా అనుకున్నాడు సత్యం.

సత్యం ఆలోచనలకు హఠాత్తుగా బ్రేకు పడింది. క్రింద వార్డెన్ రూమ్ ముందు ఏదో హడావుడి జరుగుతోంది. అందరూ ఒకేసారి మాట్లాడి వేస్తున్నారు. లైట్లన్నీ ఆన్ చేసారు. సత్యం చక చక క్రిందికి వెళ్ళాడు.

“ఏం జరిగింది? ఏమిటి గొడవ?” తన క్లాస్ మేట్ ఒకతన్ని అడగాడు.

“మన సుందరం చనిపోయాడురా! కృష్ణలో మునిగి పోయాడట!” అన్నాడతడు. సత్యం మనసు ఘుల్లుమంది. “ఎలా మునిగాడు? ఆతనికి యీత రాదా?”

“బలేణాడివేలే! వాడికి యీత రాకపోవట మేమిటి? గజ యీతగాడేలే.” అన్నాడా మిత్రుడు.

“మరెలా మునిగాడు?”

“ఖర్చు! సుడిగుండం ఉందట. శవంకోసం వెదుకుతున్నారు.”

సత్యం కెండుకో కండ్లు చెమర్చాయి.

సుందరం తన సెక్షన్ రిప్రజెంటేటివ్ చాల తెలివైనవాడు. మంచి స్పోర్ట్స్ మన్ స్పిరిట్ ఉన్నవాడు. వేదవాడంటారు కానీ, నీట్ గా, స్కాట్లర్ గా కనిపిస్తాడు. నిన్న సాయంత్రంకూడా తన రూమ్ కి వచ్చి, కబుర్లు చెప్పి వెళ్ళాడు. అలాంటి సుందరం చనిపోయాడు...

ఆరాత్రి చాల ప్రొద్దుపోయేవరకూ అందరూ మేలుకొనే ఉన్నారు. సుందరం శవమింకా దొరకలేదు. సత్యానికి నిద్ర పట్టలేదు. ఆతడి మనసంతా సుందరం మరణమే ఆక్రమించుకుంది.

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తెల్లవారింది. తొమ్మిదిన్నరకు దొరికింది శవం. హాస్పిల్ ఆవరణంతా విద్యార్థులతో నిండిపోయింది. సుడిగుండంనుండి బయటపడటానికి చాల ప్రయత్నించి అలసిపోయి నిద్రపోతున్నట్లుంది సుందరం ముఖం.

కాలేజీకి సెలవు ప్రకటించినా ఎవరూ యిండ్లకు వెళ్ళలేకపోయారు. పదిగంటలయింది. వార్డెన్ రూమ్ ముందున్నాడొక వృద్ధుడు. ఆయనను చూడడంతోనే వార్డెన్ ముఖంలో ఖాధ కనుపించింది.

“ఏమండీ, అబ్బాయి ఫీజుకి డబ్బు తెచ్చాను. తీసుకుంటారా?”

“క్షమించండి. మీ రో సారీ యిలా రండి”. ఆవృద్ధుడు వార్డెన్ వెనుకనే వచ్చాడు సంకోచిస్తూ. మరుక్షణంలో అక్కడున్న వారందరినీ విచలితులను చేసింది. - ‘సుందరం, నాయనా!’ అనే హృదయ విదారకమైన ఆక్రందన. తూలి పడిపోతున్న వృద్ధుడిని గట్టిగా పట్టుకున్నాడు సత్యం.

సాయంత్రంలోపల జరుగవలసినవన్నీ జరిగి పోయాయి. సుందరం తండ్రిని సుందరం గదికి తీసుకువెళ్ళాడు వార్డెన్. ఆ బ్లాక్ అంతటా దైన్యం అలముకొని ఉంది. ఎవరి గదులముందు వాళ్ళు నిలబడి, అందరూ సుందరం గదివైపే చూస్తున్నారు. వణుకుతున్న కాళ్ళతో లోపలకు అడుగు పెట్టాడు సుందరం తండ్రి.

మరో నిమిషంలో తల గోడకువేసి కొట్టు కుంటున్న శబ్దం ప్రక్క గదులవాళ్ళకు స్పష్టంగా వినిపించింది.

వార్డెన్ తలుపు ప్రక్కగా పడిఉన్న కవరు చింపి చదివారు.

“సుందరం, నీ ఉత్తరం అందింది. ఫీజుకు డబ్బు తెస్తాను. ఎక్స్కర్షన్ కు వెళ్ళవద్దు. మన స్థితిని గుర్తించు. పైసను రూపాయగా ఖర్చుచేయి. చెడ్డఅలవాట్లు చేసుకోకు. నీ మార్కులేవీ గొప్పగా లేవు. ఇంకా బాగా చదువు. సెంట్ పర్సంట్ తెచ్చుకోవాలి.”

దీవనలతో,  
నాన్న.

ఆ ఉత్తరం వింటూంటే సత్యానికి వెంటనే నాన్న ఉత్తరం, తన నిర్ణయం గుర్తు వచ్చాయి. తను చచ్చి పోవాలనుకున్నాడు. నాన్నమీద కసితో చచ్చిపోవాలనుకున్నాడు.

“సుందరం, నాయనా! ఎంతపని చేసావురా! నా ఆశలన్నీ నట్టేట కలిపావేమిరా? ఇరవై ఏళ్ళు ఇందుకేనా కనులలో వత్తులేసుకొని పెంచు కున్నాను! బాబూ! ఎక్స్కర్షన్ వెడతానని వ్రాసినవాడివి - నా జవాబు అందేవరకైనా ఉండలేదేరా! నాన్నను చూచేవరకూ నైనా అగలేకపోయావటరా - సుందరం!”

“ఇంకేం చూచుకొని బ్రతకను? ఏనాడూ ఎవరికీ చెప్పకుండా బయటకు వెళ్ళనివాడవి- ఆ కృష్ణజోలికెందుకుపోయావురా? కృష్ణమ్మ తల్లికి

నా బిడ్డను కడపున పెట్టుకొనేవరకూ ఆకలి తీర లేదా! బాబూ! సుందరం! ఏ లోకంలో వున్నావు నాయనా!”

తల నెరసిపోయిన సుందరం తండ్రి కొడుకు వస్తువులన్నింటినీ కాగలించుకొని, అతడి వుస్తకాలను ముద్దుపెట్టుకొని, అతడిఫోటోను గుండెలకు వాత్తుకొని- విలపిస్తూ ఉంటే- రాళ్ళు కరుగుతాయేమో అనిపించింది సత్యానికి. వార్డెన్ కనులు తుడుచుకొంటూ బయటకు వచ్చారు- బలవం తంగా సుందరం తండ్రిని నడిపిస్తూ సత్యం మనసులో తన రూపం మెదిలింది. ఆయనకూడ ఇంచుమించు యిలాగే ఉంటాడు. తను ఆత్మహత్య చేసుకుంటే... నాన్నకూడ యిలాగే గుండెలు అవిసిపోయేలా ఏడుస్తాడా? అన్నయ్యలు, అమ్మ యిలాగే తల పగలకొట్టుకొని... అమ్మో!

సుందరం తండ్రి జేబులోనుండి వందరూపాయలు బయటకు తీసాడు. “సుందరానికి వద్దని వ్రాసిన తర్వాత నాకు డబ్బందింది. ఎక్స్కర్షన్ కు పంపుదామనుకున్నాను. దేవుడే వాడిని విహారయాత్రకు తీసుకుపోయాడు. ఈ డబ్బుతో నా తండ్రికి, నాచిన్ని నాయనకు చితి వెలిగించనా?” భోరున ఏడుస్తూ వార్డెన్ ముందు కూలిపోయాడు సుందరం తండ్రి.

మరోసారి సత్యం హృదయం ఘల్లుమన్నది.

తండ్రి గుర్తువచ్చాడు. అతని మనస్సు అల్లకల్లోలంగా ఉంది. ఏవో ఆలోచనలు ముసురుతున్నాయి. లేదు, తను చచ్చిపోడే. ప్రమాద వశాత్తుపోయిన సుందరంకోసం అతని తండ్రి ఇలా విలపిస్తూంటే- యిక చేతులారా ప్రాణాలు తీసుకుంటే- తనకోసం నాన్న ఎంత బాధపడతాడో! ఆయన గుండెపగిలిపోతుందేమో! వద్దు! నాన్నకు తానా శిక్షవిధించలేడు. ఆయన ఏంచేసినా, చెప్పినా తన క్షేమంకోరే ఏతండ్రి తన బిడ్డలను అన్యాయం చెయ్యాలనీ, హింసించాలనీ అనుకోడు.

తనదేహారపాటు. ఆతనే ఆయనను అర్థం చేసుకోలేకపోయాడు. ఆయనకు ఇంక బాధకలిగించకూడదు.

సత్యం తేలిక పడిన హృదయంతో తన గదిలోకి నడిచాడు.

సంతృప్తిని కలిగిస్తాను. నాతప్పు అన్నింటినీ త్నమించండి. నా దోషాలను మీరుకాకపోతే మరెవరు మన్నించుతారు? దయయించి నా కోసం బాధ పడకండి. ఉత్తరం వ్రాయండి.

నమస్సులతో,

మీ ప్రിയమైన సత్యనారాయణ.

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“నాన్న గారికి, మీ ఉత్తరం అందింది. మీరు చెప్పినట్లే నేను ఎక్స్ కర్షనకు వెళ్ళను. ఇంతకాలం తక్కువమార్కులు తెచ్చుకొని, మీకు బాధ కలిగించినందుకు త్నమించండి. ఇకమీదట, బాగా చదివి, మంచి మార్కులు తెచ్చుకొని మీకు

కొడుకు ఉత్తరంలో కనిపిస్తున్న ఆవేశానికి మొదట ఆశ్చర్యపోయి, తరువాత నవ్వుకొని, ఉత్తరం మడచి టేబుల్ మీద పడవేశారు. మాధవరావుగారు.



## ఉత్తమ, మధ్యమాధములు

ఉత్తముండు హితము చేసి యూరకుండు  
మధ్యముండు హితము చేసి మాటువెదకు  
నధము డొరుచేయు హితమైన నణచిపుచ్చు  
హితమునకు నెగ్గు చేయు వాడెవ్వడగును.

— నాచన పోమన.

\* \* \*

## అప్రియము

ఒరులేయవి యొనరించిన  
నరవర అప్రియము లవి మనంబున కగుదా  
నొరులకు నవి చేయకునికి  
పరాయణము పరమ ధర్మ పథములకెల్లన్.

— తిక్కన.

# లయోల ఇగ్నేషియస్

జి. జేసు రత్నం.

బి. యస్.సి. - 2

విభిన్న వ్యక్తులు, విభిన్న ప్రవృత్తులతో పలు విధములుగా జీవనయాత్ర సాగించుచున్న ఈ ప్రపంచము సుఖ దుఃఖముల సమ్మిళితము. కష్టముల నెదుర్కొను మానవులను రక్షించుటకును, సంఘములోని దురభ్యాసములను రూపుమాపి సాంఘిక న్యాయమును జేకూర్చుటకై అప్పుడప్పుడు కొందరు మహా మహు లుద్భవించుచుందురీ లోకములో. అట్టివారిలో గాంధీ మహాత్ముడు, రాజా రామమోహనరాయలు, మార్టిన్ లూథర్ చక్రవర్తి (జూనియర్) మున్నగువారు ముఖ్యులు. ఈ కోవకేచెంది, అవిద్య యనెడు అంధకారములో దోబూచు లాడుచున్న మానవ కోటిని, విద్య యనెడు వెలుగులోనికి మార్గము జూపించిన లయోల ఇగ్నేషియస్ యొకరు.

ఇగ్నేషియస్ లయోల గారు 1493 వ నత్సరమున స్పెయిను దేశమందలి అజ్ పేషియా నగరము నందు లయోల బెల్ ట్రాన్, మరీ నొలికోనా యను పుణ్యదంపతులకు జన్మించిరి. వీరే వారి కడసారి ముద్దులబిడ్డ.

లయోల తెగవారు రాజ కుటుంబీకులు. ఆంధ్రువలన ప్రజలు వీరిని ఎక్కువగా గౌరవించుచుండిరి. వీరిలో చాలమంది సైన్యములో జేరి మాతృదేశము కొరకు వీరమరణ మలంకరించిన ధీరోదాతులు, వీరు విద్యకు ఎక్కువ ప్రాముఖ్యము నిచ్చెడివారు కారు. వీరు క్రైస్తవ విశ్వాసము నందు మంచి భక్తి, శ్రద్ధలను జూపిరి.

అట్టి రాజ కుటుంబమునకు చెందిన లయోల ఇగ్నేషియస్ సకల భోగ భాగ్యముల ననుభవించుచూ ప్రపంచ వస్తువులపై మోజుగానుండిరి. వీరు సైన్యమునందు ఉన్నత పదవి నలంకరించిరి. ధైర్య సాహసములుగల వీర పరాక్రమశాలి ఇగ్నేషియస్. అందరి వద్ద కీర్తి, ప్రతిష్ఠలు సంపాదించుటకై ఎంతటి త్యాగమునకైనను వెఱచని ధీరశాలి.

ఆవి ఛార్లెసు V స్పెయిను దేశమును పరిపాలించుచున్న దినములు. (ఫ్రాన్సు దేశీయులు స్పెయిన్ నందలి పాంప్లోనా దుర్గమును ముట్టడించుటకై సర్వసన్నద్ధులై వచ్చిరి. ఆ దుర్గమును శత్రువుల బారినుండి సంరక్షించుటకు ఇగ్నేషియస్ గారి నాయకత్వమున కొంతమంది సైనికులు బయలుదేరి శత్రువులతో పోరాడిరి. తుదకా వీరమూర్తి శత్రువుల గుండ్లకు గురియై గాయపడిరి. వెంటనే సెయింట్ లూసి హాస్పిటలు నందు చికిత్స పొందుటకై చేర్చబడిరి. అచ్చట నితడు జేసుక్రీస్తు జీవిత చరిత్ర, ఇంకను కొందరి పవిత్ర పురుషుల జీవిత చరిత్రలను చదివి, తాను ఇంత వరకు చేసిన పాప కృత్యములకు పశ్చాత్తాప పడి మనస్సును జేసుక్రీస్తువైపు కేంద్రీకరించిరి. ప్రపంచ ఆలోచనలు, రాజసభజీవితము, ప్రపంచ వస్తువులపై మోజు మొదలగు వాటినిన్నింటిని పటాపంచలుచేసి క్రీస్తునికొరకు జీవింపవలయునని తలంచిరి. క్రీస్తువునందు ఆతనికిగల విశ్వాసము దినదిన ప్రవర్ధమానముగా వెలుంగుచుండెను.

స్వామిని నేవించవలయునను ఆలోచన తప్ప, మరి ఏయితర ఆలోచనలు లేక లయోల దుర్గమును వీడెను. మోన్ సెర్రాట్ పట్టణమునందు పశ్చాత్తాతమునొంది, అతనికుండిన విలువైన వస్త్రములను ఒక బీదవానికిచ్చిరి. వారు గోనెపట్టలు ధరించుచూ, బిత్తుటన జేయుచు జీవితయాత్రను సాగించుచుండిరి.

ఇగ్నేషియన్ గారు మోన్ సెర్రాట్ పట్టణము నుండి మన్ రేసా యను పట్టణమునకు పోయి అచ్చట జప, తప ధ్యానములు చేయుచుండిరి. ఇచ్చటవారు ఆనేక బాధలకు గురియై వాని నన్నింటిని ఓర్పుతో సహించుచుండెను. క్రీస్తుని గురించి ప్రసంగములీయగా ఎంతోమంది వీరిని అనుసరించిరి.

జెరుసలేము పట్టణమునకు పోవుచుండగా మార్గ మధ్యమున వారి ఓడ తుఫానుకు గురియై తునా తునకలయ్యెను. దైవానుగ్రహమువలన ఆ తడు ఆ బాధలనుండి తప్పించుకొని జెరుసలేము చేరెను. స్పెయినులోన వీరు కొన్ని మార్లు కారాగార శిక్ష ననుభవించిరి.

తర్వాత ఇగ్నేషియన్ గారు జెరుసలేమునుండి బార్సలోనా పట్టణముకు పోయెను. ఇచ్చట సైతాను అతనిని ఎంత బాధించినప్పటికి లాంగక, దానికి ప్రతికూలముగా, చదువవలెనను ఆశ జనించినది.

ఇగ్నేషియన్ గారు అల్కాలాయను పట్టణము నందు తత్వ శాస్త్రమును చదివి, పారిసు నగరము నందు ఎం. ఏ., పట్టమును స్వీకరించిరి. ఇచ్చట వారికి చాలమంది మిత్రులు తోడైరి. వారి ప్రసంగములకు ముగ్ధులై చాలమంది శిష్యులుగా జేరిరి. వారిలో పీటర్ ఫేబర్, ఫ్రాన్సిస్ జేవియర్ ముఖ్యులు.

విద్యావిహీనులగు మానవకోటికి విద్యాబుద్ధులు గలపనెంచి “జేసుసభ” యను ఒక సమాజమును స్థాపించిరి. ఈ సమాజము అనతి కాలము లోనే ప్రపంచమంతట వ్యాపించి 1540 లో మన దేశమందును స్థిరపడిరి. ఈ సభవారు మన దేశములో ఎన్నియో పాఠశాలలను, కళాశాలలను నడపుచు మనకు విద్యాదానము నిచ్చుచూ భావి భారత పౌరులనుగా తయారు చేయుచున్నారు.

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## వినయ సంపద

అన్ని గుణములుండి యడకువ లేకున్న  
నిష్ఫలంబులవియు నిశ్చయముగ  
ఎంతకలిమి గలుగు నంతయడంకువ  
కలిగి యుండవలయు గర్వపడక  
చదువునకు తోడు వినయంబు గుదిరియుండ  
పసిడికిని దావి యబ్బిన భాతి యగును.

— కందుకూరి.

# జీవనయాత్ర

CH. D. వివర్ధనచౌదరి,

బి. కాం. - 1

రామయ్యగారింట్లో ఆరాత్రి ఎవ్వరికీ సరిగా నిద్రలేదు. అందరికళ్ళలోను ఏదో బాధ కనిపిస్తున్నది.

రామయ్యగారు గదిలో పచార్లు చేస్తున్నారు. బెడ్లైటు వెలుగుతోంది. ఏ సమస్యనైనా తేలిగ్గా పరిష్కరించగల ఆయనే వెంకట్ విషయంలో ఒక నిర్ణయానికి రాలేకపోతున్నారు. ఏం చేయాలి? చిక్క సమస్య వచ్చిపడింది. ఆలోచిస్తున్నారు.

కులగోత్రాలంటే ఎంతో నమ్మకముంది. ఎవరైనా వర్ణాంతర వివాహం చేసుకుంటేనే చూడలేజే తను. ఇప్పుడు స్వంతకొడుకు వెంకట్ మల్లని చేసుకుంటానని పట్టుబడితే ఎంత బాధ! ఒక్కగా నొక్క కొడుకు. అప్పటికి తిట్టినా, ఎంత నచ్చజెప్పినా వినలేదు వీడు. పైగా చెల్లెలి అవసానదశలో మేనకోడలు పార్వతిని వెంకట్ కిచ్చి పెళ్ళిచేస్తానని మాటిచ్చాడే తను. వీడి కైనా బుద్ధి ఉండఖలే. బి. ఏ. చదివి, ఆస్తి ఉండి, పెద్దకులంలో పుట్టిన వీడిబుద్ధి ఇలా పెడత్రోవలు పడుతోందే! పనిపాటలు చేసుకుంటే మాత్రం మల్లే కావాలి. ఏం చూసి దాన్ని ప్రేమించాడు? చక్కగా వినయంగా ఉండే పార్వతి నచ్చలేదట వీడికి. ఈ కాలంలో కుట్టాళ్ళంతా ఇంతే. పోనీ వీడు దాన్నే చేసుకుంటే... సంఘంలో పరువే చూతుంది? గౌరవం గంగలోకలిసి అందరూ

నవ్వుతుంటే తలెత్తుకు తిరగలడా? ముందు ఎన్ని కబుర్లు చెప్పినా కొంతకాలానికీ మోజుపోతే బ్రతుకుని బజారుపాలు చేసుకోడు! పాపం! పార్వతి ఎంతబాధపడుతోందో. అసలే ఒత్తి పిచ్చి పిల్ల. ఏం చేస్తుందో ఏమో? వీడికెలా నచ్చ చెప్పాలి?

ఈ విధంగా అనేక రకమైన ఆలోచనల్లో బాధ పడుతోందా ముసలి హృదయం.

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అసలిదెక్కడ దాపురించిందట? వీడికేం మందు పోసిందో. దాన్ని తప్ప మరొకరినీ చేసుకోనని కచ్చితంగా చెప్తున్నాడయ్యే. తప్పకుండా ఏదో మంత్రం వేసుండాలా మల్ల. లేకపోతే వీడు దాన్ని ప్రేమించడం ఏమిటి? బయటికి చెప్పే నవ్వుతారు. నక్కెక్కడ? నాకలోకం ఎక్కడ? పాపం పార్వతి దుఃఖం చూస్తుంటే కడుపు తరుక్కుపోతోంది. అక్షణంగా మేనరికం చేసు కొని హాయిగా కాపురం చేసుకోక వీడికిదేం బుద్ధంట! అసలయినా వాడి ననేం లాభం తప్పంతా తమదయి నప్పుడు? దాన్నసలు ఇంట్లో అంత చనువుగా ఎందుకు తిరగనివ్వాలి? ఇంత కాలం ఊళ్ళో అందరిచేతా పనిదానిగా తిట్లు, దెబ్బలు తిన్న దాన్ని తమకోడలుగా చేసుకుంటే ఎంత చులకన అందరిలో. అసలు కులంకూడా

వేరు. శేషు వీళ్ళ పిల్లలు ఏం కులముని చెప్పా కుంటారు... వాళ్ళెంత బాధ పడ్డారు. వీళ్లెదు. ఏమైనాసరే ఈ పెళ్ళికి ఒప్పుకోకూడదు. బలవం తంగానైనా పార్వతి నిచ్చి త్వరగా పెళ్ళి జరి పించాలి. మల్లని మొన్ననే పనిలోంచి తీసి ఈ ప్రాంతాలకుకూడా రావద్దని చెప్పిందికూడా అందుకే. అయినా అది తనకు కోడలేమిటి ? తల్లుకుంటేనే అసహ్యం వేస్తోంది. ఎట్లా వీడి మనస్సు మార్చటం ?

వంటింటి గుమ్మం మీద కూర్చుని వెంకట్ తల్లి కాంతమ్మగారు ఆలోచిస్తున్నారు.

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కులం ఏమిటి ? మతం ఏమిటి ? కులంలో తక్కువమనవాళ్ళు మనుష్యులు కారా ! వారికి రక్తమాంసాలు లేవా ? అసలు అమ్మా, నాన్న ఎందుకింత బాధపడ్డారు ? ఒప్పుకుంటే ఎవ్వరికీ బాధ ఉండదే. అయినా ఈ కులగోత్రాలు మనం కల్పించుకున్నవి కావా ! పనిపాటలు చేసుకునే వైతే మాత్రం మల్లి మనిషికాదా ? భగవంతుడు ఆమెనే ఉన్నత కుటుంబంలో పుట్టించి ఉంటే...? పోనీ తనే ఆ మాలకుటుంబంలో పుట్టి ఉంటే...? మానవులందరూ ఒక్కటేకదా. ఒక కులంలో పుట్టి దానికిగల కట్టుబాట్లలోనే పెరగాలా ? ఎందుకీ అర్థంలేని తెరలు ? జన్మించటంలో భేదం ఉన్నంత మాత్రాన వారికీ వీరికీ ఏవిధమైన సం బంధబాంధవ్యాలు ఉండకూడదా ? ఎంతదారుణం!

సంఘం ఈ సంఘంతో తనకు పనేముంది. తన బ్రతుకేదో తను బ్రతుకుతాడు. నా గురించి ఈ సంఘానికి దేనికి ? ఒక వేళ నేను ధనధాన్యాలు లేక దరిద్రంతో చస్తుంటే కొంచెమైనా సహాయంచేస్తాండా ఈ సంఘం ? నామీద ఏం అధికారముంది సంఘానికి? మల్లి కులం లేనిదవ్వొచ్చు. పనిచేసుకు బ్రతికేదవ్వొచ్చు. కాని ఆ కళ్ళల్లో ఎంత అమాయకత, ఎంత ఆకర్షణ ఉన్నవి. ఎంత మంచి హృదయం వుంది ? 'బాబూ ! నన్ను మర్చి

పోండి. నావల్ల మీకేమీ సుఖం వుండదు. అన్నీ కష్టాలే. నావల్ల అందరికీ బాధలు కలుగుతాయి. మీ తల్లిదండ్రులు, ప్రాణంకన్నా అధికంగా ప్రేమిస్తున్న పార్వతమ్మగారు ఎంత అల్లాడి పోతారు! చిన్నమ్మగార్ని చేసుకుని సుఖంగా ఉండండి' అని ఎంత బ్రతిమాలిందా ఆమాయకురాలు.

తన గదిలో కిటికీవద్ద నిల్చుని బయటి పూల మొక్కలవంక చూస్తూ ఆలోచిస్తున్నాడు వెంకట్. దగ్గరోవున్న మల్లెపువ్వులు పార్వతిలా నవ్వు తున్నవి. అందుకోవటం జేలికే. కాని మనస్సే అంగీకరించటంలేదు. గులాబీలు మల్లిలా అమాయకంతో దీనంగా వేడుకుంటున్నవి దూరంలో. అందుకోబోయాడు. ముళ్ళు గుచ్చుకున్నవి. అయినా ధైర్యంగా తీసుకుని, ఒక ధృఢ నిర్ణయంతో బయలుదేరాడు మల్లి ఇంటికి.

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నిజంగా బావ నన్నింతకాలం ప్రేమించనే లేదా ! నేనంటే ఏమాత్రం ఇష్టంలేదా ! బావే నా పాలిటి దైవంగా ఎంచుకొని పూజించానే. బావ సాన్నిధ్యంలో పరవశించాలని ఎన్ని గాలి మేడలు కట్టాను ! బావని అనురాగ పారవశ్యంలో నింపాలనుకున్నాను. ఆయ్యో ! బావ ఇన్నాళ్ళూ నన్నే ప్రేమిస్తున్నాడనుకున్నానుకాని, మల్లని ప్రేమిస్తున్నాడని ఏమాత్రం ఊహించలేక పోయాను. మల్లి ఎంత అదృష్టవంతురాలు ! అమృత హృదయమైన బావను పొందు మల్లి ఎంత పుణ్యం చేసుకుందో ? బావ నాకు తోడు నీడగా ఉంటాడని ఆశపడ్డాను. కాని ఈ చీకటి మాత్రమేనని ఎంచలేకపోయిన అభాగ్యురాలిని. మల్లి లేకుంటే నా ఆరాధన ఫలించేదా ? ఏమో చిన్నప్పుడే తల్లిదండ్రులు పోయారు. అదృష్టం ఉండి అత్తమామలచే ఆదరంగా పెంచబడింది తాను. కనీసం వాళ్ళ బాధను పోగొట్టటానికి ప్రస్తుతం తన కర్తవ్యం ఏమిటి ?

పడక గదిలో, దిండులో తలదూర్చి దుఃఖి  
స్తోంది పార్వతి.

\* \* \*

చిన్నబాబు నన్నంత గాఢంగా ఎందుకు  
ప్రేమించారు? నాలో ఏం చూశారు? వద్దను  
కుంటూనే తనుకూడా ఆయన వైపు ఆకర్షింప  
బడింది. నిజమే ఆయన్ని ఒక్కరోజు చూడక  
పోతే పిచ్చెక్కిపోతుంది. నన్ను చేసుకుంటే  
ఆయన కన్నీ కష్టాలేకదా? పెదబాబుగారు,  
అమ్మగారు ఎంత బాధపడ్తున్నారు. నావల్ల  
ఆయన పరువు ప్రతిష్ట తేంకావాలి? నన్ను చేసు  
కుంటే చిన్నబాబు అందరికీ చులకనైపోతాడు.  
పార్వతమ్మగారు ఎంత దుఃఖిస్తున్నారో? చిన్న  
ప్పట్నీంచి ఎంతగా పూజించి దాయన్ని. ఏమైనా  
సరే వారిద్దరికే వివాహం జరగాలి. తను చెప్పినా  
వినడు చినబాబు. తనేంచేయాలి?... ఆలోచిస్తూ  
అర్ధరాత్రివరకూ కూర్చుండి మల్లి, తర్వాత ఒక  
కొగితం పెన్నిలు తీసుకుని, ఇలా వ్రాసింది.

పూజ్యులైన చిన్నబాబుగార్కి,

మీరు నిజంగా నన్ను ప్రేమించిఉంటే  
పార్వతమ్మగార్ని వివాహంచేసుకొని సుఖపడండి.

నేను మా మామదగ్గరకు వెళ్తున్నాను. మామంజే  
నాకెంతో ఇష్టం..... ఇది మీకు నాకూకూడ  
ఎంతోమంచిది.

ఇట్లు,  
మల్లి.

వ్రాసిన కొగితం ఎదురుగా తడికకుగుచ్చి,  
బట్టలమూట తీసుకుంది. ఈ వుత్తరంచూసి ఆయన  
తన బుద్ధిని అసహ్యించుకుంటారు, తిట్టారు, బాధ  
పడ్తారు. దీనివల్ల వంచకి, కులట, దుర్మార్గురాలని  
బిరుదులు వచ్చినా ఫర్వాలేదు. తనకు కావలసింది  
కూడా అదే. తల్లిదండ్రుల బలవంతంమీద చిన్న  
బాబు పార్వతమ్మని చేసుకుంటారు. అందరూ  
సంతోషిస్తారు. కాని తనకుమాత్రం కరువౌతుంది.  
అయినా తను త్యాగం చేయక తప్పదు. దీనివల్ల  
తనకు అపనిందలు వచ్చినా ఫర్వాలేదు. తనకు  
కావలసింది వారి ఆనందమే. అసలు తనెక్కడ?  
వారెక్కడ?

అని మనస్సులో నిర్ణయించుకుని పొలాల్లోంచి  
వెళుతోందిమల్లి. 'మామదగ్గరకు' అని అబద్ధం  
వ్రాసిన మామేలేని ఆ త్యాగమూర్తి, నిర్భాగ్యజీవి  
శాశ్వతనిశీధిలోకి వెళ్తుందని లోకానికి మాత్రం  
తెలియదు.

## అ ధి కౌ ర ము

అధరము కదిలియు గదలక

మధురము లగు భాషలుడిగి మానవ్రతుడౌ

అధికార రోగ పూరిత

బధిరాంధక శవము జూడ బాపము సుమతీ.

— సుమతీశతకము.

# గణిత శాస్త్రవేత్త ఐన్ స్టయిన్

వి. ఎం. డి. ఆచార్య.

బి. యస్.సి. 1.

సాపేక్షతా సిద్ధాంతాన్ని కనిపెట్టిన గణిత శాస్త్రవేత్త ఐన్ స్టయిన్ మన కాలంలో జీవించిన యింతటి మేధావి జీవితాన్ని గురించి తెలిసికొనడానికి అన్ని దేశాల ప్రజలూ ఆతురతపడ్డావుంటారు.

జర్మనీ దక్షిణ భాగంలోవున్న 'బవేరియా' రాష్ట్రంలో ఉత్తర అనే నగరంలో 1879 మార్చి 14వ తేదీన జన్మించాడు ఐన్ స్టయిన్.

అల్బర్ట్ ఐన్ స్టయిన్ జీవితంలో ముఖ్యమయిన విషయం- మ్యూనిచ్ లో అతని కుటుంబ వాతావరణం, స్కెల్లర్, హన్, గవాటి మొదలయిన జర్మన్ మహాకవుల కావ్యాలన్నీ చదివిన తండ్రి, సంగీతంలో గాఢమయిన అభిరుచి వున్న తల్లి, తండ్రితో బాటు వ్యాపారంచేస్తూ, లెక్కల్లోనూ, విజ్ఞాన శాస్త్రంలోనూ అభిరుచివున్న పినతండ్రి.

"అల్బ్రీబ్రా అంటే యేమిటి?" అని ఒకసారి పినతండ్రి సడిగితే, "అల్బ్రీబ్రా అంటే... ఒక రకమయిన సోమరిపోతు గణితం. అందులో నీకు తెలియనిదానికి 'X' అని పేరుపెట్టి- తరువాత సావకాశంగా దానికోసం వెతుకుతారు" అని చెప్పిన జవాబే చిన్నవాడు ఐన్ స్టయిన్ ని గణితశాస్త్రపు విషయాస్వేషణకు పురికొల్పింది. ఐన్ స్టయిన్ జీవితంలో ముఖ్యంగా సాహిత్యం, సంగీతం, గణితం- యీ మూడు విషయాలపట్ల ఆసక్తికలగడానికి

చిన్నతనంలో యీ ముగ్గురి పెద్దల ప్రభావమూ కారణమని చెప్పాలి.

ఐన్ స్టయిన్ కి బడిలో క్రమశిక్షణ అన్నా, అధికారం అన్నా గిట్టేదికాదు. అతని సృజనాత్మక శక్తికి ప్రతి బంధకంగా ఉన్న కఠినమయిన నియమాలకు అతడు తల ఒగ్గలేకపోవడమే అందుకు కారణం. ఉరకలువేసే, అతని భావనా శక్తికి - బండగా 'బట్టిపట్టడం' సాధ్యం కాలేదు. మరి జర్మన్ పాఠశాలల్లో బట్టి పట్టించడమే బోధనా సర్వస్వము.

అతడు యూదు జాతీయుడు కావడంవల్ల - జ్యూరిచ్ పాలిటెక్నిక్ లో పట్టభద్రుడయినప్పటికీ, స్కూల్ మాస్టర్ ఉద్యోగంకూడ దొరకలేదు. చిట్టచివరకు ఎన్నో రోజులు నిజంగా పస్తులతో గడిపిన మీదట ఒక స్నేహితుడి సిఫారసువల్ల బెర్న్ లో స్విస్ ప్రభుత్వపు "పేటెంట్ ఆఫీస్" లో గుమాస్తాగిరి దొరికింది. ఈ ఉద్యోగం దొరకటం చాల అదృష్టమే అయింది. ఎందుచేతనంటే, ఇక్కడే యీ ఉద్యోగంలో ఐన్ స్టయిన్ ప్రపంచాన్నంతటిని దిగ్భ్రమలో ముంచేసిన సాపేక్షతా సిద్ధాంతాన్ని రూపొందించాడు. "పేటెంట్ ఆఫీస్" లో పని అతనికి చాల తేలికగా ఉండేది. అందుచేత త్వరత్వరగా పని ముగించుకొని మిగతా కాలం అంతా తన

లెక్కలు చేసుకుంటూ కూర్చునేవాడు. తన పై అధికారి వస్తున్న సవ్యడి వినిపించినప్పుడు మాత్రం గజగబా లెక్కల కాగితాలు డ్రాయర్లు కుక్కేసి, ఆఫీస్ పనిచూస్తూన్నట్టు నటించేవాడు.

“చెప్పలు కుట్టేపని” అని ఐన్ స్టయిన్ హాస్యానికి పెట్టుకున్న పేరుగల ఆ గుమాస్తా గిరి ఆతనికి చాల అనుకూలంగా వుండేది. విశ్వవిద్యాలయాల్లో ఆచార్యపదవి ఇస్తామన్నా ఆతడు ఆపని వదలటానికి మొదట్లో ఒప్పుకోలేదు. ఐన్ స్టయిన్ యిత శాస్త్రజ్ఞుడయినా పరిశోధనాలయాల్లో ఒక్క పరిశోధనకూడ చేయకుండానే, ఇతర శాస్త్రజ్ఞులిచ్చిన వివరాలు ఆధారంగా కాగితంమీద లెక్కలు కట్టి, తన సిద్ధాంతమంతా రూపొందించాడు. సాపేక్షతాసిద్ధాంతం ఆతని మనస్సుకు తట్టి క్రమక్రమంగా రూపొందితూవుంటే, ఆతనికి ఎక్కడలేని ఉద్వేగమా కలిగి అహారాత్రములు కృషిచేసి 1905లో తన 25వయేట సాపేక్షతా సిద్ధాంతాన్ని గురించిన మొదటి వ్యాసం తయారుచేసి ప్రకటించాడు. తరువాత, పదేళ్ళకుగాని రెండవ వ్యాసం ప్రకటించలేదు. ఈ వ్యాసాలు ఇతర శాస్త్రపరిశోధకుల వ్యాసాలకువలె అంతకు ముందున్న శాస్త్ర సిద్ధాంతములకు విస్తరణలో, అవలంబనలో కాకుండా విజ్ఞాన శాస్త్రానికి ఆధారసత్యములకు సంబంధించిన నూతన ప్రవచనాలు. అందుచేత ఈ రెండు వ్యాసాలవల్ల ఐన్ స్టయిన్ కు జగద్విఖ్యాతి వచ్చింది. 1921 సం॥లో ఈగణితశాస్త్ర విద్వాంసునకు ‘నోబెల్’ బహుమతి ఇచ్చుట జరిగింది.

ఇప్పుడు ఐన్ స్టయిన్ పేరుచెప్పేసరికల్లా, సాపేక్షతా సిద్ధాంతం స్ఫురణకు వస్తుంది. ఎవరు ఐన్ స్టయిన్ ని గురించి చెప్పదలుచుకున్నా, ఆతని సిద్ధాంతాన్ని వివరించి బోధించక తప్పించుకోవడానికి వీలులేదు.

పెద్దమాటలన్నా, క్రొత్తడోహలన్నా మీకు ధయమయితే యీ ‘పేరా’ చదవకండి! కాని,

దీన్ని చదివితే యెవరికయినా ఐన్ స్టయిన్ భావాలు స్థూలంగా అర్థమౌతాయి. ఇందులో డాక్టర్ ఐన్ స్టయిన్ సిద్ధాంతాన్ని గూర్చిన తేలిక విషయాలుంటాయి. గణితభాగం చాల క్లిష్టమయినది. మనలో పెక్కుమంది దాన్ని అర్థం చేసుకోలేరు. మొదట మనం వాడవలసిన మాటలు చూద్దాం. వెలుగు, విశ్వము, కాలము, స్థాన పరిమాణము. ఒక్కొక్కమాటను ప్రత్యేకంగా వివరిస్తే అంత కష్టంగా వుండవు. ‘వెలుగు’ అంటే యేమిటి? పగలు వెలుగు వుంటుంది. మనిషి కంటికి గోచరించని రేడియో తరంగాలు, ‘ఎక్స్’ కిరణాలలాంటి వెలుగు - శక్తి రూపాలు ఎన్నో వున్నవి. అయితే కొన్నిరూపాలలో వెలుగునే మనం చూడగలం. దాన్నే మనం ‘వెలుగు’ అంటాం.

“విశ్వము” అంటే యేమిటి? సూర్యుడు, చంద్రుడు, భూమి, నక్షత్రాలు గ్రహాలు- ఇవన్నీ కలసినదే విశ్వం. ‘కాలం’ అంటే యేమిటి? దూరంలాగే కాలం కూడ ఒక పదార్థం. రెండు నగరాలమధ్య వుండే యెడం ‘దూరం’ అంటాం. రెండు సంఘటనల మధ్య వుండే యెడమును ‘కాలం’ అంటాం. ‘నాలుగవ పరిమాణం’ అనే మాటను వినే వుంటారు. కాని, దాని అర్థం తెలియక పోవచ్చును. గణితశాస్త్రంలో ప్రౌఢజ్ఞానం కల్గిన పండితునికి నాలుగవ పరిమాణం అంటే, యెంతో, అర్థవంతమయిన మాట. కాని, మామూలు మనుష్యుడు దాన్ని కాలమని గ్రహిస్తే చాలు. అయితే ఐన్ స్టయిన్ దృష్టిలో స్థాన పరిమాణం అంటే యేమిటి? విశ్వంలో ఒక గ్రహం యొక్క స్థితిని నిర్ధారణ చేయడానికి మూడు పరిమాణాలు చాలవు. ఎందుచేతనంటే ఆ గ్రహం చలిస్తూనే వుంటుంది, విశ్వంలో ప్రతిపదార్థమూ ప్రతిక్షణమూ చలిస్తూనే వుంటుంది. వస్తుస్థితిని నిర్ధారణ చేయడానికి కాలాన్నిగూడ ఒక పరిమాణంగా గ్రహించాలి. ఇకపోతే ‘సాపేక్షత్వం’ అంటే యేమిటి? ఒక దానిస్థితిని వేరొకదాని

స్థితితోపోల్చి నిరూపించడమే సాపేక్షత్వం. కాలాన్నికాని దూరాన్నికాని కొలిచేటప్పుడు డేనితోనోపోల్చక తప్పదు. వేగం సాపేక్షమనియే దానికి పోల్చి కొలవాలి. విశ్వంలోనికల్లా సాపేక్షంకాని వేగం మౌక్తికేవున్నదని ఐన్ స్టయిన్ సిద్ధాంతం. వెలుగువేగం యెల్లప్పుడూ ఒకటిగానే వుంటుందని, దాన్నికొలవడానికి వేగోకదాని వేగంలో పోల్చనక్కరలేదని ఐన్ స్టయిన్ చేసిన ప్రతిపాదన ముఖ్యమయినది.

ఐన్ స్టయిన్ సిద్ధాంతాన్ని ప్రపంచమంతా క్రిందిచింది. కాని, దాని ప్రాముఖ్యం ఏమిటో బోధపడింది కొద్దిమందికి మాత్రమే !

ఐన్ స్టయిన్ ఆటంబాంబ్ కనిపెట్టడానికి కారకుడని చెప్పడంకూడ ఊరికే అన్నమాట కాదు. రెండవ ప్రపంచయుద్ధం ప్రారంభం కావడానికి సరిగ్గా 34 యేళ్ళకు పూర్వం పదార్థానికి, శక్తికి అనుబంధం యేర్పరుస్తూ  $E = mc^2$  అన్న ప్రధానసూత్రాన్ని కనిపెట్టాడు. ఈ సూత్రంలో 'E' అంటే 'శక్తి' (Energy), 'm' అంటే 'పదార్థం' (mass), 'C' అంటే 'కాంతివేగం' (సెకనుకు 186000 మైళ్ళు) అది తన భావిలోనే, అణువును బ్రద్దలుచేయడానికి సాధ్యమయి అం

దులో, నిబిడికృతమయిన అపారశక్తిని విడుదల చేయడానికి ఈ సూత్రం ప్రాతిపదికకాగలదని దీన్ని కనిపెట్టినప్పుడు ఐన్ స్టయిన్ అనుకోలేదు.

ప్రిన్ స్టన్ లో పదవి విరమణచేసెను. ఐన్ స్టయిన్ యేకాంతంగా తనకృషిని కొనసాగించుకుంటూనే వుండేవాడు. 1949లో తన 70వయేట భూమ్యాకర్షణ సిద్ధాంతాన్ని (Generalized Theory of Gravitation) ప్రకటించారు. ఈ మహావిజ్ఞాని జీవితాంతంవరకూ మానవజాతిక్షేమంకోసమూ, విజ్ఞానాన్వేషణకోసమూ నిర్విరామంగా కృషిచేస్తూనేవున్నాడు.

1955 ఏప్రిల్ 18వ తేదీన ఆల్బర్ట్ ఐన్ స్టయిన్ ప్రిన్ స్టన్ లో మరణించాడు. అప్పటి కాయనకు డెబ్బదియైతేండ్లు.

ఈయన మరణవార్త వైజ్ఞానిక ప్రపంచాన్ని అపార విషాదంలో ముంచింది.

స్వర్గీయ జవహర్ లాల్ నెహ్రూగారు చెప్పినట్లు, "చీకట్లు ముసురు కుంటున్న ప్రపంచానికి జ్యోతిర్దాతగా జీవించిన మహాసుభావుడు మరణించాడు"



## అ క్రో ధ న త

క్రతు సహస్రంబులు నే  
 సిన వారి కంటె నక్రో  
 ధనుడ కరంబధికు డండ్రు త త్వ విధిజ్ఞుల్.

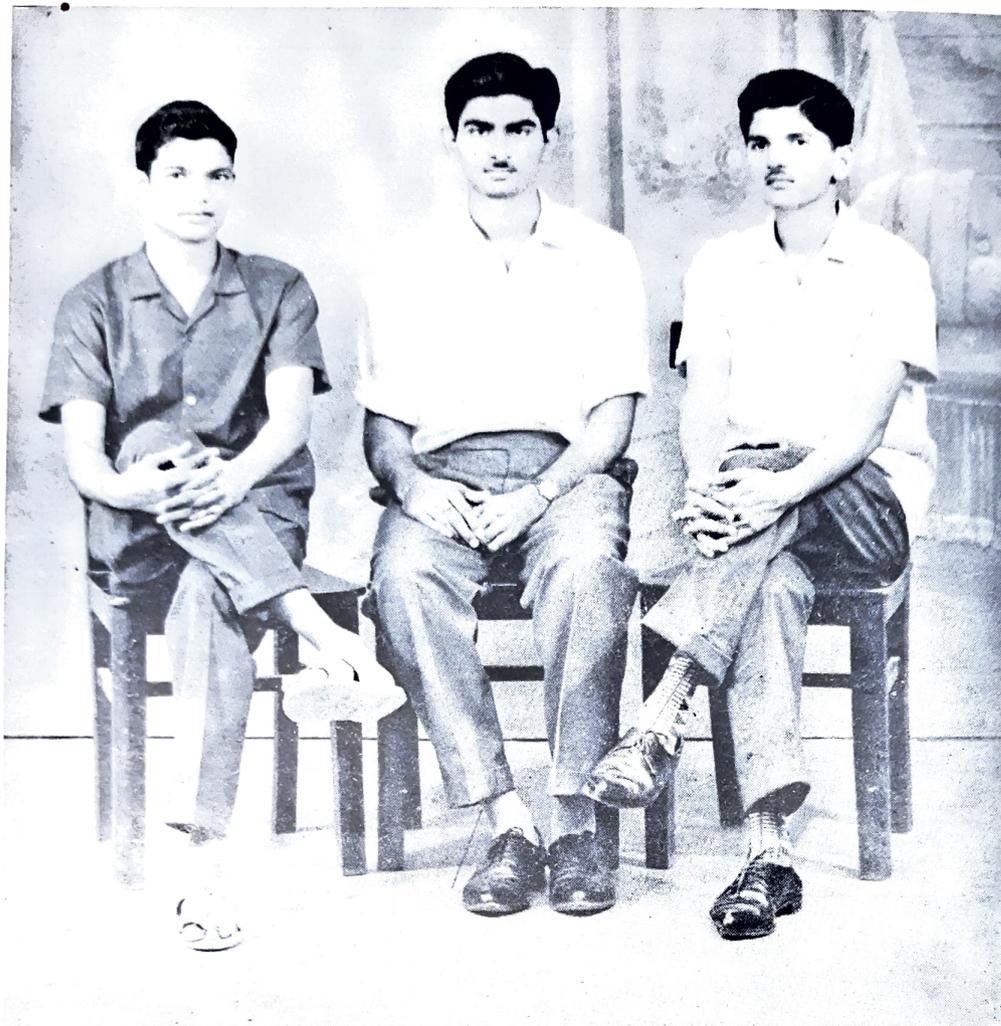
— నన్నయ.



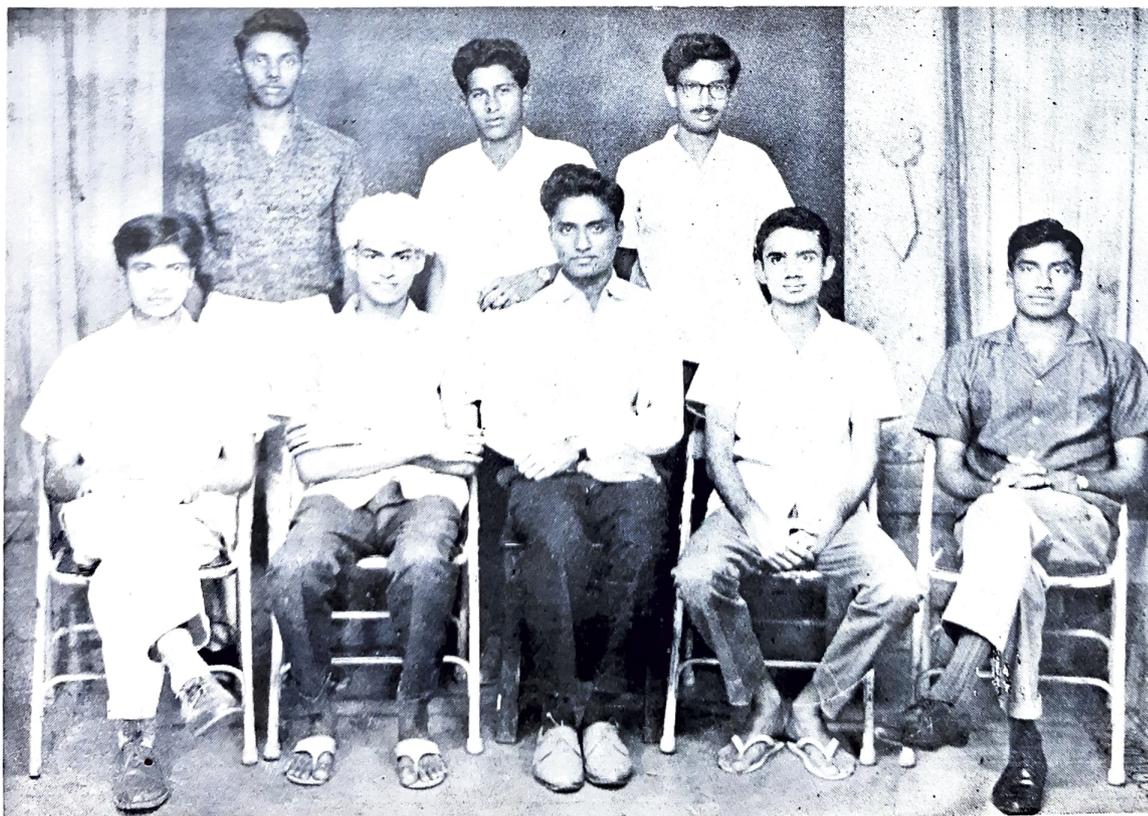
Old Boys at St. Joseph's College and Regional Engineering College, Trichy,  
with Fr. T. George, S.J., Principal, St. Joseph's and Fr. B. J. Coyle, S.J.,  
Director, Local Branch.



Old Boys at P. E. S. Engineering College, Mandya



Old Boys (B.Sc. 1966) at the Indian Institute of Technology, Madras, 3 year B.Tech.



O. B. A. Branch at Engineering College, Anantapur

# చీకటి - చెదిరింది

తిరుపతి భాస్కరరావు,

బి. యస్.సి. - 3

నొకేదో ఇంత భగవంతుడిచ్చాడు. నాది మంచి చిల్లరకొట్టుంది. లాభాలు బాగానే వస్తూంటాయి. పెళ్ళాం బిడ్డలు లక్షణంగా ఉన్నారాయెను. కూటికోసం కాలు కదల్చనవసరంలేదు. ఏదో రామా! లక్ష్మణా! అంటూ కాలం గడిపేస్తే సరి” అని తెలిసినవాళ్ళు కనబడినప్పుడల్లా, ఉపోద్ఘాతం ఇస్తుంటాడు పోలిశెట్టి.

“ఏవైనా; అదృష్టవంతుడివిలే, శెట్టి - నువ్వు! అందరికీ రమ్మంటేమాత్రం, సిరి పరుగెత్తుకు వస్తుందా ఏవన్నానా!” అని లోలోపల కుళ్ళు కొనేవాళ్ళు సామాన్యులు. ఆ విధంగా ఇతరులు కుళ్ళుకుంటూ, తమ లో తాము బాధపడి పోతుంటే; - చూసి ఆనందించడం, పోలిశెట్టికి మహా సరదా. తన పూర్వీకులు అన్నాలు తిని విస్తళ్ళు పారవేస్తే ఒక్కొక్క విస్తల్లో ఫలాల లెక్కన నెయ్యి పేరుకొని ఉండేది; పూర్వీకుల ఘనతను చాటి చెప్పి చంకలు గుద్దుకోవడం కూడా అతనికి సరదా.

వాళ్ళ పూర్వీకులు విస్తల్లో నెయ్యి పోసుకొని తినేవారో లేకపోతే, విస్తరాకుకు - ఆముదం పూసి, వీధిలో పడేసేవారో నాకైతే తెలియదు కానీ పోలిశెట్టి పిల్లికి బిచ్చంపెట్టే రకం కాదని మాత్రం తెలుసు. ఇంత పెద్ద వ్యాపారం చేస్తున్నాడుకదా! ఏనాడైనా ఒంటిమీద చొక్కా వేసుకున్న పాపాసపోయాడూ! అంతా బడాయి.

వట్టి పిసినిగొట్టుమనిషి. కాకపోతే ఇది వేసవి కాలంగా! చిల్లరకొట్టు మొదులే ఇరుకు; అందుకు తగ్గట్టు చచ్చే ఉక్క. గుమస్తా గోవర్ధనం చెమటలు క్రక్కుతూ పద్దులు రాస్తున్నాడాయె; ఆ ఫ్యానుగాలి తన బాజ్జకు తప్ప అతనికి గాలి తగిలేలా మళ్ళించడే! పిసినిగొట్టుతనానికి ఇంత కన్నా నిదర్ధనం ఏమికావాలిగనుకా!

చెమట ఓచేత్తో తుడుచుకొని పోలిశెట్టివైపు కొరకొరా చూశాడు గోవర్ధనం. పోలిశెట్టి మో చేతులమీద తల ఆస్సుకొని దూరంగా వస్తున్న మామిడి పండ్ల అమ్మి తన జారిపోతున్న పైటను సద్దుకుంటుంటే చూస్తూ ముసిముసిగా నవ్వు కున్నాడు. పోలిశెట్టి నవ్వితే గోవర్ధనానికి మహా కోపం వస్తుంది. ఎందుకంటే! ఆ నవ్వులో చాలా అర్థాలు దాగుంటాయిగనుక. రెండవది అలా నవ్వుతూనే అనుకున్నపని నిముషాలమీద నెర వేరుస్తాడుకనుక. అందుకే ఆ నవ్వుకు “విష బాణం” అని ముచ్చటగా పేరు పెట్టుకున్నాడు గోవర్ధనం.

గోవర్ధనానికి, పోలిశెట్టికి అన్ని విషయాల్లోనూ సామరస్యం కుదురుతుందా! అంటే చెప్పడంకష్టం. పోలిశెట్టి అతి రహస్యంగా సాగించే వ్యాపారం గమనించి గోవర్ధనం ఆశ్చర్య పోవడంకూడా కద్దు. శెట్టి వ్యాపారంకోసం ప్రయోగించే వ్యవహారిక భాషను అందులోని

నుకువును గోవర్ధనం చాలానుట్టుకు అర్థం చేసుకున్నాడుకూడాను. అతను చేరిన మొట్టమొదటి గోణాలలో రాత్రి బాగా చీకటిపడి పన్నెండూ ఒంటిగంటల ప్రాంతాలలో నాలుగైదు లారీలు శెట్టి కొట్టుముందు ఆగేవి. అందులోంచి పెద్దపెద్ద పెట్టెలు శెట్టి రవాణ్యంగా ప్రాణ ప్రదంగా చూసుకుంటున్న గోడౌన్ లోనికి చేరుకునేవి. ఆ పెట్టెల్లో ప్రాచీన బుద్ధులు, నల్లమందు, స్వగుల్లు రిప్పుచాచీలు, ఇంకా అలాంటి రకానికి చెందినవే చాలా ఉండేవి. గోవర్ధనం మొట్టమొదట్లో ఈ దృశ్యం చూసి వణికిపోయాడు. గోవర్ధనం భయంతో గడగడా వణుకుతుంటే శెట్టి గలాగలా నవ్వి. “ఎట్టి నాగాళమ్మా ఈ మాత్రానికి భయపడితే ఎట్లా బ్రతుకుతావోయ్ ప్రపంచకంలో. ప్రపంచకాన్ని అర్థం చేస్తోవాలి; అందుకు తగినట్టు నడవాలి. పెద్దోళ్ళతో యాపారం అంటే యావసుకుంటున్నోవో! మనం ఇలాంటియి అందితే ఈ నిమిషంలో చేతుల్నిండా డబ్బు లొస్తాయోయ్! సంపాదించినప్పుడే రెండు నేతులా సంపాదించాలి; నేకుంటే ఈ కాలంలో మనకు పైసా యిలువిచ్చేవాడెవడోయ్!” అని ధైర్యం చెప్పాడు శెట్టి. ఇప్పుడు గోవర్ధనానికి విజయవాడనుండి సరుకు ఏమాలసుండి, ఏమాలకు చేరవేయాల్సి తున్నంగా తెలుసు. మామూలు జీతం కాకుండా శెట్టి ఎంతో కొంత ముట్టజెప్పుతున్నాడుకూడ. చీకటిపడితేచాలు, చీకటికొట్లో నుండి ఒక్కొక్క వస్తువుకు కాళ్ళొచ్చి మారు మూలలకు ప్రయాణం సాగిస్తుంటాయి. ఇది నిత్యం జరుగుతున్న తంతు.

మావిడి పళ్ళెమ్మి వెకిలిగా నవ్వుతూ దాటుకుపోయింది. బీసెంట్ రోడ్డును ఆచివరనుండి ఈచివరకు సర్వేచేసి ఒక పల్లెటూరి రైతు వెకిలిగా నవ్వుతూ పావులలోనికి వచ్చాడు. పోలిశెట్టి అతనికి మర్యాదచేసి కూర్చోబెట్టాడు. గోవర్ధనాన్ని పిలిచి “వారికి ఏంకావాలన్నీ కనుక్కోరా” అన్నాడు.

“అర్లి క్కుందా?” అన్నాడు రైతు. “అర్లిక్కా! - అది ఇప్పుడేడ దొరుకుద్దండి సరుకు వచ్చినట్టేవచ్చి మాయమైతేను” అన్నాడు శెట్టి.

“యాంద్రీదా! మావాళ్ళు అర్లి క్కే తెమ్మరనే! ఆ - పసిబిడ్డకైతే - గొల్లభామడబ్బా తీస్కెల్లి చ్చుసుకో! మరి మాయింటిది, జబ్బుతో ఆస్పత్రిలో పడుండేదాయే! రావశెండ్రా! ఏం చేసేది తండ్రా! ఏం శెట్టే అర్లి క్కు దొరకదంటా!... నూడ య్యా ఎక్కడన్నా!... నీకాళ్ళట్టుకుంటాను.” రైతు ప్రాధేయపడ్డాడు.

శెట్టి కాసేపు పైకి క్రిందకూ చూసి మంత్రాలోచన చేశాడు. హార్లెక్కు దొరక్క బాధపడుతున్న రైతు తనే బనట్టు నటించాడు. “ఎక్కడ దొరుకుతుందబ్బా!” అని ఆలోచించాడు. ఆఖరికి ఏదో తీర్మానం చేసినట్టు మొహంపెట్టి “సరేలండి; ఏదో ఒకటి చేస్తాం!... మీ బాధ నాకు అర్థమైందిలండి... అన్నట్టు... ఓపది ఇలా పడెయ్యండి... ఎక్కడో తంటాలు పడి తెప్పిస్తా... ఆ... ఒక గోవర్ధనం... మన మాణిక్యం... కొట్టుకెళ్ళి... అర్లి క్కుందేమో! కనుక్కొని... ఉంటే ఒకటట్టుకురా” అని కన్ను గీటాడు.

“రావశెండ్రా! బిదురూపాయలా సిల్లరన్నాడు కదయ్య... డాక లేరు... మరి సువ్వేమో!... పదిలాగుతుంటివి అన్నాడు రైతు బాధగా “సరే నయ్యా... ఇది మరి బావుంది... అవుసరం నీకా... నాకా... ఆంధ్రలో సరుకు డిమేండ్” అతిలాఘవంగా శెట్టి ఆశ్రయం ప్రయోగించాడు. రైతు నోరుమూసుకున్నాడు.

గోవర్ధనం, శెట్టి ప్రయోగానికి చాలా నవ్వుకున్నాడు. శెట్టి పరిభాషలో “మాణిక్యం” కొట్టుంటే చీకటి కొట్టని, గోవర్ధనం బ్యాటరీ పుచ్చుకొని మాణిక్యం కొట్టుకెళ్ళాడు. ఒక మూలగా యాభై హార్లెక్కు పెట్టెలు దొంతరగా

పేర్ని పెట్టున్నాయి. అందులోంచి ఒక పెట్టె తీసి గుమ్ము దులిపి పెట్టిక్రింద పచ్చసిరాతో ఏదో మార్కు పెట్టాడు.

కిరోసిన్ కరువున్న రోజుల్లోకూడా శెట్టి తీటరుకు రూపాయ పుచ్చుకుని అమ్మిన రోజులు గుర్తుకొచ్చాయి గోవర్ధనానికి. “వెధవ ఒకరికి పెట్టడు; తనూ తినడు. ఇంత ఆస్తి సంపాదించు న్నాడుకదా! ఆస్థంతా ఉన్న ఆ ఒక్క కొడు కుకే ఊడ్చి పెట్టకపోతే; ఇంత దానధర్మం చేయ కూడదూ! అయినా ఈ శెట్టికి వ్యాపార కిటుకులు మాబాగా తెలుసు; అపర చాణక్యం. లేకపోతే మొన్నటికి మొన్న మూడు లారీల హార్లెక్స్ సీసాలు మార్కెట్లో దిగాయికదా. ఇంతలోనే ఏచెయ్యం వచ్చి మింగినట్లు! ఏబిలో రాత్రిం బవళ్ళు వీడికి చాకిరీ చేయలేక చస్తున్నాను.” గోవర్ధనం కొట్టులోని కొచ్చేసరికి; పంగనామాల బైతు కొట్టంతా పరికించి తీరిగ్గా వాసాలు లెక్క పెట్టుకుంటున్నాడు. గోవర్ధనం డూప్లికేటు బిల్లు పుస్తకంలో పదిరూపాయలకు బిల్లు వ్రాసి బైతుకు ఇచ్చాడు.

బైతుచేతికి పెట్టె వచ్చింది; దాన్ని త్రిప్పి త్రిప్పి చాలా విచిత్రంగా చూశాడు. చెవిదగ్గర పెట్టుకుని గలగలా ఆడించేడు. బొడ్డోనుండి మూట విప్పి అందులోంచి - పదిరూపాయలు తీసి, శెట్టికొచ్చాడు. శెట్టి గోవర్ధనాన్ని చూసి తృప్తిగా మెరుస్తున్న కళ్ళతో నవ్వేడు. గోవర్ధనం ముసిముసిగా నవ్వి తల వంచుకున్నాడు.

పల్లెటూరి బైతు గడపమీద తీవిగా నిల్చుని జేబులోంచి విజల్ తీసి ఉదాడు. ఎక్కడ

దాకున్నారో ఏమో! వెంటనే నలుగురు మట్టి పోలీ సులు పరుగెత్తుకొచ్చి పోలీశెట్టి చేతులకు బేడీలు తొడిగారు. అక్కడకు, మరో పోలీసు వచ్చి “మాణిక్యం కొట్టు సీల్ చేశానుసార్” అన్నాడు.

“Well done my dear Inspector” అన్నాడు గోవర్ధనం, chief Inspector దివా కర్ భుజంతట్టి. “నాడేముంది లెండి నా డ్యూటీ నేను చేశాను. శ్రమపడింది మీరేకదా!” అన్నాడు దివాకరం. గోవర్ధనం శెట్టికళ్ళలోనికి నూటిగా చూసి హేళనగా నవ్వేడు. “ఒరేయ్ గోవర్ధనం. సువ్వు ..... సువ్వు ... ?” అన్నాడు శెట్టి తడబడుతూ.

“అవును నేనే సెంట్రల్ స్పెషల్ బ్రాంచ్ సి. ఐ. డి. ఇన్స్పెక్టర్ ని; పోలీశెట్టి! నీ రహస్యాలు కనుక్కునేందుకు ఏడు నెలలనుండి నీక్రింద నమ్మకంగా పనిచేశాను. నీ చీకటిగదిలోంచి వస్తు వులు ఏ మూలకు ఎవరిచేతికి దాటుతున్నది గమనించాను. వాళ్ళందరినీ ఈ పాటికి అరెస్టు చేసుం టారుకూడా. నీలాంటి దేశద్రోహులు బీదల రక్తాన్ని పిండుతూ దేశం నలుమూలలా బ్రతుకు తున్నారు. కాలం వాళ్ళనుకూడా పట్టిస్తుందనుకో! కాని శెట్టి ఒకటి మాత్రం గుర్తుంచుకో - సత్యాన్ని చీకట్లో దాచలేవు. ఎల్లకాలం పేదల కడుపు కొట్టలేవు.” గోవర్ధనం శెట్టి భుజాన్ని సాను భూతిగాతట్టి “Carry on Inspector” అన్నాడు. భయంతో వణుకుతున్న శెట్టినిచూచి మాణిక్యం కొట్టోనిచీకటి ఒక్కసారి పకపకా నవ్వి; తృప్తిగా నిట్టూర్చి; వెలుగులోనికి చెదరి పోయింది.



# విప్లవయోగి అరవిందఫోన్

డి. అప్పారావు, వి. యస్.సి. (ద్వితీయ)

'వందేమాతరమ్' దాస్యమున మ్రగ్గుచుండిన మన దేశమాతకు ప్రజలొనర్చవలసిన సేవ నుదోషి ధించుచు మహర్షి బంకించంద్ర తన 'ఆనందమఠ' మను నవలలో ఒక పాటయందు ఈ మాటల నే సుముహూర్తమున నుపయోగించెనో కాని ఇవి భారతీయులకు నిత్యమనన యోగ్యములైనవి. జాతికి జీవముబోసి యెంతటి త్యాగమునకైనను ఉత్సాహము కల్పించినవి.

ఎట్టి విషయమునందైనను భారతదేశమున ముందంజ వేయునది వంగభూమియే. వంగభూమి యిట్టి నూతన వికాసము నందుచుండిన దినములలో జాతిలో అంతర్నిహితమైయున్న సర్వశక్తుల సమ్మేళనమో అన్నట్లు, 1872వ సంవత్సరము ఆగస్టు 15వ తేదీన అరవిందు డుద్భవించెను.

పరిస్థితు లనుకూలించినచో నెట్టి విజయముల నైన సాధింప వచ్చునని సామాన్య లనుకొను చుండురు. ప్రాతికూల్యము నతిక్రమించి పట్టు దలతో విజయమును సాధించుటే మహాత్ముల లక్షణము. అరవిందుడీ అసాధారణ విద్యా విజ యమును సాధించినపుడు దారిద్ర్యమునే అనుభ వించుచుండెను.

చిన్నప్పడు మనసున నాటిన విషయములు జీవితాంతము నిలుచును. ఇది సాధారణముగ మానవ స్వభావము. అరవిందుని బాల్యము, విద్యా భ్యాసము, అన్నియు ఆంగ్ల వాతావరణముననే

సాగినవి. ఇంగ్లండునందున్నంతవఱకు ఆతడు భారతీయ విజ్ఞానమునకు దూరముగనే యుండెను.

తండ్రియైన కృష్ణధనునకీ పేరెట్లు తోచెనో కాని, అరవిందుని జీవిత పరమార్థ మిందులోననే యున్నది. భారతీయుల దృష్టిలో అరవిందము వికాసమునకు చిహ్నము. అది పంకజము. అయి నను పంకము నతిక్రమించి, ఊర్ధ్వముఖమై, దివ్య తేజస్సుచే వికాసమునందును. అరవిందుని పూర్ణ యోగమునకు లక్ష్యము, భౌమమును నివృత్తమొనర్చు టయేకదా.

తల్లియొడినుండి దూరముగా త్రోసివేయబడిన బిడ్డ మరింత యుద్వేగముతో మాతృవక్షుమున తల దాచుకొనబోవునట్లు, అరవిందుడు ఆంగ్ల దేశము నందుండియు మాతృదేశ మహాదయమునకై తహతహలాడెను.

స్వదేశమున నడుగుపెట్టు నాటికి అరవిందునకు ఇరువదియొక్క సంవత్సరములు. అంతవర కతనికి భారతీయ విజ్ఞాన మాహాత్మ్యముగాని, ఆధ్యాత్మిక కాన్నత్యముగాని, శాస్త్ర సంప్రదాయములుగాని, ఏమియు తెలియవు. నీటి తుంపురులచే చల్లబడిన తప్తలోహమువలె సాశ్చాత్య విజ్ఞానముచే నతని జ్ఞానత్పన్న శాంతించినదికాదు. ధారావాహినిగా నీరు పడినగాని తప్తలోహము చల్లారదు. సర్వజ్ఞ త్వము సిద్ధించినగాని జ్ఞానత్పన్న అణగదు.

అంతర్వాణి ఆ దేశము వినిపించినతోడనే

అన్నిటి నతడు తృణప్రాయముగా తృణించి, మాతృదేశ సేవకై కార్యరంగమున కురికెను. తల్లి పిలుపును విన్న తనయుని తహతహ యట్టిది! జాతీయ విజ్ఞానముతో పరిచయము లేకున్నను, స్వదేశమునకు వచ్చునాటికే, అతనికి దేశమాత దాస్యబంధనములను విడగొట్టవలెనను గాఢకాంక్ష కలిగినది. భారతీయ విజ్ఞానము దానిని బలీయ మొనర్చినది. కర్మయోగియై జాతికి ఉత్తేజము కలిగించినాడు. అరవిందున కారంభమున దేశదాస్య విమోచనమే లక్ష్యము. దానినిగూర్చి యత్నించుటకు ముందు దేశము నెరుంగవలెననుకొనెను.

వంగ భాషా సాహిత్య మెంత గొప్పదైనను భారతాత్మను సాక్షాత్కరింప జేయుట కది సమర్థముకాదు. దానికేకాదు. ఏ భాషకును నాసామర్థ్యము లేదు. సరిగదా, అన్నింటి సాహిత్యములు కలిసియు దానిని సాధించుటకు సమర్థములు కాజాలవు. సాహిత్యము హృదయమును సంస్కరించునే కాని సాధన మార్గముల నుపదేశింపదు. జిజ్ఞాసువగు నరవిందుడు సాహిత్యముతో తృప్తి పడక శాస్త్ర గ్రంథములనుకూడ చదివెను.

రాజకీయముగా స్వాతంత్ర్య మందినగాని భారతీయ విజ్ఞాన వికాసమున కవకాశము లేదు. స్వాతంత్ర్యము సర్వాభ్యుదయములకు ప్రథమ సోపానము. దానిని సాధించుట కేసాహసములైన చేయవలెనని ప్రతిజ్ఞ గైకొని స్వదేశమునకు వచ్చిన అరవిందునకు భారతీయ విజ్ఞాన సంపర్కముచే ఆ కాంక్ష బలీయమైనది. తానందులకే అవతరించెనని యతని కనిపించెను. అది యధార్థముని ఆతని

జీవితము నిరూపించెను. అట్లే దేశమును గూర్చిన యతని యూహలును ఎప్పటికైన నిజము కాగలవు.

అరవిందునకు, పెంచి పెద్దచేసి పరమోపదేశము చేయు తల్లియే దేశమనిపించినది. ఆతల్లి రక్తమును రాక్షసులు పానము చేయుచుండ, ఏ కుమారుడును చేతులు కట్టుకొని కూర్చుండ లేడుగదా! మాతృదాస్య విమోచనకై అవతరించిన అరవిందు డెట్లూరకుండగలడు ?

‘పాశ్చాత్య దేశములవోలె రహస్య విప్లవ సంస్థలు దేశమంతటను ప్రథాన స్థానములలో నేర్పడవలెను. అవి యన్నియు నొక్క కాలమున ప్రవర్తించి పర ప్రభుత్వమును పడగొట్టి జాతీయ ప్రభుత్వమును స్థాపింపవలెను. స్వాతంత్ర్య సిద్ధికి మార్గమిది’ యని ఆతడు చాలకాల మనుకొనుచుండినాడు. ఈ దృష్టితో వంగదేశమున ప్రబల మగుచుండిన విప్లవ సంఘముతో సంబంధ మేర్పరచుకొనెను. అరవిందుని రాజకీయములకు ఆధ్యాత్మిక శక్తియే ప్రాతిపదిక. అతడు సాధించిన ఆధ్యాత్మికాన్నత్యమునకు మాతృ దేశోద్ధరణ కాంక్షయే మూలము. అనగా దానికిదియు, దీని కదియు కారణములైనవి.

“ఏ వ్యక్తి ఎప్పుడేమి చేసినను దేశోపకార మగునా కాదాయని విచారించియే చేయవలెను. దేశార్థముపయోగింపని ఆత్మోద్ధరణము ఉద్ధరణమే కాదు.” అనునది, విప్లవయోగి, నవయుగ నిర్మాత, స్వరాజ్య సారథి యనదగు పండిత అరవిందఘోష యొక్క కడపటి సందేశము.



# ప రి స్కృ తి

బి. ము రళీ కృష్ణ, బి. యస్.సి. (తృతీయ)

“అరేయ్ గోపి, గోపి, ఏడున్నర అయింది, ఇంకా నిద్ర లేవలేదే? దొడ్లో గొడ్లతో సహా అన్నీ లేచాయ్. అఫీసరువి ఇంకా సువ్వే లేవ లేదు” అని విసుగుతో కసురుతూ మాణిక్యమ్మ తన సవిత్రకొడు కైన గోపిని లేపుతున్నది.

“ఇప్పుడే లేస్తున్నా పిన్ని” అన్నాడు అప్పుడే అరచేయి చూచుకుంటూ గోపి. ఎందుకో అరచేయి కనపడిందిగాని, అరచేతిలోని గీతలు మాత్రం కన పడలేదు. ఈరోజు ఏమికాసున్నదో అని అనుకుంటూ మీదనున్న కంబళీలాంటి దుప్పటి తొలగించాడు. అప్పుడే బాల భాసుని లేతకిరణాలు గొడ్లపాకలోని చిన్న సందులగుండా గోపి మంచం మీదకు “ఇంకా సువ్వే లేవలేదా, నేనువచ్చి చాలా సేపయింది” అన్నట్లుగా మీదపడు తున్నాయి. చంకలక్రింద కర్రల ఆసరాతో దొడ్లో శావిదగ్గరకు వెళ్ళాడు గోపి.

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‘పిన్ని, పిన్ని’ గోపాలం మామయ్య, అత్తయ్య వచ్చారంటూ దొడ్లోకి కేక వేసి గోపాలం గారి కేసి బయల్దేరిన గోపి కర్రలడ్డంపడి సరిగ్గా గోపాలం కాళ్ళమీద పడి “అమ్మా” అని గట్టిగా కేక పెట్టాడు.

“మీ అమ్మకే మొచ్చిందిరా పోయేకాలం” అని సాగడిసుకుంటూ వచ్చిన మాణిక్యమ్మ వాళ్ళ న్నయ్యను ఇంత మొగం చేసికొని ‘రారా, అన్నయ్య రా’ ఇప్పుడేనా రావటం అని ప్రశ్నల

వర్షం కురిపించింది. ప్రశ్నలన్ని అయిన తరువాత గోపాలంతో తన గొడవనంతా వెళ్ళబోసికొంది. ‘ఈ కుంటి వెధవతో చస్తున్నా నన్నయ్యా! ఏడు రేపు బతికి ఎలాబట్టుగడతాడోగాని, ఒక్కపనికి ఆస్కారం లేదయ్యె. ప్రతిపనికి పెద్ద ఆరిందాలా బయల్దేరి చేయబోవటం, దమ్మిడిదానికి ఏగాని క్షువరం చేయటం’. అవును, కుంటి వెధవని ఎందుకు పనికివస్తాను అని సవిత్రతల్లిమాటలు తల పోసుకుంటూ బడికి బయల్దేరాడు గోపి.

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“అరేయ్,” రంగనాథం లేచి, సుభాషితాల్లోని “వనజభవుండు కోపమున...” అనే పద్యం అప్ప జెప్పరా” అన్నారు కళ్ళజోడు సరిచేసికొంటూ, చేతిలో బెత్తం ఊపుతూ తెలుగు మాష్టారు పరంధామయ్యగారు. ఆ నూకల్లో నామాలు పెట్టుకొన్న పరంధామయ్యగారంటే పిల్లలు కమ్మనకుండా ఉండేవాళ్ళు. ఆయన చండశాసనుడు. అతి కోపిష్టిమనిషి. పైగా ఉత్తిపుణ్యానికే ఆయన అగ్గయిపోతాడు. రంగనాథం లేచి గడగడ పద్యం అప్పజెప్పేశాడు.

“సువ్వరా గోపి” అన్నకేకతో ఇంటిదగ్గర పిన్ని అన్నమాటలు నెమరుకు తెచ్చుకుంటూ బాధపడుతున్న గోపిలేచి మాష్టారు అడిగిందేమిటో తెలియక దిక్కులు చూస్తూ కర్రలసహాయంతో లేచి నిలబడ్డాడు. “దానితర్వాత పద్యం చెప్పమంటున్నా” అంటూ లేచి హుంకరించాడు పరం

ధామయ్యగారు. “చదవలేదండి” అన్న గోపి మాటలు విన్న తెలుగు మాస్టారు “ఆ మాట చెప్పటాన్ని సిగ్గు లేకపోతేసరి. ఎందుకురా చదువుకోలేని వెధవ కుంటిబ్రతుకు వెళ్ళి రోడ్డుమీద కూర్చోని ముష్టిఅడిగితే నీకు రోజులు గడిచిపోతాయ్” అన్నారు, వెనక ఏదిక్కులేని గోపిగాణ్ణి. తరగతిలోని సలభయ్యిద్దరు ఒక్కసారి గొల్లు వన్నారు. తలవంచుకొని గుడ్లనిరు క్రుక్కుకుంటూ కూచున్నాడు గోపి.

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ఇంటర్ బెల్లు ఆవంగానే పిల్లలందరు ఒక్కసారిగ ఖైదీలందరు బయటకువస్తే పొందే ఆనందంతో పరిగెత్తుకుంటు వెళ్ళిపోయారు. ఆ రోజు పూసలు లాగ జరిగిన సంఘటనలను దండగుచ్చటానికి నెమ్మదిగ ప్రయత్నిస్తూ చంకకర్రలు టకటక లాడించుకుంటు నడుస్తున్నాడు గోపి.

“అయ్ నెమ్మదిగ నడవలేనా? ఏమిటా గుర్రంలాగా చప్పుడు అన్నాడొక అతితెలివివాడు.

బాధగా వెనుకకు తిరిగి తన నూకల్లోని పోకిరి ముతాని చూసేడు గోపి.

“అతయ్ సింగూ! గోపాలరావుని మన చెడుగుడు కెప్టెనుకు ఎన్నుకుందామరా” అన్నాడొక ఆగంతకుడు. “అప్పుడు మనల్ని సీనియర్సుగూడ గలవలేరోయ్. విన్నర్సుకప్పు మనకేనోయ్” అని వాణ్ణి బలపర్చాడొకొకడు.

“నేను రేపు మన నూకల్లో జరిగే వార్షికోత్సవములకు లైమూర్ వేషం వెయ్యాలనుకుంటున్నా” అన్నాడొకడు. “మరి నీకు గుర్రమెక్కడిదిరా?” దుర్గారావుకి ధర్మసందేహం. “గుర్రం లేంజే లైమూరే లేడు” అన్నాడు ఆ రోజే వారపత్రిక తిరగేసిన పాపారావు.

అందరు ఇలా పరాచికాలాడు సరసోక్తులతో వెళ్ళుతున్నారు. “ఇహా చాల్లెరా, ఇవాల్టికి ఇంకపోదాం, ఇప్పటికే డోసు ఎక్కువయింది.”

అన్నాడింకొక సానుభూతిపరుడు.

ఈ ప్రపంచములో కొందరు వుంటారు; వారు ఇతరులకష్టాల్లో పాలు పంచుకొనలేకపోగా సానుభూతిఅన్నా చూపించరు. క్రుంగిపోయేవాళ్ళను మరింత క్రుంగదీయటయే వాళ్ళునైజం. ఇంకొకొందరున్నారు వాళ్ళు పైకి సానుభూతి చూపిస్తున్నట్టే కనపడతారు గాని వారి ప్రతిమాటల్లోను ద్వంద్వార్థం, వ్యంగ్యం గోచరిస్తాయి. ఇంకొకొందరున్నారు, వారు ముఖంమీద పూజిస్తున్న ఏమాత్రం ఏమరుపాటుగవున్న దూషించటానికి వెనుదీయరు. ఎందుకో వీళ్ళందరికి నామీద ఇంత ద్వేషం? వీళ్ళందరికి నేనేమి అపకారం చేశాను? నాకున్న యీ కుంటికాళ్ళే నేను చేసిన అపరాధం గావాలన్నా! ఇంక దీనికి పరిష్కారమార్గం ఏమీ లేదా అని అనుకొంటూ ఇంటికి నడుస్తున్నాడు గోపి.

ఇంతలో వెనుకనుంచి చెవులు చిల్లులు పజేలాగా ‘బాయియ్య’ మంటు పెద్దగ అరిచింది బెంజిలారీ. అసలే మనస్సు వికలంగావున్న గోపికి తత్తర పాటులో కర్ర వొకటి జారిపోయింది. సువ్వు తప్పకొని నీ కర్తవ్యం నెరవేర్చకపోతే నా కర్తవ్యం నేను నెరవేర్చుకుంటానన్నట్లుగా గోపి మీదనుంచి నిర్దాక్షిణ్యంగా వెళ్ళిపోయింది బెంజిలారీ.

“అవును నా సమస్య లన్నిటికి ఇదే పరిష్కార మార్గం చూపింది’ అనుకొంటున్న గోపి ఎర్రటి కనుకొలకుల్లోంచి రెండు అశ్రుకణాలు చెంపల మీదుగ జారిక్రిందపడ్డాయి.

[ చదువరులకొక మనవి :

వికలాంగులుగవున్న వాళ్ళమీద సానుభూతి చూపించటమే తోడిమానవులుగా మన ధర్మం, కర్తవ్యమూను. కొందరికి ఏదిక్కులేనివాళ్ళని చూస్తే ఏదో ఒకటి అనబుద్ధి వేస్తుంది. పాఠకులకు వికలాంగుడైన గోపిమీదజాలి, సానుభూతి కలిగించుటయే ఈ రచనలోని ప్రధమోద్దేశ్యము.]

# అభినేతగా రూపొందటం ఎలా? ....

వై. హర్షవర్ధనరావు, బి. యెస్.సి. - 3

అభినయము, కవిత్వము, సంగీతము మొదలైన కళలు నేర్పితే అభ్యేషికావు. ఏ కళలోనైనా ప్రావీణ్యం సంపాదించాలన్నా, దాన్ని సంపూర్ణంగా అవగతం చేసుకొని తన కళా పాటవాన్ని అవధుల మేరకు ప్రదర్శించి మెప్పు పొందాలన్నా, జన్మతః కొద్ది ప్రతిభన్నా వుండాలి. ప్రతిభలేని కళ రాజించదు. “సాధనమున పనులు సమకూరు ధరలోన”... అనే పెద్దలమాట నిజమే గాని, అంత మాత్రంతో కేవలం అవిరామ కృషితో, సశాస్త్రీయమైన కళా లక్షణాల్ని గమనించి, దానిని సాధించినా, అంతర్గతంగా వున్న కళ పెరుగుతుండేకాని ప్రతిభను మాత్రం సృష్టించలేం. ఇది అభినయం విషయంలో మరీ కష్టం. ఇలా తమలో స్వీయప్రతిభ లేకపోయినా, దానిని సాధించి పరిపూర్ణ విజయాలయ్యేవారు అరుదు. బహుశా, నూటికి కోటికి ఒక రుంటా రెమో! తమలో నటనాశక్తి వున్నదని కాని, తాము అభినయించ గలమనికాని తొలుత గమనించలేని కళాకారులు ప్రత్యక్ష, పరోక్ష ప్రోత్సాహములు... మొదలైన వానిద్వారా కొంతకాలం గడిచినపిమ్మట తమ ప్రతిభను గుర్తించి అభినయమున ఆరితేరిన వారగుచున్నారు.

చిత్తశుద్ధితో, చైతన్యంతో నాటక కళలో కృషిచేసిన కళాకారుడే, ఆ నాటక కళకు సంపూర్ణత చేకూర్చి, దానిని సజీవంగ పది కాలాలపాటు నిలుపగల్గుతాడు. కేవలం నాటక కళ అంటే

ఇష్టంతో, సరదాగా అభినయించేనటులు, ఆ కళను ప్రజానీకం పూర్తిగా మరచిపోకుండా కళా చరిత్రలో సమాప్తం లేకుండా తాత్కాలికంగా రసానుభూతుల్ని ప్రేక్షకులకు కలిగించగలరే తప్ప, శాశ్వతంగా రసమయ జగత్తులో ప్రేక్షక లోకం విహరించేటట్లు చేయలేరు. అట్టివారు నాటక కళా సౌభాగ్యాన్ని నిలుపగలేరే తప్ప, పెంపొందించలేరు. దానికొక ప్రత్యేకతను సముపార్జించలేరు.

నటుడు నిజమైన రసానుభూతిని పొందితేగాని ప్రేక్షకుడుకూడా రసానందాన్ని అనుభవించలేడు. ఇట్టి రసానుభూతిని పొందవలయునంటే తాను ధరించే పాత్రలో ఆ పాత్రధారి పూర్తిగా లీనమవ్వాలి. పాత్ర, పాత్రధారి అనే రెండు పదాల వ్యత్యాసం, ఆయా పదాల అర్థం, ఆ సమయంలో ప్రేక్షకులకు భాసించరాదు. ఇందుకు ఏకాగ్రతతో కూడిన సాధన అత్యవసరం. త్రిత్రయినకు ఖడ్గమూ, శస్త్రు వైద్యునకు తదుపయోగకరమైన శస్త్రుమూ ఏవిధంగా వారివారి ఏకాగ్రతాలక్ష్య సముపార్జనకు కారణభూతాలో, అదే విధంగా నటునకూ, అతని ఏకాగ్రతకూ, అతను ధరించే పాత్ర లక్ష్యంగా వుండాలి.

ఈ ఏకాగ్రతకు అధ్యయనం అత్యవసరం. అధ్యయనం చేసిన తదుపరి మాత్రమే నటుడు కళా సృష్టి మొదలెడతాడు. మరోవిధంగా చెప్పా

అంటే, చొలుత అన్వేషణద్వారా సృష్టిస్తాడు, తను పరి ప్రదర్శనములో నిర్మాణాత్మకంగా ఆ సృష్టిని వెల్లడి చేస్తాడు. ఇందుకు సంగీతానికి సరిగమలనుండి సారంభించినట్లు, పంచేంద్రియాలనుండి సాధన మొదలెట్టాలి. కన్ను, ముక్కు, చెవి, నాలుక, స్పర్శ ఇవి మనకు ఉపకరణాలు. వీటిమీద మనసును కేంద్రీకరించి, వాటి జీవన వ్యాపారాన్ని గమనించాలి. ఇట్టి గమనింపువలన నటునకెంతో లాభం వుంది. ఉదాహరణ కొక నటుడు తన ప్రదర్శనలో తాను శబ్దాన్ని వింటున్నట్లభినయించే సందర్భాల్లో గుండునూది క్రిందపడిన శబ్దానికీ, పిడుగుధ్వనికీ ఒకే విధంగా అభినయించినట్లైతే, ఆ నటుడు ప్రేక్షకులలో అపహాస్యం పాలవుతాడు. ఇలా కాకుండా తన నిజ జీవితంలో పిడుగు ధ్వనిని వినినప్పుడు తానేవిధంగా గగుర్పాటు చెందినదీ, అనుభూతి పొందినదీ ఆ నటుడు గ్రహించి సాధన చేశాడనుకోండి, అలాగే నూతనైతి నూతనమైన గుండునూది క్రిందపడిన శబ్దాన్ని గ్రహింపు చేశాడనుకోండి, అప్పుడు ఈ అనుభూతులనే ప్రదర్శనలో ఆవాహన చేసుకుని విజయవంతంగా అభినయించిన పక్షంలో, ప్రేక్షకులలో అపహాస్యం పాలు కాకపోగా వారికి సరియైన అనుభూతిని కలిగించ గలుగుతాడు. ఎటొచ్చీ, ఈ సాధన అనేది స్వీయ ఊహపోహలతో మాత్రమే చేయరాదు. ఈ విధంగా ప్రతినటుడు తన పంచేంద్రియాలను అదుపులో ఉంచుకొనగల్గాలి.

సాధారణంగా నటుడు సంభాషణలు (Dialogues) పలికేటప్పుడు ప్రేక్షకులు తమ దృష్టిని, ఏకాగ్రతను రంగస్థలం మీదనే కేంద్రీకరించుతారు. కాని సంభాషణ రహితమైన అభినయం చేస్తున్నప్పుడు ప్రేక్షకులు వారి వారి ఏకాగ్రతలను మరల్చుకొని తమ స్వవిషయాలను గురించిగాని, రాజకీయాది అన్యవిషయాలు సక్తులైగాని వారిలో వారు మాట్లాడుకోవచ్చు.

ఈ విధంగా ప్రేక్షకులు అన్యవిషయాసక్తులై నటుడి మూకాభినయాన్ని గమనించలేదంటే, అందుకు ఆ నటుడే ముఖ్యకారణం. ప్రేక్షకుల భావనాజగత్తును అధిగమించే ఏకాగ్రత, ప్రేక్షకులకున్న దానికన్నా శక్తివంతమైన ఆకర్షణాబలం నటుడికి అవసరం. వీనిలోపాటు నిర్దుష్టమైన మూకాభినయాన్ని సాధనచేస్తే, ఏకకాలాకారుడైనా ప్రేక్షకులను తన గుప్పిటలో ఉంచుకొనగలడు.

ఇవేకాకుండా, నటుడు ప్రతిభావంతుడై, నాటక శిల్ప సమన్వితుడై వుండాలి. అందుకు ముఖ్యంగా [స్థూలంగా] నటుడు నాలుగు విషయాలను అభ్యాసం చేయాలి.

1. శరీరవ్యాయామం :— ప్రతిరోజూ నిర్ణీత కాలంలో వ్యాయామం చేసి, తన శరీరంలోని ప్రతి భాగాన్నీ, ప్రతి కండరాన్నీ తన అదుపు ఆజ్ఞల్లో వుండేటట్లు చేసుకోవాలి. అంటే, నిజ జీవితంలో తనకు అవసరమైన శారీరక పుష్టికి మాత్రమే కాక అభినయ పరంగా ఈ వ్యాయామం సాగాలి. సంతోషంగా వున్నప్పుడు నవ్వు తున్న భంగిమలో వున్న నోరును సాధ్యమైనంత త్వరలో విచారకర లేక గంభీర సన్నివేశాల్లో వుండే భంగిమకు మార్చటం మొదలైన అభినయాలకు అనుగుణంగా శరీరంలోని ప్రతి స్నాయువునూ తన అధీనంలో వుంచుకొన గలగాలి. ఈ శరీర వ్యాయామంవలన నటులకు అందమైన, ఆకర్షణీయమైన రూపముకూడ ఏర్పడుతుంది.

2. సంస్కృతీ పరిచయ జ్ఞానంద్వారా, మేధస్సును అదుపులో వుంచుకొనుట :— నటుడు వివిధ ప్రాంతాల సంస్కృతులతో పరిచయమున్న వాడైయుండాలి. కనీసం, తన పాత్రకు సంబంధించిన జీవిత సంస్కృతులతో తుణ్ణంగా పరిచయము కలుగజేసుకోవాలి. భవభూతి, కాళిదాసు, షేక్స్పియర్ మొదలైన మహామహుల గురించి, వారి నాటకములందలి

పాత్రలగురించి తెలుసుకోవాలి. పరిపూర్ణత సిద్ధించాలంటే నటునకు కొంత మనస్తత్వశాస్త్రం, భావాల క్రమబద్ధత తెలుసుండాలి. మేధాశీక్షణ వలననే నటుడు వివిధపాత్రలను విజయవంతంగా నిర్వహించగలుగుతాడు.

3. మానసికశిక్షణ, సంకల్పబలం:— నటు డెప్పుడూ (నటీమణులుసైతం) సంకల్పమాత్రంచేత తను వెలువరించదలచిన భావాన్ని వ్యక్తీకరించ గలిగినవాడైయుండాలి. “ఘో! బావా” — అంటూ సిగ్గుపడే మరదలుపిల్ల ఆ సంభాషణను పలి కేసిన పదినిమిషాలకు సిగ్గుపడాలి అని గుర్తొచ్చి మరొక ఐదునిమిషాల తదుపరి సిగ్గుపడటం జరుగ రాదు. ఏ భావానికి తగిన అభినయం, ఆ సమయం లోనే సంకల్పమాత్రంచేత వెలువరించాలి. ఇందుకు మానసిక శిక్షణ, సంకల్పబలం అవసరం. వీటి ద్వారానే రచయిత సృష్టించిన ప్రతిపాత్రనూ నటుడు సజీవంగా మనముందు నిలుపగలుగుతాడు.

4. పరిశీలనాశక్తి:— నటునకు పరిశీలనాశక్తి వుండాలి. ఈ పరిశీలన వలననే అభినయమునందలి అనేకముద్రలు, అనేక మేమిటి! అన్నిముద్రలూ, ప్రక్రియలూ లోపరహితంగా వుంటవి. పరిశీలనా జ్ఞానాన్ని కూడ సాధనద్వారా పటిష్టం చేసుకో వచ్చు. కళ్ళజోడు జేబునుండితీసి కళ్ళకు తగిలించు కోవటమనే చిన్నప్రక్రియనే తీసుకోండి. పరి శీలనాజ్ఞానంలేని సాధారణ అభినయకర్తయితే దానిని జేబునుండితీసి, “కళ్ళజోడు నేను ధరించాలి కదూ!” అన్నట్లుగా పెట్టుకుంటాడు. అదే పరి శీలనతో తన ప్రక్కవారుకాని, తనుకాని కళ్ళ జోడు ధరించేతరు విజ జీవితంలో యాంత్రికంగా ఎలా (ధరిస్తాలో) వుంటుందో గమనించిన అభి నేతయితే ఆ ప్రక్రియను సజీవంగా చూపగలడు. ఇదేదో సర్వసాధారణమైన పనిలాగా, జేబునుండి సులోచనములు తీయటం- దానిని నింపాదిగా తెరవటం- అద్దాలను లాల్చిచివరతోనో, జేబు

రుమాలుతోనో శుభ్రపరచటం- తదుపరి దానిని ధరించటం- దానిస్థానాన్ని సరిచేయటం-... మొదలైన ఉపప్రక్రియలతో ఆ ప్రక్రియకు నిండు తనాన్నాపాదించ గలుగుతాడు. ప్రక్రియను నింపాదిగా చేయతగ్గ సందర్భాల్లో ఇది జరుగు తుంది. అలాకాకుండా త్వరపడే సన్నివేశాల్లోనూ ఇదే ప్రక్రియను జరుపవలయునన్న పైన చెప్పిన విధంగానే తోటివారు (కళ్ళజోడు ధరించేవారు) ఆదుర్దాలో, త్వరలో దీన్నెలాచేస్తాలో గమనించి, సాధనచేయాలి. ప్రతిక్రియనూ ఇలాగే మెరుగులుదిద్ది పరిశీలనతో లోపరహితంగా ప్రదర్శిస్తే, రూపక రచయిత బ్రాకెట్లలో వ్రాసిన బిగ్గరగా, శోకించును, ఆశ్చర్యముతో- మొదలైన పదాల ననుసరించి అభినయించిన దానికన్నా ఎంతో చక్కగావుండి, సహజత్వంతో శోభిల్లు తుంది.

కుంటివాడు, వృద్ధుడు, గ్రుడ్డివాడు... మొదలైన పాత్రలను అభినయించాలంటే ఆ పాత్రధారి ఎంతో శ్రమచెందాలి. నిజమైన కుంటివాడు లేక వృద్ధుడు ఎలానడుస్తాడో, ఏయే కండరాలు ఎప్పుడు పట్టుగావున్నాయో, ఎప్పుడు వదలు తున్నాయో, అడుగులు ఎలా వేస్తున్నాడో, ఆ సమయంలో మిగిలిన అవయవాల చలనము ఎలా వుందో మొదలైనవి గంటలతరబడి పరిశీలించటం, దానిని ప్రత్యేకంగా అధ్యయనం చేయటం అవ సరం. ఇలాగే మిగిలిన పాత్రలకుకూడా పరిశీలన ద్వారా మెరుగులు దిద్దాలి.

ప్రతినటుడూ కొంతకాలాన్ని ఈ పరిశీలనకై వినియోగించాలి. ఆ సమయంలో వీలైనన్నివిష యాలు పరిశీలించి, వాటిని మనసులో హత్తుకుని గుర్తుంచుకోవటానికి ప్రయత్నించాలి. ఇలా కొంత కాలంచేస్తే ఆపూర్వమైన సేధస్సు, జ్ఞాపకశక్తి నటుడికేర్పడుతాయి. ఈ పరిశీలన ప్రతి అభినయ కర్తకూ పాఠ్రం లాంటిదికనుకనూ, ప్రస్తుత యువ

కళాకారులు దీనిని నిర్లక్ష్యపరుస్తున్నట్లుగా కనుపించుతుంది కనుకనూ దీనినింతగా వివరించాను.

ప్రతినటుడూ తాను ధరించేపాత్రకు తగిన రూపకల్పన చేసుకోగలిగానా, లేదా అని ఆలోచించాలి. తన ఆహార్యం సరిగావుందో, లేదో అని గమనించాలి. ఇది చాలా ఆవసరం. ఆహార్యం చెబ్బితిన్న పక్షంలో అతడెంత అభినయించినా పాత్రకు పరిపూర్ణతచేకూరదు. అలాగే, వాచికం విషయంలోకూడా అపకవాలు పలుకకుండా పాత్రోచితభాషను జాగ్రత్తగా వాడాలి. మహారాజ పాత్రధారి వ్యావహారికాన్ని, సీచపాత్రధారి గ్రాంధికాన్నివాడితే అపహాస్యం పాలవుతాడు. వాచికంలో తడబాట్లులేకుండా నిండు జాగ్రత్త తీసుకోవాలి.

అభినయించేటప్పుడు ఆ యా రసాల ప్రత్యేకతను గమనించటం నటుడికెంతో ముఖ్యం. సుఖాన్ని; సంతోషాన్ని అభినయించటం తేలిక. తక్కువ ప్రయాసతో ఈ అనుభూతుల్ని ప్రేక్షకులలో కలిగించవచ్చు. కాని, కొన్ని రసానుభూతుల్ని, ఉదాహరణకు : శోకరసాన్ని నటుడు అనుభూతిచెందటం, ప్రేక్షకులకు ఆ అనుభూతిని కలిగించటం కష్టతరమైనది. ఇందుకు పరిశ్రమ ఆవసరం.

ప్రతిప్రదర్శనకూ, ముఖ్యంగా నాటకానికి కొన్నిరంగాలు లేక సన్నివేశాలు ప్రాణసమానంగా వుంటాయి. అంటే ఆ రంగాన్ని లేక సన్నివేశాన్ని సంతృప్తికరంగా, సజీవంగా, సహజంగా అభినయించగలిగితేనే ఆ నాటకం విజయవంత మవుతుంది. ఇలా ప్రతి పాత్రకూ కొన్ని సన్నివేశాలుంటాయి. ఈ సన్నివేశాలను ప్రాణప్రదంగా భావించి తన వైదుష్యాన్నంతా ఉపయోగించి అభినయకర్త ఆ సన్నివేశాలలో

అభినయించాలి. రామదాసు నాటకంలో జైలు సీనూ, హరిశ్చంద్రలో కాటిసీనూ, మామరీలో ఆఖరు రంగమూ మొదలైన విందుకు ఉదాహరణములు.

“మేధావి ఒకణ్ణి అనుకరించడు. స్వంత మార్గం వేసుకుంటాడు. మూర్ఖుడే ఇతరులను అనుకరిస్తాడు” — అని కాళిదాసు ప్రవచించాడు. ప్రపంచ ప్రసిద్ధిగాంచిన కళాకారులందరూ తమ లక్ష్య లక్షణాల్లో క్రొత్త దనాన్ని ప్రవేశపెట్టిన వాళ్ళే. “అనుకరణ” ఎప్పుడూ సరియైన మార్గం కాదు. స్వీయ ప్రతిభతో నటుడు నిర్మాణాత్మకమైన సృష్టిద్వారా అభినయించటమే సరియైన మార్గం. కొందరు నటులు తామభినయించే పాత్రలందు మరొక అభినయ సామ్రాట్టును అధిక్షేపించి, వారిని అనుకరిస్తూ అభినయిస్తారు. ఇలా అనుకరించటంవలన సహజ నటనాపాటవాన్ని కోల్పోయి, కొన్ని రకముల హావభావాలకు నటులు బానిసలవుతారు. నాట్యకళా నిష్ణాతులుగా మనమంగీకరించిన వారందరూ ఈ అభిప్రాయాన్ని బలపరిచినవారే, అనుకరణను గర్హించినవారే.

అభినయ విషయంలో మన ఆంధ్రులు చాలా ముందంజ వేశారనే చెప్పాలి. చలన చిత్రాలు రాకపూర్వమూ, వచ్చిన తదుపరికూడా మన దేశంలో బెంగాల్, ఆంధ్రప్రదేశ్ రాష్ట్రాలు కళాత్మకంగా మంచి స్థితిలోవున్నాయి. ఆంధ్రులు మరెవ్వరికీ తీసిపోనంతగా అభినయ కళలో సిద్ధహస్తులయ్యారు. ప్రపంచ వ్యాప్తిపొందిన కూచిపూడి నాట్యమునకు ఆంధ్రదేశమే పుట్టిల్లు — ఆలవాలము. ముస్కండుకూడా ఆంధ్రులు అభినయమునకే నిర్వచనము కలుగజేసేంతటి ఉత్కృష్ట కళాకారులవుతారని ఆశిద్దాం !



# రజీ .... నేను పిరికివాణి కాను

గుడిమెట్ల సుధాకరరెడ్డి,

బి. యస్.సి. - 2.

అగ్రస్తు 5వ తేదీన పాకిస్తాన్ సైనికులు మరల సరిహద్దులను ఆక్రమించారు. 'ఇంతకు ముందు లాగే తీవ్ర నిరసన తెలియజేస్తారు. అంతకంటే వీళ్ళేం చేయగలరు' అనుకున్నాడు పాపం ఆయూబ్ ఖాన్.

కాని ఇది చిన్నరికం సరిహద్దులతిక్రమణ కాదని భారత ప్రభుత్వం గుర్తించింది. మిత్రత్వం మాటున వున్న పాకిస్తాన్ రాక్షసత్వాన్ని, దురాశను భారత ప్రభుత్వం అర్థం చేసుకొంది.

I. A. F. కు చెందిన విమానాలు సరిహద్దు దళాలకు తోడుగా సైనికులను తరలించాయి. భారత సైనికులు, పాకిస్తాన్ సివిల్ దుస్తులతో పంపిన పారాచూట్ సైనికులను (పేరాట్రూపర్స్) గాలించి పట్టుకున్నారు.

పాకిస్తాన్ తన రెగ్యులర్ ఆర్మీని రంగంలోనికి దింపడంతో పోరు ఘోరమయింది.

పాకిస్తానే మొదట తెగించి ఆమెరికావద్ద తాను అడుక్కుతెచ్చుకున్న శాబర్ జెట్లను తన సైనికులకు మద్దతుగా రంగంలోనికి దింపింది.

అధికారులనుండి ఆజ్ఞలనందుకొని భారత విమానదళం (I. A. F.) రంగంలోనికి ప్రవేశించింది. బెంగళూరులో తయారయిన గ్నాట్ ఫైటర్లు యుద్ధంలో పాల్గొన్నాయి.

స్క్వాడ్రన్ లీడర్ కీలర్ నాయకత్వంక్రింద, పదాతి సైనికులకు రక్షణనిస్తూ విమానదళం బయలుదేరింది.

ఫ్లయిట్ లెఫ్టినెంట్ అజీజ్ క్రిందికి చూశాడు. జవాన్లు ప్రాణాలకు తెగించి పోరాడుతున్నారు. మన టాంకులు పాకిస్తాన్ టాంకులను బ్రద్దలు కొద్దూ ముందుకు సాగుతున్నాయి. చెవిలో ఇయర్ ఫోన్ గురగురలాడింది. 'కులాసా?' అంటున్నాడు తోటిఆఫీసరు.

హఠాత్తుగా రజియా గుర్తుకొచ్చింది, అజీజ్ కి. ఎర్రని ఆమె బుగ్గలు, కవ్విం చే కన్నులు గుర్తుకొచ్చాయి. ఎత్తయిన వక్షస్తలం. సన్నని నడుము గుర్తుకొచ్చాయి. రజియా తన పిన్నికూతురు. దానికి అందమయినదాన్ననే గర్వం ఎక్కువ. తన అందాన్ని చూసుకొని మురిసి పోతుంది. కవ్విస్తుంది, చెయ్యి వెయ్యిబోతే కన్ను, బుస్సు మంటుంది. అప్పుడు తను M. P. C. గ్రూప్ తో B.Sc. పాసయ్యాడు. ఆమెను అడిగాడు తను.

"రజియా! నిన్ను నేను మనసారా ప్రేమించాను నీవు సరేనంటే ....."

"అజీజ్"

నవ్వుతూ అందామె.

"B. Sc. చదివావునువ్వు, నీకేం వుద్యోగం వస్తుంది? L. D. C. వుద్యోగం. ఇంత భాగ్యంలో"

చెరిగిన నేను ఒక్కపూట తిని, తినక పస్తులుండలేను”

గర్వంగా తలను ఎగురవేసింది రజయా. “చేసుకోవా? అయితే యుద్ధంలో చేరిపోతాను” చైనా యుద్ధం సమయం చేరిపోతానని బెదరించాడు తను. “పిరికి అజీజ్, నీవేం చేయగలవ్?”

హాళనగా నవ్వింది రజయా. ఆ మాటతో మ్రోర్ తింది తనకు. కాలేజీలో N. C. C. లో C సర్టిఫికేట్ పాసయిన తాను విమానదళంలో చేరాడు. చైనా యుద్ధసమయంలో సైనికులకు సమర్థవంతంగా సరఫరాలను అందజేయడంతో తనకు లెఫ్టినెంట్ గా ప్రమోషను, వీరచక్రం లభించాయి. “పిరికివాడికి వీరచక్రం లభిస్తుందా? ? ?” రజయాను అడగాలనివుంది, ఇప్పుడు పాకిస్తాన్ దురాక్రమణ. తాను మతానికి ముస్లిం. కాని భారతీయుడు.

“ఏలోకంలో వున్నావ్, ఫ్రండ్?”

ఇయర్ ఫోన్ లో నవ్వుతున్నాడు రావ్. అతని కేవల సమాధానం చెప్పి ఆలోచనలో పడ్డాడు అజీజ్.

పాకిస్తాన్ తమ రాజ్యంకదా అని వెళ్తే ఏమయింది. తన తండ్రికి, వుద్యోగం దొరకలేదు సరికదా - తన మామయ్య భార్యను, తన తల్లిని ఎవరో ఎత్తుకపోయారు, తనప్పటికి పసిపిల్లవాడు. బలవంతునిదే రాజ్యం పాకిస్తాన్ లో.

అటువంటి పరిస్థితులలో తిరిగివచ్చిన తమకు ఆశ్రయమిచ్చిన ఇండియాకోసం ప్రాణం వసితే తప్పేమిటి? .....

కీలర్ గొంతు ఇయర్ ఫోన్ లో వినిపించింది. “రెడీ ఫర్ ఫైట్ ... టువన్ ... త్రీ... రెప్ట్... వన్ ... వన్ ... సెవన్”

ఆదేశాలు వినిపించాయి. ఎదురుగా కాబర్ జెట్ విమానం గ్నాట్ ఫైటర్స్ గర్జించాయి.

మెషిన్ గన్స్ బుల్లెట్లు వర్షాన్ని కురిపించాయి. ప్రక్కకి చూశాడు అజీజ్.

కీలర్ విమానం చూడు కాబర్ తో ముట్టడింపబడింది. కాబర్స్ రాకెట్లు వదులుతున్నాయి.

కీలర్ విమానం ఒక్కపట్టి కొట్టింది. “శభాష్ కీలర్” ఆ నందంతో కన్నుల నీరు కారాయి అజీజ్ కి. విమానం నుండి అగ్నివర్షం కురిసింది. కాబర్స్ మంటలతో కూలిపోయాయి.

“పిరికివాడివి, నీవేం చేయగలవ్?”

గింగురుమంది రజయా కంఠస్వరం. మెషిన్ గన్ ట్రెగర్ మీద వ్రేలు బిగుసుకపోయింది.

అన్ని వేపులనుండి కాల్పులు జరపడంతో కాబర్స్ కొన్ని నిప్పులు గ్రుక్కకుంటూ కూలిపోయాయి. మరికొన్ని తోకముడిచాయి. గ్నాట్ విమానాలు విజయగర్వంతో ఊమంగా స్థావరం చేరుకొన్నాయి.

\* \* \*

లాహూర్ అభిముఖంగా సాగిపోతున్నాయి సైన్యాలు వాటికి మద్దతుగా గ్నాట్స్ ఎగురుతున్నాయి.

సైనికులకు లైన్ క్లియర్ ఈ యడానికి, పాకిస్తానీయుల స్థావరాలను భగ్నం చేయడానికి గ్నాట్స్ ఎగిరి వెళ్ళిపోయాయి.

గ్నాట్ ఫైటర్స్ పాకిస్తాన్ స్థావరాలమీద బాంబులవర్షం కురిపించి వెనుదిరిగాయి. కాబర్స్ వెంటబడ్డాయి. కుక్కల్లా మొరిగాయి, గ్నాట్స్ తిరిగి ఎదుర్కొన్నాయి. కాల్పులు జరిగాయి. కొన్ని కాబర్స్ కూలిపోయాయి. అజీజ్ విమానానికి బుల్లెట్ తగిలింది. పక్షిలా పూగిపోతుంది. కం ట్రోలు చేయడం కష్టమవుతుంది.

ఏది ఏమయినా తన విమానపు అవశేషాలను పాకిస్తాన్ భూభాగంమీద పడనీయరాదు. ఎలా గయినా భౌతభూభాగంకేసి వెళ్ళాలి. మంటలు

ఎక్కువవుతున్నాయి. ఆజీజ్ ఇంజనీను ఆటో మేటిక్ లోపెట్టి, ఫూర్నిస్మీడ్ పేట్టి, పారా చూట్ సిద్ధం చేసుకొన్నాడు. విమానం భారతభూభాగం లోకి వచ్చింది. ఆజీజ్ పారా చూట్ తో క్రిందికి దూకినేకాడు.

పచ్చిక బయలుమీదపడ్డాడు ఆజీజ్. “రజీ! నేను పిరికివాణి కాను” అతని పెదవులు గొణిగాయి. భారత రెడ్ క్రాస్ ఆఫీసర్లు, పరుగెడుతున్న శబ్దం మెత్తని పచ్చికమీద బూట్లచప్పుడు కాలిపోయిన శరీరం మంటలు స్ఫుటి తప్పింది ఆజీజ్ కి.

\* \* \*

అది లేజ్ ఫూర్ మిలిటరీ హాస్పిటలు. గాయా లతోపడివున్న ఆజీజ్ పెదవుల్ని తడిచేసుకుంటూ “రజీ! నేను పిరికివాణి కాను” అని కలవరించాడు.

“కాదు ఆజీజ్! నీవు పిరికివాణి కాదు. వీరుడివి జేశభక్తుడివి”

రజీయా అతని తల నిమూరుతూంది. ఆజీజ్ కి స్ఫుటి వచ్చింది.

“రజీ! నేను పిరికివాణి కాదు” అన్నాడు రెప్పలు అల్లారుస్తూ.

“అవును, నీవు పిరికివాణి కాదు, వీరుడివి... నన్ను తుమించు ఆజీజ్...”

ఆమెచేతిని గుండెలమీద వుంచుకుని తృప్తిగా కన్నులు మూసుకున్నాడు ఆజీజ్.

[అంకితం :—

మతానికి ముస్లిం అయినా, భారతీయుడిని అని నిరూపించి వీరస్వర్గ మలంకరించిన అబ్దుల్ హమీద్ లాటి జేశభక్తులకు...

ర చ యి త.]

## అ ప రిణ తి

గురువచనంబతి నిర్మలంబయ్యు  
సలిలంబునుం బోలె శ్రవణస్థితంబై  
య భవ్యునికి శూలపుట్టించు.

శ్రీనాథుడు

★ ★

## అ రూ డి

మేనుక్షణ భంగురం బౌట మానసమున  
నుంచిరేపు చేసెదనని యంటమాన  
వలయు సద్గర్మముల నేడె సలుపవలయు  
నెల్లి మనముందుమో లేమొ యెఱుగరాదు.

కందుకూరి.

## हमारे पूज्य बापू

देश प्रेम का मन्त्र सुनाकर,  
जिसने हमें जगाया है;  
जिसने अपने ललकारों से,  
भय का भूत भगाया है ।

कर सदियों की दूर दासता,  
जिसने हमें उबारा है;  
जो भारत का भाग्य विधाता;  
बापू वही हमारा है ।

जिसने कष्ट और दुख सहकर,  
कभी न अपना पथ छोडा,  
सत्य अहिंसा और त्याग का,  
जिसने न प्रण तोडा ।

जिसने प्रेम और साहस से  
बैरी को ललकारा है;  
जिसने नहीं पराजय जाजीजी;  
बापू वही हमारा है ।

पी. शांति किरण,  
पी. यू. सी.

## श्रद्धांजली

प्यारे भाई चले गये हैं ।  
स्वर्गवासी बने हुए हैं ॥

अपनी दोस्ती बढ़ायी है ।  
और मित्रों की सेवा की है ॥

अपने प्राणों तक बलिदान ।  
करते हुए आप अमर बन गये ॥

सच है, आप की प्राण-मित्रता ।  
देखकर, हम कभी नहीं भूलें ॥

धन्य हुआ है, जन्म आप का ।  
और आपके माता पिता का ॥

याद रक्खेंगे, हम सब हमेशा ।  
आपके बलिदान की अमर कहानी ॥

एम. रामशेषु,  
२ बी. काम.

# सज्जन का स्वभाव

कडी धूप में तपकर, जलकर डाल पत्र झुलसाते हैं ।  
थके पथिक को घनी छाँह में शीतलता बरसाते हैं ॥

मेघ खुद पानी नहीं पीते, सब धरती को देते हैं ।  
सज्जन सेवा करते सब की, खुद दुख सह लेते हैं ॥

खिला दूसरों को फल अपना, वृक्ष बहुत सुख पाते हैं ।  
फूल फलों से जब लद जाते अपना शीश झुका सुख पाते हैं ॥

एक न दाना धरती खाती सबको अन्न खिलाती है ।  
जाड़ा, गर्मी, वर्षा सहकर सबको सुख पहुँचाती है ॥

इसी तरह सज्जन दुख सहते, करके सदा भलाई, हैं ।  
जिनके गुण की दुनियावाले करते सदा बड़ाई हैं ॥

पी. शांति किरण,  
पी. यू. सी.



# इतिहास

इतिहास जिसे कहते हो तुम,  
उसे सच नहीं मानते हम ।  
यह सब अत्याचारों का सुंदर नाम,  
'इतिहास' हो तो कहो उसको "राम - राम" ।

बलवान जलाता सब पर ज़बर  
नहीं किसको इसकी खबर ?  
इसे बताने नहीं इतिहासों की जरूरत;  
उसे चाहिए सबको सिखाना जब्त ।

देखो किसी इतिहास को  
देख सका कुछ तो सिवाय झगडे के ?  
युद्ध के दिनों की परवाह नहीं किसीको  
नफा नुकसानों का उल्लेख न चाहिए हमको ।

शाहजादी की याद में हुआ ताजमहल निर्मित  
अनार्कली के प्यार पर हुई समाधि निर्मित,  
जहाँपनाहों के रग-रग में बहा काला खून,  
जिसको तुमने रंगीन आइनों में दिखाकर कहा कानून ॥

हमें नहीं चाहिए ऐसा इतिहास,  
जो करता मानवता का उपहास ।  
हमें सच्चाई, प्यार की कहानियाँ बस,  
इन इतिहासों का है मुझे बड़ा अफसोस ।

शोक इकबाल अहमद,  
बी. एस. सी. (अंतिम वर्ग)

# राकेश

“माँ हम जा रहे हैं।” विनोद ने बाहर के फाटक के पास आकर चिल्लाया। उसके साथ राकेश, प्रमोद, चम्पा और सबसे छोटी शान्ति सब खड़े हुए थे।

“अच्छा, शाम को जल्दी घर आजाना। हाँ राकेश को उस डाक्टर के पास न जाने देना”। रमादेवी घर के भीतर से चिल्लाई है। सब बच्चे बाहर निकले और स्कूल को जाने लगे।

राकेश के माता पिता चल बसे। इसलिए अब वह अपने मामा के यहाँ रहता था। राम दयाल ने मृत्यु-शय्या पर लेटी अपनी बहन से वादा किया था कि मैं अपने भानजे की देखबाल करूँगा और उसे पढ़वा-लिखवाकर बहुत बड़ा अफसर बनाऊँगा। अपनी माँ के गुजरते ही राकेश अपने मामा के यहाँ आ गया। रामदयाल ने राकेश को उसी स्कूल में दाखिल करा दिया जहाँ उनके बच्चे पढ़ते थे। राकेश का उनके घर आना रामदयाल के सिवा किसी को पसंद नहीं था। रमादेवी सोचती थी कि जब पति की कमाई से जीवन गुजरना ही मुश्किल रहा है तब और एक सूरवे पेट को घर लाना उचित नहीं। उसका बदला रमादेवी राकेश से लेती थी।

राकेश को घर का सारा काम करना पड़ता और साथ ही साच डॉट भी रवानी पड़ती थी। अपनी माँ को देखा-देखी उनके बच्चे भी राकेश से नफरत करते थे। खासकर विनोद राकेश से इतनी नफरत करता था कि वह अवकाश मिलते ही अपनी माँ से राकेश की शिकायत करता था। और नतीजा यह होता था कि राकेश की पीठ रमादेवी के पीटने पर लाल होती थी। अगर उसे कोई प्यार करता तो वह सबसे छोटी शान्ति थी वह अपनी माँ की नजरों से बचाकर वह राकेश को लड्डू आदि ला देती और जब कभी वह रोता तो उसके पास बैठकर उसके आँसू पोंछती।

स्कूल के रास्ते में रामदयाल जी की जान-पहचान के एक डाक्टर रहते थे। वे संतानहीन थे। इसलिए वे राकेश को बहुत चाहते थे। उन्हें राकेश के बारे में सब कुछ पता था। एकाध बार उन्होंने रामदयाल से कहा भी था कि आप राकेश को मेरी गोद दीजिये। मैं उसे पाल-पोसूँगा। रामदयाल उन बातों को हँसी में उडा देते थे। डाक्टर का राकेश से इतना प्यार रमादेवी से देखा नहीं जा सकता था। भला ! राकेश उसका लडका तो नहीं है। वह जानती थी कि-

# इतिहास

इतिहास जिसे कहते हो तुम,  
उसे सच नहीं मानते हम ।  
यह सब अत्याचारों का सुंदर नाम,  
'इतिहास' हो तो कहो उसको "राम - राम" ।

बलवान जलाता सब पर ज़बर  
नहीं किसको इसकी खबर ?  
इसे बताने नहीं इतिहासों की जरूरत;  
उसे चाहिए सबको सिखाना जब्त ।

देखो किसी इतिहास को  
देख सका कुछ तो सिवाय झगडे के ?  
युद्ध के दिनों की परवाह नहीं किसीको  
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हमें नहीं चाहिए ऐसा इतिहास,  
जो करता मानवता का उपहास ।  
हमें सच्चाई, प्यार की कहानियाँ बस,  
इन इतिहासों का है मुझे बड़ा अफसोस ।

शोक इकबाल अहमद,  
बी. एस. सी. (अंतिम वर्ग)

डाक्टर साहब राकेश को देखते ही बहुत खुश हो जाते हैं और उसे खाने के लिए प्रति दिन कुछ-न-कुछ देते हैं। इसलिये रमादेवी ने राकेश को डाक्टर के घर जाने से मना कर दिया और विनोद से कह दिया कि राकेश के ऊपर अच्छी तरह निगाह रखे।

“अरे राकेश चुप-चुप के क्यों जा रहे हो?” डाक्टर साहब ने मुस्कराते हुए राकेश से पूछा। “क्या आज भी तुम्हारी मौसी ने तुम्हें यहाँ आने से मना कर दिया?”

नहीं डाक्टर साहब! स्कूल जाते देर हो रही है। इसलिए मैं जा रहा हूँ। “राकेश अपनी घबराहट को छिपाने का व्यर्थ प्रयत्न कर रहा था। उसने देखा कि विनोद उसकी ओर गौर से देखकर आगे बढ़ गया।

डाक्टर साहब! मैं अब जाता हूँ।”

“अरे ठहरो!” इतने में डाक्टर साहब की पत्नी एक थाली में दो-चार लड्डू रखकर बाहर आयी।

“यह लो राकेश” बड़े प्रेम पूर्ण स्वर से डाक्टर साहब की पत्नी ने उसे लड्डू दिये। राकेश उन लड्डूओं को अपनी जेब में रख कर विनोद के पीछे-पीछे दौड़ा।

शाम को घर आते ही विनोद ने अपनी माँ से बता दिया कि राकेश आज फिर डाक्टर साहब के घर गया और लड्डू खाया है।

बस रमादेवी के गुस्से का ठिकाना न रहा झाड़ू लेकर राकेश को पीटने लगी।

“मैं ने तुम्हें कितनी बार बताया कि उस डाक्टर के घर मत जाओ।

\* \* \*

“मामीजी! मामीजी! मैं अब उनके घर कभी नहीं जाऊँगा। मुझे मत मारिए। मैं सच कहता हूँ — मैं अब कभी नहीं जाऊँगा।” रोते हुए राकेश कह उठा। उसको रोते देखते ही शांती ने उसे अपना हाथ दे दिया।

रामदयाल दफ्तर से आकर यह दृश्य देखकर चौंक पड़े। झट से उन्होंने अपनी पत्नी के हाथ से झाड़ू छीन लिया और कहा — “शरम नहीं आती तुम्हें? देखो बच्चे की पीठ कैसे लाल हो गयी। क्या तुम औरत नहीं? माँ नहीं? क्या अगर वही तुम्हारा बच्चा होता तो तुम इसे ऐसे मारती? क्या तुम्हारा हृदय पत्थर से बना हुआ है? खबडदार कभी अगर बच्चे को मारा तो।” फिर उन्होंने राकेश को उठाया और अपने पास बिठा लिया। रमादेवी मुँह फुला कर रसोई में चली गयी। विनोद, प्रमोद और चम्पा पिता के आते ही बाहर दौड़ गये थे। अब उस कमरे में राकेश, रामदयाल और शांती के बिना कोई नहीं रहा। रामदयाल के मन में राकेश के प्रति बहुत दया उमड़ आई। इतने में उनका ध्यान शांती की तरफ गया।

“और तुम क्यों रो रही हो ?” — उन्होंने पूछा “मम्मी लकेश को माल लही तो मेले से नहीं देखा जा सका” — उसने अपने आँसू पोंछते हुए कहा। “अरे ! अच्छा बेटा ! आज तुम और राकेश मेरे साथ सैर करने चलो। और वे दोनों का हाथ पकडकर बाजार की ओर चल पडे। बाजार में खूब घूमे। शांती और राकेश को बहुत चीजें खाने का मौका मिला। लड्डू गुड का सेफ, आईस्क्रीम आदि उन्होंने खाया।

जब रात को वे घर लौटे तो देखा कि रमादेवी उनकी राह देख रही थी। रामदयाल अपनी पत्नी से कुछ बात किये बिना ही अंदर गये। रमादेवी ने उनके पीछे जाकर उन्हें खाने को बुलाया। रामदयाल ने राकेश और शांति से खाना खाने के लिये कहा।

“मैं अब कुछ नहीं खा सकता मामाजी। मेरा पेट भर गया है। बस कुछ सर में दर्द हो रहा है।” राकेश बोला।

“मेले को भी सलदलद हो रहा है” — शांती बोली। रामदयाल घबरा गये और बच्चों से सोने को कह दिया।

आधीरात का समय था। रामदयाल सो रहे थे। इतने में उन्हें कुछ ध्वनि सुनाई दी। वे झट उठ गये और देखा कि आवाज गुसलखाने से आ रही है। वे घबराकर उस तरफ चले। बत्ती जलाने पर उन्होंने देखा

कि राकेश उल्टी कर रहा है। उसके साथ शांती भी कर रही है।

“अरे ! तुम्हें क्या हुआ बेटा ! मुझे क्यों नहीं जगाया !” घबराते हुए उन्होंने पूछा। वे दोनों के पास आये। उनके माथे पर हाथ देखा। बुखार बड़ा तेज था उन दोनों को पलंग पर लिटाकर उनकी देखभाल रमादेवी को सौंपकर वे डाक्टर को बुलाने के लिये अपने डाक्टर मित्र के घर दौडे।

खबर सुनते ही डाक्टर साहब दौडते हुए वहाँ आ पहुँचे। उन्होंने दोनों की परीक्षा की और बताया कि उन दोनों को कोई विष ज्वर आया है। वे फिर रामदयालजी को बाहर बुलाकर उनसे धीमी आवाज से बोले “देखिये रामदयालजी ! अब मेरे सामने एक बहुत बड़ी कठिन समस्या आ गयी है। आपके बच्चों को जो बुखार आया है वह बहुत खतरनाक है। उनकी हालत कुछ अच्छी नहीं है। अगर उनकी हालत सुबह तक ऐसी ही रहे तो वे बच सकते हैं। नहीं तो कहना मुशकिल है। हाँ बात यह है कि मेरे पास इस बुखार को रोकनेवाली गोली एक ही है। दूसरी निकट की बस्ती में जाकर लानी होगी। वहाँ भी इस आधी रात में गोली कोई नहीं देगा। और मेरे मरीज दो हैं। बताइये अब क्या करूँ ? राकेश को दूँ तो शांति की हालत संदेह जनक हो जायेगी। अगर मैं शांति को दूँ तो राकेश की हालत भी ऐसी ही होगी।

राम दयाल थोड़ी देर चुप रहे। एक ओर अपनी प्यारी लड़की, दूसरी ओर बहन का लडका। उनमें वे किसीको दूर करना नहीं चाहते थे। समय अब बहुत अमूल्य हो गया। ज्यादा देर नहीं कर सकते थे। फिर उन्होंने सोचा “मेरे शान्ति के अलावा तीन और बच्चे हैं। पर मेरी बहन का एक ही एक चिह्न इस पृथ्वी पर है। अगर वह भी मिट गया तो ..... नहीं, नहीं ऐसा नहीं हो सकता। मेरी बहन के लडके को अच्छी तरह पढ़ाना है, उसे बहुत बड़ा अफसर बनाना है। और मैं उसे कैसे मरने दूँगा। यों सोचकर उन्होंने कहा “ठीक है डाक्टर साहब! आप वह दवा राकेश को ही दे दीजिये। मेरी बहन के चिह्न को तो रहना है।”

डाक्टर साहब भी यही चाहते थे। उन्होंने वह गोली उठायी और अंदर आये। उसे राकेश के पास रख दी और दूसरी कोई गोली शान्ति के पास रख दी। फिर वे राकेश के पास आकर बोले “बेटा। तुम्हारे लिए मैंने एक गोली तुम्हारे पास रखी है। आधे घण्टे के बाद खाना। किसी हालत में उसे मत खोना।”

राकेश ने बहुत धीमी आवाज से डाक्टर साहब से पूछा “डाक्टर साहब। आपने शान्ति को भी दी है न?”

“हाँ! हाँ! उसे भी दी है। लेकिन तुम जरूर अपनी गोली खा लेना।”

डाक्टर साहब बाहर आते हुए रामदयाल से बोले, “देखिये मैं अब घर जाता हूँ। राकेश को गोली जरूर खिलाये। शान्ति के लिये ऊपर भगवान है।” रामदयाल जी उनसे विदा लिये और अंदर आये।

रमादेवी अपनी बेटी के पास बैठी थी और उसके लिये चुल्हे पर पानी रख आयी थी। रामदयाल राकेश के पास बैठकर ठंडे पानी में भिगोया हुआ टवल उसके भाल के ऊपर रखने लगे। थोड़ी देर के बाद राकेश धीमी आवाज से “पानी माँगा। रमादेवी यह सुनकर भी अपने स्थान से अपने साथी से नहीं हटी।

“देखो रमा बच्चा पानी माँग रहा है। मैं लाता हूँ और तुम जाकर हॉल्लिक्स रखना।” इतना कहकर रामदयाल पानी लाने अंदर चले गये। रमादेवी भीतर जाकर हॉल्लिक्स की तैयारी करने लगी।

पानी लाते रामदयाल ने देखा कि राकेश अपने बिस्तर पर बैठा है और उसके हाथ में एक गोली है।

“राकेश तुम क्यों बैठ हो। तुम्हें बैठना नहीं चाहिये। अरे क्या तुम गोली खा रहे हो? अच्छा पानी पिओ बेटा।”

“अच्छा मामाजी! गोली मैं अभी खा लेता हूँ। उतना कहकर राकेश ने गोली खा ली। और बिस्तर में लेट गया।

समय बीतने लगा । सुबह हो रहा था । रामदयाल सारी रात राकेश के पास बैठे थे । कमरे में उनकी साँस के सिवा और कोई आवाज नहीं थी । रामदयाल राकेश को छूते ही चौंक पड़े । ऐसा लग रहा था कि मानो उसका बदन जल रहा है । झट से उनको कुछ सूझा तो घबराकर वे शांति के पास दौड़े और उसको छूते ही उनको पता चल गया कि शांति का बुखार उतर गया है । अब उनकी समझ में आगया कि राकेश ने अपनी गोली शांति को दी और उसकी गोली खुद खा ली है । राकेश का साग जानकर उनकी आँखें डबड़बाने लगीं । वे धीरे से राकेश की पलंग के पास आये । राकेश अध बेहोशी में बोल रहा था ।

“मामीजी ! मैं अब डाक्टर साहब के घर कभी नहीं जाऊँगा । मुझे मत मारो” । राकेश अपनी आँखें मुशकिल से खोलकर हीन स्वर से बोला ।

“मामाजी ! मैं अब आपसे हमेशा के लिये विदा ले रहा हूँ । मेरा इस संसार में कोई नहीं है । लेकिन शांति के तो माता-पिता, भाई-बहन सब हैं । इसलिये मैंने अपनी गोली उसके पास रख दी । मैंने डाक्टर साहब की सारी बात सुन ली । और शांति भी मुझसे कितना प्यार करती है । क्या उसके लिये मैं इतना भी नहीं कर सकता । मामाजी ! मामीजी से कह दीजिये कि मैं अब कभी उन्हें तंग नहीं करूँगा । बस...मामाजी... मु...झे...याद...रखेंगे...न” धीरे धीरे उसके प्राण अपनी माता की खोज में इस अनंत वायु में लीन हो गये ।

सुबह होते ही डाक्टर साहब जल्दी जल्दी रामदयाल के यहाँ पहुँचे । रामदयाल के हाथों में राकेश की लाश को देखकर निश्चेष्ट हो गये । उन्हें राकेश के हँसते हुए मुख के बिना कुछ नहीं दिखाई पडा ।

के. चन्द्रमोहन,  
२ बी. एस. सी.



# फैशन

वे दिन बीत गये जब पुरुष और स्त्री को अपने कपड़ों की फिक्र न थी और न ही उनको अपने फैशन की। आज फैशन दुनियाँ को बदल रहा है। आजकल दुनियाँ में नयी नयी किस्म के नमूनेदार कपड़े ही नहीं बदल रहे, बल्कि उनके साथ-साथ मनुष्यों का आचरण और आदर्श भी फैशन के साथ बदल रहे हैं। आज आप एक आधुनिक मनुष्य को देखिये। वह फैशन से बात करता है; उसके विचार फैशन सहित होते हैं; वह फैशन करने वाले मनुष्यों से ही घुलमिल कर रहना पसंद करता है। वह फैशन से बने कपड़े पहनता है। वह फैशन के पीछे इतना दीवाना हो गया है जैसे भौरा फूल के पीछे।

बदलना ही फैशन का नियम है। पर्दा — क्या प्रथा पुराने जमाने में लागू थी। परंतु आज दुनियाँ बदल गई है। यही तो उन्नति की निशानी है। आज आश्चर्य इस बात का है कि वस्तुएँ बदलते-बदलते परिवर्तन की पराकाष्ठा तक पहुँच गई हैं। उदाहरण के लिये आधुनिक फैशन के वस्त्र को लीजिये। ऐसा लगता है कि स्त्री और पुरुष में फैशन के पीछे होड़ लगी है। उस होड़ का नतीजा यह हुआ कि स्त्री और पुरुष चुस्त कपड़े पहनने लगे और उनको पहनना और उतारना उनके लिये एक समस्या बन गई है। यदि किसी से पूछा जाय कि तुम ऐसे कपड़े क्यों

पहनते हो तो वह कहने लगता है कि उसके पूर्वज भी चुस्त कपड़े कभी पहना करते थे। वह यह भी कहने से नहीं चूकता कि आजकल कई असभ्य जातियाँ उसी प्रकार के तंग कपड़े पहना करती हैं।

अच्छा, अब हम थोड़ी देर के लिये आधुनिक दुनियाँ की ओर चलते हैं, जहाँ नवयुवतियाँ अति तंग और चुस्त कपड़े पहनती हैं। उनकी देखा-देखी पुरुष भी तंग ड्रेन पाईप पेन्ट पहनने लगे हैं। ऐसा लगता है मानों ये फैशन के दीवानों ने अपने पैरों को लकड़ी के ढाँचे में डाल दिया हो। ये नवयुवक और नवयुवतियाँ अपने को दूसरे से भिन्न और ऊँचे समझती हैं। अब हम उस स्थिति तक पहुँच गये हैं कि हम ठीक से उठ बैठ भी नहीं सकते और नहीं दौड़ कर चलती बस को पकड़ ही सकते हैं।

अब हम कुछ देर के लिये महिला जगत में चलते हैं। जहाँ नवयुवतियाँ रंग बिरंगे कपड़ों में तितलियों के समान लगती हैं। आजकल महिलाओं में ऊँची एडी वाले चप्पल पीछे की ओर खुलनेवाले ब्लाउज और बटुए नये फैशन हैं। सब से ज्यादा आजकल महिलाओं को बटुए का बुखार लग गया है। और वे हमेशा बटुए को साथ लिये फिरती हैं। अजी ! वह बटुआ भी कैसा; मानों एक छोटा सा अटैची केस जिसमें वे महिलायें

अपनी जरूरत की चीजें जैसे पाउडर, सों, लिपस्टिक तथा नाना प्रकार के अंटसंट सामान रखती हैं। यदि कोई उनकी ओर ध्यान से देखे तो वे समझती हैं कि उनके मेकअप में कुछ गडबडी हो गयी है और झट अपना बटुआ खोल कर उसमें स्थित आई नेमें अपना चेहरा देखने लगती हैं। बटुआ आजकल महिलाओं का एक अंग सा बन गया है। बिना बटुए के वे अपंग सी दीख पड़ती हैं। चाहे वह कालेज गर्ल हो या विवाहिता स्त्री, चाहे वह किसी रईस की प्राइवेट सेक्रेटरी हो या स्टेनो ग्राफर, यदि वह अपना बटुआ भूल आयी हो तो मानो अपना सम्मान ही भूल आयी — वे ऐसा समझती हैं।

आजकल महिलाओं में नाना प्रकार की नयी बीमारियाँ फैला गयीं। उनमें एक उनके बाल बनाने और संवारने का ढंग है। वे अपने बालों को हेअर स्प्रे द्वारा अपने कावू में कर लेती हैं। उनसे वे कभी चिड़ियों के घोंसले के आकार का जूडा कभी मटकी जैसा जूडा तथा और भी नाना प्रकार के जूडे बांधती हैं। आजकल महिलाओं में एक और नयी बात पायी गयी है। वह है टांप लेस तैराकी पोशाक जिसे पहन कर वे समुद्र के किनारे घूमा करती हैं। परंतु यह फैशन अब भारत में अधिक नहीं है। लेकिन निकट भविष्य में इसकी उन्नति की संभावना है। उन सब बातों को देख कर तो ऐसा

लगता है कि दुनियां अपने पुराने जमाने को लौट रही है।

ऐसा माना गया है कि पुरुष स्त्री से हर चीज में ऊँचा पाया गया है। लेकिन फैशन की दुनियां में स्त्रियों ने पुरुषों को परास्त कर दिया। अधुनिक मानव यह समझते हैं कि पुराने जमाने के लोग उनसे हर स्थिति में कम थे। और यह सब फैशन द्वारा ही हुआ। कुछ बुजुर्गों का कहना है कि फैशन के द्वारा कयी बड़े बड़े राजा और राज्य मिट्टी में मिल गये हैं। सब लोग इस बात को मानते हैं। पर वे यह नहीं बताते कि बुरी फैशन कहां शुरू होती है। और अच्छी फैशन कहां से। यदि फैशन को ठीक तरह से अमल में लायी जाय तो वह काफी सुंदर लगती है।

फैशन कोई अमाननीय वस्तु नहीं है। वह मनुष्य के द्वारा ही बनायी गयी है। हर एक मनुष्य चाहता है कि हर समय वह निराला रहे और वह आसानी से पहचाना जा सके। पहले पहल नयी फैशन एक मनुष्य के द्वारा अमल में लायी जाती है। और यदि उसीको सब लोग अमल में लायें तो वह पुरानी फैशन बन जाती है। इस तरह अच्छी फैशन भी कुछ ही दिनों के लिये रहती है। उसकी जिंदगी एक तितली की जिंदगी के समान होती है।

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# दिल का दर्द

“बाबू एक पैसा”

मैंने चौककर देखा तो सामने एक फटे कपड़े पहना हुआ दुबला बालक दिखाई दिया। मैं दो दोस्तों के साथ टिफिन कर रहा था और कुछ सिनेमा की बातों में तल्लीन थे। इसलिये उसका क्षीण स्वर मुझे पहली बार अच्छी तरह नहीं सुनाई दिया। पर जब उसकी ओर मैं ने दृष्टि डाली, तो न जाने क्यों मेरे हृदय में व्यथा पैदा हुई। मुझे लगा, मानो यह बालक दलित पीडित शत-सहस्र भिखमंगों का प्रतिनिधित्व कर रहा हो, जिनको दिन में एकबार खाना मिलना भी मुश्किल है। मेरी टिफिन से अभी तक जो कुछ बचा था मैंने उसे सहर्ष दे दिया।

मेरे दोस्तों में से एक ने कहा — क्या रे ! तूने भी दान करना शुरू किया, पुण्य पाना चाहता है ? दूसरे ने मुस्कराते हुये पूछा। मैं चुपचाप सुनता रहा और इन ना समझों को

क्या समझायें ? जिनको सुबह और शाम खाने की चिंता तक नहीं, भूखों का कष्ट वे क्या जानें ? बहुत लोगों को मैं जानता हूँ जो कहते हैं कि वे काम करके पेट क्यों नहीं भरते ? बताने के तरीके से मुझे भी हंसी आती है, मानो इस दुनिया में हजारों काम खाली पड़े हैं। और चाहो तो आसानी से मिल सकते हैं। वे लोग एक पैसा देना नहीं चाहते। पर दोस्तों के साथ सिनेमा और होटेल में चाहे जितना भी खच करें। हम आज ऐसी एक दुनिया में वास कर रहे हैं जहाँ आदमी ने अपनी सुकोमल प्रवृत्तियों का गला घोट दिया है। और सिर्फ स्वार्थ ही बचा रहा।

उस बालक के मुँह पर कृतज्ञता का भाव और खुशी की लहर मुझसे कभी मुलाई नहीं जाती।

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# प्रेमचन्द का महत्व

हिन्दी उपन्यास-क्षेत्र में “मुन्शी प्रेमचन्द” का नाम सर्वोपरि है। इनका जन्म ३१ जुलाई सन् १८८० ईस्वी शनिवार को बनारस के पास लमड़ी गाँव के एक गरीब परिवार में हुआ। इनका पहला नाम था धनपतराय। चाचा इनको नवाबराय कहकर पुकारते थे। घोर दरिद्रता और विमाता के विद्वेषपूर्ण व्यवहार में इनका बाल्यकाल व्यतीत हुआ। आर्थिक दुस्थिति के कारण उनकी शिक्षा में भी विघ्न पडा। किसी तरह मेट्रिक कर मास्टरी में लग गये। अपनी योग्यता तथा दक्षता के कारण शीघ्र ही डिप्टी इन्स्पेक्टर के पद पर पहुँचे। परंतु महात्माजी की पुकार सुनकर पद-त्याग करके स्वदेश के आंदोलन में भर्ती हो गये। इस प्रकार उनका जीवन प्रारंभ से अंत तक संघर्षमय रहा। दरिद्रता ने अंत तक पीछा नहीं छोडा। किंतु प्रेमचन्दजी इस दरिद्रता से कभी विचलित नहीं हुए। वे सदा संतुष्ट रहे। अपनी दरिद्रता के कारण ही उनकी दृष्टि पीडित तथा शोषित प्रजा के प्रति उदार थी।

प्रेमचन्द बड़े आत्माभिमानि थे। उनका आत्माभिमान विनय से विभूषित था। दरिद्र किसान को आत्मबल देना अपना कर्तव्य

समझते थे। इसकी सफलता के लिए उन्होंने जीवन भर कोशिश की। तन-सेवा, या मन-सेवा से उन्हें जन-सेवा ही प्रिय लगती थी। वे किसी की वेदना या दुःख को देख नहीं सकते थे। वे कभी शांत नहीं बैठ सकते थे। असत्य के विरुद्ध लडने के लिये वे हमेशा तैयार रहते थे। वे सदा अपने को मजदूर मानते थे। पर समाज ने उनका आदर नहीं किया। तो भी वे जरा भी विचलित नहीं हुये।

प्रेमचन्दजी को हिन्दी का प्रथम मौलिक उपन्यासकार माना जाता है। उन्होंने उपन्यास को कल्पना के क्षेत्र में लाकर खडाकर दिया। इनके सभी उपन्यास उपयोगिता के सिद्धांत को लेकर आगे बढ़ते हैं। वरदान, प्रतिज्ञा, सेवासदन, प्रेमाश्रम, रंगभूमि, गबन, कर्म भूमि, निर्मला, गोदान और कायाकल्प इनके उपन्यास हैं। “मंगलसूत्र” पूरा नहीं लिख पाये।

उपन्यास के पात्रों का चरित्र उन्होंने साधारण मानवीय भावनाओं से पूर्ण मानव के रूप में चित्रित किया। उनकी दृष्टि नगर, देहात और देहात से बाहर रहनेवाले अछूतों और घुमकडों पर भी पडी है। नगर और देहात का कोई वर्ग उनसे छूटा नहीं है।

इनके सब गुण और अवगुण प्रेमचन्द की रचनाओं में प्रतिबिम्बित हैं। अपने चार उपन्यासों में (प्रतिज्ञा, निर्मला, गबन और सेवासदन) उन्होंने समाज की कुप्रथाओं को अपना विषय बनाया है। प्रतिज्ञा में विधवा-विवाह, निर्मला में वृद्ध-विवाह, गबन में स्त्रियों का गहनों के प्रति मोह और उनके करण होनेवाले अनर्थ और सेवासदन में अनमेल विवाह, विधवा जीवन की ग्लानि और वेश्या-जीवन की सभी समस्याओं को उन्होंने समाज के सामने रखा। पीडित जनता और असहाय नारी-जाति का उद्धार ही आप का लक्ष्य था। इस कारण निम्न और मध्यम वर्ग के सजीव चित्र उपस्थित करते थे।

प्रेमचन्द राजनैतिक जीवन को भी लेकर चले हैं। इस राज नैतिक जीवन के कई पक्ष हैं। एक पक्ष का संबंध देहात का है। दूसरे का नगर से। देहात के राजनैतिक जीवन की समस्या किसान-हाकिम, किसान-महाजन और किसान-जमींदार की समस्याएँ हैं। इन समस्याओं पर प्रेमाश्रम, कायाकल्प और गोदान में प्रकाश डाला गया है।

भाषा की दृष्टि से प्रेमचन्द महत्व पूर्ण हैं। उनकी भाषा चुस्त और मुहावरों से सजी है। उसमें उर्दू-फारसी के चलते हुये शब्दों का प्रयोग है। पाठों के अनुसार वे भाषा बदल देते हैं। गाँव का वातावरण उपस्थित करने के लिए वे प्रांतीय और प्रादेशिक शब्दों का

भी प्रयोग करते थे। आप की भाषा में प्रवाह है और प्रसाद गुण है।

प्रेमचन्द एक अच्छे साहित्यकार हैं। वे हिंदी साहित्य में “उपन्यास-सम्राट” के नाम से प्रसिद्ध हैं। साहित्यकार के बारे में वे इस प्रकार कहते हैं —

“साहित्यकार का काम केवल पाठकों का मन बहलाना नहीं है। यह तो भाटों मदारियों, विदूषकों और मसखरों का काम है। साहित्यकार का पद इससे कहीं ऊँचा है। वह हमारा पथ-प्रदर्शक होता है, वह हमारे मनुष्यत्व को जगाता है, हममें सद्भावों का संचार कराता है, हमारी दृष्टि को फैलाता है— कम से कम उसका यही उद्देश्य होना चाहिये”। सचमुच प्रेमचन्दजी इन सभी विषयों में सफल हुए हैं।

प्रेमचन्द प्रगतिशील कलाकार हैं। उन्होंने स्वयं लिखा है — “साहित्यकार या कलाकार स्वभावतः प्रगतिशील होता है, अगर यह उसका स्वभाव न होता तो शायद वह साहित्यकार नहीं हो सकता”। उनपर टाल्स्टाय और गांधीजी के विचारों का प्रभाव पडा। इसलिये वे टाल्स्टाय श्रेणी के आदर्शवादी कलाकार हो गये।

हिन्दी के कथा साहित्य में प्रेमचंद का विशिष्ट स्थान है। उनकी हिंदी कहानियों की संख्या तीन सौ तक मानी जाती है। बड़े घर की बेटी, पंचपरमेश्वर, शंखनाद,

कफन, शादि उनकी ऐसी कहानियाँ हैं जो विश्व सहित्य के सर्वोत्तम कहानियों के समकक्ष बिठाने के योग्य हैं।

प्रेमचंद आत्माराम थे। उन्हें अपने पर पूरा भरोसा था। जो वे सोचते थे, करके दिखाते थे। वे गाँधी वादी थे। गाँधीजी की पुकार सुनकर वे सत्याग्रह के आंदोलन में खड़े हो गये थे। उनका हथियार लेखनी थी। उसमें प्रेमामृत भरा हुआ था। उस प्रेमामृत ने अनेकों को चेतना प्रदान की थी। पर देश-भक्त और गाँधी वादी प्रेमचंद से कलाकार प्रेमचंद बहुत ऊँचे उठे हुये हैं।

इतने महान होने पर भी प्रेमचंद ने अपना

सारा जीवन दरिद्रता में ही बिताया। यद्यपि उन्हें जीवनकाल में मान और धन नहीं मिला था किंतु आज वे विश्व के उच्च साहित्य सेवी माने जाते हैं।

इस प्रकार हिंदी साहित्य में प्रेमचंदजी को अद्वितीय स्थान प्राप्त हुआ है। इतना प्रतिभाशाली कलाकार हिंदी साहित्य में ही क्या, विश्व-साहित्य में भी बहुत कम मिलते हैं। “उपन्यास सम्राट” नाम से आज आपका नाम हिंदी साहित्य गगन में सूर्य के समान प्रकाशित हो रहा है। आपका स्वर्गवास ८ अक्टूबर १९३५ को हुआ।

प्रेमचंदजी एक अमरकलाकार हैं।

एस. रामाराव,  
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# भारत में अन्न की कमी

आजकल भारत में अन्न की कमी एक मुख्य समस्या हो गयी है। पुराने ज़माने में यह कहावत सच थी कि “सुजलां, सुफलां, मलयज शीतलां, सस्यश्यामलां।” लेकिन आज यह कहावत झूठ साबित हुई। हमारे लिये यह शर्म की बात है कि आजाद होने के बाद करीब बीस साल गुजर जाने पर भी हम अपने लिये काफी अनाज नहीं पैदा कर सकते हैं। समय बीतते बीतते यह समस्या और भी बढ़ रही है। सरकार का कहना है कि इस पंचवर्षीय काल में यह और भी तीव्र होने वाली है। हर साल हमें अमेरिका व बर्मा से अनाज और गोहूँ मंगवाना पड़ता है। अगर अमेरिका गोहूँ नहीं देता तो हमारे लिये खाना नहीं है। इसके साथ यह होता है कि उनसे खाने की चीज पाने के लिये हमें उनकी बात माननी पड़ती है। एक स्वतंत्र देश के लिये यह अच्छी बात नहीं है। अनाज के लिये हमें किसी भी देश पर निर्भर नहीं होना चाहिये।

हमारे कुछ किसान अब भी ऐसे हैं जो खेतीबारी में नये ढंग लाने के विमुख हैं। समय बीतते जाने पर भी उनके स्वभाव में परिवर्तन नहीं आ रहा है। हमारे सभी

किसानों को खेतीबारी में नये ढंग अमल में लाने चाहिये। उदाहरण के लिये जापान की खेतीबारी करने के ढंग से हम अपनी फसल को कई गुना बढ़ा सकते हैं। ‘सूपर फास्फेट’ जैसी खादों का इस्तेमाल करना चाहिये। बढ़ती हुयी आबादी के लिये किसी न किसी तरह फसल के भी बढ़ने की जरूरत है। पुराने हल आदि को छोड़ कर ट्रैक्टर वगैरह का इस्तेमाल करना चाहिये। ट्रैक्टर आदि का इस्तेमाल एक या दो एकड़ के लिये नहीं हो सकता। इसलिये कुछ आदमियों को एक साथ मिलकर खेतीबारी करनी चाहिये।

जैसे विनोबाजी कहते हैं, सब लोगों को श्रमदेवता की उपासना करनी चाहिये। शारीरिक मेहनत करने में शर्मिंदा नहीं होना चाहिये। अन्न की कमी को कम करने के लिये शर्मिंदा नहीं होना चाहिये। अन्न की कमी को कम करने के लिये सब्जी ज्यादा खानी चाहिये और उसको आप ही पैदा करना चाहिये। साधारणतया हमारे आंगन में बहुत भूमि बेकार पडी रहती है। उस जमीन में अगर हम सब्जी पैदा करें तो हमको और हमारे देश को भी लाभ पहुँचता है। इससे

खाने की चीजों का दाम भी कम हो जाता है और हमारा समय भी नष्ट नहीं होता ।

हमारे देश में खाद की बहुत कमी है । किसान के लिये कम दाम में खाद नहीं मिलती हैं । और कभी कभी मिलती ही नहीं । सरकार को नई नई खाद की फेक्टरियों की स्थापना करनी चाहिये । हमारे किसान ज्यादातर बरसात पर ही निर्भर होकर खेतीबारी करते हैं । अगर ठीक समय पर वर्षा नहीं होती तो उस साल के लिये फसल नहीं है । यह ऐसा नहीं होना चाहिये । “नागार्जुन-सागर जैसे प्राजेक्ट जल्दी पूरा करना है और नये प्राजेक्ट की स्थापना करनी चाहिये । जानवरों का गोबर जैसी सहज खाद का दुरुपयोग नहीं करना चाहिये । और एक बात यह है कि हमारे किसान का साल भर का काम नहीं होता है । ज्यादा से ज्यादा नौ महीने इनको काम मिलता है । बाकी समय वे बेकाम रहते हैं । अगर उस समय इन्हें किसी और काम में लगायें तो उनको बहुत लाभ हो सकता है । उनका लाभ राष्ट्र का ही लाभ है ।

अन्न की कमी का एक और कारण यह है कि अनाज किसान से सीधे ग्राहकों के पास नहीं आता है । इन दोनों के बीच बहुत व्यक्ति होते हैं । हरेक व्यापारी कुछ न कुछ लाभ के बगैर नहीं बेचता । इसलिये ग्राहक को मिलने तक उसका दाम बहुत बढ़ जाता है । सरकार को सीधे किसान से

खरीदकर “को-आपरेटिव स्टोर्स” के द्वारा बेचना चाहिये । इससे व्यापारी माल को अपने यहाँ संचित रखकर अधिक दाम के पर बेच नहीं सकते ।

अन्न की कमी का एक प्राधान कारण है — आबादी की तेज बढ़ाव १९४७ में हमारी जनसंख्या लगभग तैंतीस करोड थी । लेकिन अब पचास करोड से ज्यादा बढ़ गयी । इसलिये सरकार जितनी भी कोशिश कर रही है अन्न की समस्या हल नहीं हो रही है । वैज्ञानिकों का कहना है कि अगर जनसंख्या इसी तरह बढ़ती जाय तो दस साल के बाद हमारे देश में सभी लोगों के लिये सिर्फ खडे होने की जगह मिलेगी । इस बढ़ती हुयी जनसंख्या से एक अन्न की ही नहीं बल्कि कई समस्यायें पैदा होंगी । अगर हम इसे रोकने की चेष्टा न करें तो देश कुछ भी आगे नहीं बढ़ सकता । छुटपन में ही शादी नहीं करनी चाहिये । तीन या चार बच्चे होने के बाद आपरेशन करवानी चाहिये या ‘लूप’ जैसे आधुनिक संतान-निरोधक उपकरणों का इस्तेमाल करना चाहिये । छोटे परिवार होने से परिवार के समस्य तंदुरुस्त और सुदृढ रह सकते हैं । परिवार बड़ा हो गया है तो उनको पाल पोसने में आदमी को बहुत कष्ट होता है । वह उनको खूब खिला नहीं सकता और पढवा नहीं सकता । देश को अब तंदुरुस्त पढे लिखे और उपयोगी नौजवानों की जरूरत है न कि नालायक और

रोगी आदमियों की । इससे सिर्फ परिवार का ही नहीं बल्कि देश का सौभाग्य भी होता है ।

इस तरह हमें अन्न की समस्या हल करने की कोशिश करनी चाहिये । हम सब जितना हो सके उतना इसको मिटाने की चेष्टा करें ।

अन्न के लिये हमें विदेशों पर निर्भर नहीं होना चाहिये । जैसे श्री चतुर्वेदीजी कहते हैं “हरेक आदमी को कुछ न कुछ समय अन्न की उत्पत्ति में लगाना चाहिये । भूखे

रह कर कुछ भी काम नहीं कर सकते । हरेक आदमी का यह कर्तव्य है कि वह इस के लिये कुछ न कुछ करे । कहीं भी भूख से मरनेवाले न हों । कहीं भी ऐसे आदमी न हों जो अन्न के लिये तरसते हों । जब आदमी संतुष्ट होता है तभी वह कुछ कर सकता है । सभी आदमियों के खुश रहने में ही समाज का कल्याण है और समाज के कल्याण पर ही देश का कल्याण निर्भर है ।

जयहिन्द !

के. ०ही. सुब्रह्मण्यम,

२ बी. एस. सी.

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43. Mount Carmel College	Bangalore
44. The Govt. Arts College	Srikakulam
45. Govt. College of Physical Education	Hyderabad
46. St. Teresa's College	Ernakulam
47. St. Francis De Sales College	Nagpur
48. Sir C. R. Reddy College	Eluru
49. St. Joseph's Pontifical Seminary	Alwaye
50. Viswa Kavi Vidya Nikethan	Jemigolwapalli (Krishna)
51. The Guntur Medical College Hostel Magazine	Guntur
52. Home Review—St. Paul's Regional Seminary	Tiruchirapalli
53. St. Francis Xavier's High School	Tuticorin
54. Sacred Heart High School	Ponmalaipatti
55. St. Xavier's College (Britto Annual)	Palayamkottai
56. Maris Stella College	Vijayawada

## LIST OF MAGAZINES RECEIVED - 1966-67

1. St. Xavier's Teachers' Training College	Palayamkottai
2. St. Joseph's Boys High School	Calicut
3. St. John's Regional Seminary	Hyderabad
4. Andhra Lutheran College of Education	Guntur
5. St. Albert's College	Ernakulam
6. The Mar Ivanios College	Trivandrum
7. Andhra Jateeya Kalasala	Machilipatnam
8. St. Mary's High School	Dindigul
9. Sophia College	Bombay
10. Sri Subbaraya & Narayana College	Narasaraopet
11. Annavaram Satyavathi Devi College	Kakinada
12. St. Mary's High School	Madurai
13. St. Joseph's High School	Trivandrum
14. Kakaraparthi Bhavanarayana College	Vijayawada
15. Loyola College of Social Science	Trivandrum
16. The Hindu College	Machilipatnam
17. S. R. R. & C. V. R. Govt. College	Vijayawada
18. Loyola College	Madras
19. Bapatla College of Arts & Science	Bapatla
20. Andhra Christian College	Guntur
21. S. K. B. R. College	Amalapuram
22. St. Mary's High School	Bombay
23. The Sacred Heart's College	Thevara
24. A. K. J. M. English Medium High School	Kanjirapalli
25. St. Berchmans' College	Changanacherry
26. St. Joseph's College	Tiruchirapalli
27. The Hindu College	Guntur
28. St. Xavier's High School	Palayamkottai
29. Holy Cross College	Tiruchirapalli
30. St. Xavier's College	Palayamkottai
31. St. Xavier's College	Bombay
32. C. S. R. Sarma College	Ongole
33. St. Joseph's College (S. Heart Hostel)	Tiruchirapalli
34. Guntur Medical College	Guntur
35. St. Aloysius College	Mangalore
36. Rajalakshmi Mill's High School	Coimbatore
37. Akkineni Nageswara Rao College	Gudivada
38. St. Xavier's College	Ahmedabad
39. Rangaraya Medical College	Kakinada
40. Stella Maris College	Madras
41. Leo XIII H. S. School	Alleppey
42. St. Joseph's College	Bangalore

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