



BHARATIYA VIDYA BHAVAN

Sardar Patel College Of Engineering

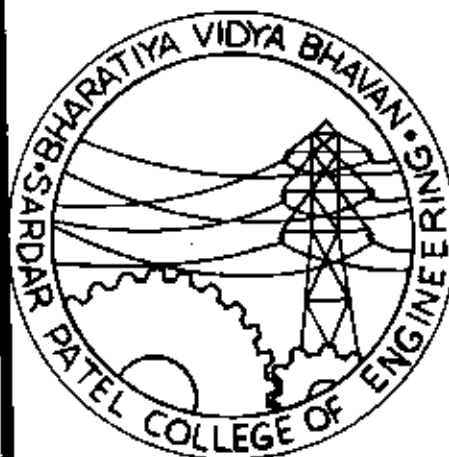
ANDHERI, BOMBAY-400058



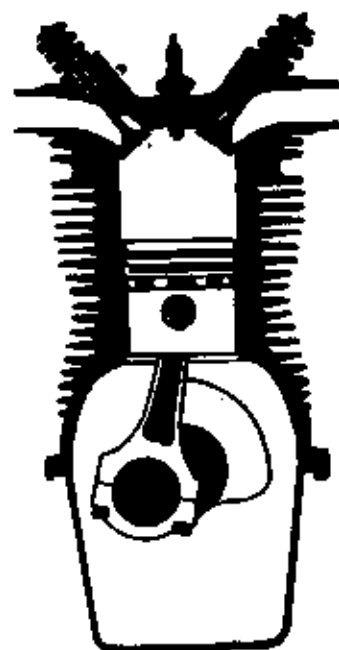
अमृतं तु विद्या

ARJANIKA

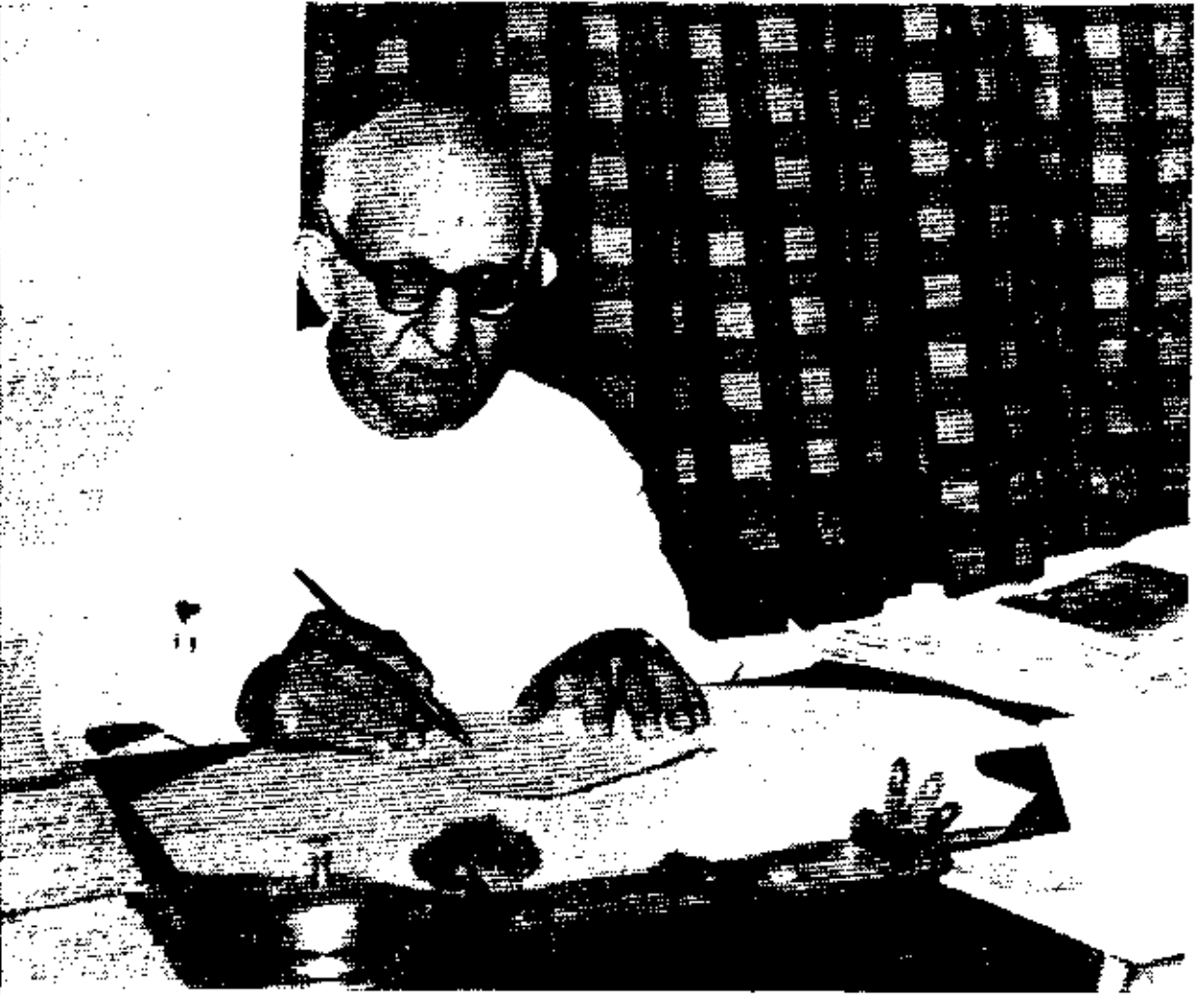
VOLUME XII



JULY 1977



Dr. P. N. Rao



Kulapati Dr. K. M. Munshi

Shri Dharamsey M. Khatau
President, Bharatiya Vidya Bhavan



Shri Shantilal H. Shah
Our Executive Vice-Chairman



BHARATIYA VIDYA BHAVAN
Sardar Patel College Of Engineering
ANDHERI, BOMBAY-400058



SARJANIKA



VOL. XII

JULY 1977

MAGAZINE COMMITTEE

President :

Officiating Principal V. D. KHATRI

Ex-Officio Staff Members :

DR. J. V. N. RAO

PROF. S. S. NAGARAJU

Magazine Secretary :

SHRI GOSALIA PRADIP



EDITORIAL BOARD

Editor :

Officiating Principal V. D. KHATRI

Executive Editors :

DR. J. V. N. RAO

PROF. S. S. NAGARAJU

Editor (Printing)

PROF. M. M. SHAH

Associate Editors :

Prof. Kum. L. E. Thailamani (English)

Prof. V. S. Chandrasekhara (Civil)

Dr. S. S. Maneck (Electrical)

Prof. N. K. Panicker (Mechanical)

Prof. P. P. Vaidya (Marathi)

Prof. S. C. Goyal (Hindi)

Prof. B. H. Pancholi (Gujarati)

HOMAGE

It is with a sense of profound grief that we offer our homage to the three great personalities the country has lost this year. cellor of the University of Bombay, he evinced keen interest in the academic development of the University and the problems of the students.

Hon. Shri Fakhruddin Ali Ahmed the Fifth President of India died in office. He was a symbol of our secular traditions. His devout faith in the religion and compassion for the fellow beings personified all that is best in our tradition.

Hon. Shri Ali Yavar Jung, Governor of Maharashtra and Chancellor of the University of Bombay was snatched away from us by the providence. As the Governor of Maharashtra, he commanded the respect and affection of different sections of the people with his liberal outlook and genuine concern for their welfare. As the Chan-

A literary figure of great eminence Shri Vishnu Sakharan Khandekar expired within a short duration after the belated recognition of his literary genius with the Jnanapith award, the highest literary award in the country. He is considered to be the father of the modern Marathi novel. His works bring out the basic human relationships in all their entirety.

We offer our heartfelt condolences to the families of the bereaved.

May the departed souls rest in peace.

EDITORIAL

We are happy to place in your hands the twelfth volume of the College Magazine which reflects the creative talents of our students. The College started towards the end of June 1976, for the new academic year, and the staff and the students were hard pressed for time to complete the courses of teaching and study with very little time left for extracurricular activities, as usually happens in Engineering institutions.

Principal S. S. Dighe leaves the College :

During the academic year under review Principal S. S. Dighe left the college which he ably served since its inception. He first joined this college as Professor and Head of the Mechanical Engineering Department, later became Vice-Principal and then Principal from July, 1971. The members of the staff and the students of this college remember him for his active interest in building up the Mechanical Engineering Department, from scrap and his contributions to the growth of this Institution during his tenure as Principal. We wish him good health and long life.

Our Officiating Principal :

Prof. V. D. Khatri, Head of the Deptt. of Structural Engineering took over as Officiating Principal at the beginning of the academic year. We

hope the college will grow in strength and make rapid strides in the academic field under his young and energetic leadership.

Our College Day Celebrations :

We were fortunate to have Commander N. K. Sawhney, Director (Commercial), Mazagon Docks, Bombay as our Chief Guest. The audience appreciated his brief but interesting and lively talk. A notable feature of this year's celebrations is that a large number of entertainment items were performed by our own students unlike in the past when we used to invite outside parties for entertainment. We hope this trend will be kept up in the years to come.

Towards Academic Progress :

We are happy to report that Prof. J. V. N. Rao, Assistant Professor in the Deptt. of Structural Engineering was awarded the Ph.D. degree by the I.I.T., Kanpur for his thesis entitled "Optimum Aseismic Design of Multistorey Frames". Our heartiest congratulations to Dr. J. V. N. Rao.

There has been a steady academic progress as judged from the number of contributions by our faculty members at various International and National level conferences.

Prof. S. S. Nagaraju, Assistant Professor, Department of Civil Engineering presented the following research

papers at the International and National conferences mentioned against each :

1) "A Rational Design Approach for the Design of Deep Foundations for Seismic Forces" — presented at the Regional conference on Tall Buildings organised by the Institution of Structural Engineers Hongkong Chapter and IABSE. The conference was held at Hongkong during September 1976.

2) "A New Technique for Ground Improvement" — presented at the International Symposium on New Horizons in Construction Materials with Special Applications to Geotechnical Engineering. The Symposium was held at Lehigh University, U.S.A. during November 1976.

3) "Practical and Economic Aspects of the Design of Ground Improvement Systems" — presented at the National Symposium on Foundations and Excavations in weak Soils organised by Calcutta Geotechnical Study Circle and Indian Geotechnical Society. The symposium was held at Calcutta during December 1976.

Shri R. M. Joshi, Lecturer, Department of Civil Engineering, presented a paper entitled "Rigorous Analysis of Rectangular Water Tank by Finite Difference Method" at the 7th All India Conference on Materials and Equipment organised by Association of Engineers, India. The conference was held at Calcutta during March, 1977.

Dr. A. R. Krishna Murty, Professor in the Department of Structural Engineering presented a paper entitled "On dependence of Flow birefringence

Parameters on Spectral Frequency and Shear Strain Rates" at the 7th International Congress on Rheology. The Conference was held at Chalmers University of Technology in Sweden during August, 1976.

Dr. M. M. Ranade, Professor of Mathematics presented a paper entitled "Stability of a Conducting Jet in the Presence of Magnetic Field", in the "Poster Session" in a conference on Plasma Physics and M.H.D. held at B.A.R.C. Bombay during Feb. 1977.

Prof. V. R. Doiphode, Professor of Physics presented a paper entitled "Demonstration Models for Teaching Crystal Geometry" at the 64th session of Indian Science Congress held at Bhubaneswar during January 1977.

Our congratulations to all these faculty members. We hope there will be a healthy competition in the academic pursuits of this type among our faculty members during the years to come.

Achievements of Our Students :

It is a matter of great of pride to us to report that Shri Suresh Mhatre of the B.E. (Mech.) class was elected as the Chairman of Students' Council, University of Bombay. We hope that the Council, under his able and energetic guidance will set up healthy precedents to enable the University to solve the manifold problems of the student community in a congenial atmosphere. Our students have brought laurels to the college by their meritorious performance at the University examinations held in May/June 1976 as can be seen from the Principal's

Report. Mention must be made of Shri D. P. Shirke, Shri Raju B. Advani and Shri P. P. Gosalia who respectively topped the list of successful candidates at the T.E. (Civil), T.E. (Mechanical) and S.E. (Electrical) examinations. Our heartiest congratulations to them. In spite of the busy academic schedule our students have not lagged behind in extra curricular activities, as can be seen from the reports of the various gymkhana committees.

Acknowledgements :

In conclusion, we extend our sincere thanks to the office staff for all the assistance they rendered in bringing

out this magazine. We are also grateful to those who patiently went through the proofs. Finally a word of regret for the delay in publication of this magazine for reasons beyond our control.

* * *

Books do not brainwash the intelligent; they inform, educate and stimulate them. Only people whom a defective education has made literate but has failed to develop in them a capacity to think for themselves, who can swallow information but cannot critically evaluate or analyse it, are brainwashed by what they read.

Gilroy D'Sa

* * *



Flowers : They alone can convey the best of feelings.



A lot to discuss—not merely over a cup of tea.



All about our achievements - Principal V. D. Khatri



What more could be achieved - Chief Guest Mr. Sawney

THE PRINCIPAL'S REPORT

For the year 1976-77 — Presented on the Occasion of the 14th College Day Celebrations)

Honoured Guest, Friends, Ladies and Gentlemen,

It gives me great pleasure to welcome our Chief Guest, Commander N. K. Sawhney amidst us this evening on the august occasion of the Fourteenth College Day Celebrations of this College.

This time, the students and the staff felt that we invite an eminent personality from the docks. I contacted one of our college alumni, working at Mazagon Docks and asked him to suggest the name of the best officer there. Instantly came the name of Commander Sawhney. I am extremely grateful to Commander Sawhney, who in spite of his very busy schedule, agreed to accept our invitation and spare his valuable time to be the Chief Guest at this function and also to distribute the prizes.

Normally, it is customary to introduce the Chief Guest. Perhaps the best way I thought to start introducing Commander Sawhney is to state that at a very young age of 38 years, he held the esteemed high position as Commercial Manager and Company's Secretary at Mazagon Docks, then as General Manager (Commercial) at the same place when at 41 years of age and later within a short span of three years, promoted as Director (Commercial) of Mazagon Docks. The past students of our College, now working at Mazagon Docks, inform me that to work sixteen to eighteen hours a day is something very common to Commander Sawhney since he joined the

Mazagon Docks in 1965. Perhaps there lies the key to his meteoric rise of his career.

To think that India can supply cargo ships to United Kingdom may sound ridiculous but Commander Sawhney has done it. And all the credit goes to him in securing recently an order of 6 ships, and earning valuable foreign exchange of Rs. 24 crores. Two of these ships have already rolled off the slipway at Mazagon Docks in January 1977. It is not the money that he has earned for our country in foreign exchange that alone matters, but greater still is his achievement to have put India as a supplier of the ships on the map of the world.

We are, therefore, very proud to extend a hearty welcome this evening to this illustrious son of our country.

The Annual Day Celebration is a day when we pay homage to the great personalities associated with our College. We rejoice at our achievements during the year and we just like to forget our difficulties to-day. To-day, we pay homage to the architect of this College, late Dr. K. M. Munshi, whose vision created this grand edifice. We also pay homage to all innumerable giant personalities who helped him in creating this edifice, and to those who still continue to contribute to the development of this College.

When we want to rejoice at our achievements, we look through the results of the University examinations. I am briefly giving the University results of the various examinations during the year.

Results of the University Examinations held in May/June 1976.
SARDAR PATEL COLLEGE OF ENGINEERING, ANDHERI, BOMBAY-400 058.

Class	Total No. appeared	Distin- ction	I class	II class	Pass class	Total No. of passing	Percentage	University percentage
F.E.	208	—	37	104	11	152	73%	71.8%
S.E.(C)	50	—	—	29	2	31	62%	69.3%
S.E.(M)	66	—	5	35	2	42	63.7%	70%
S.E.(E)	77	—	18	50	3	71	92.2%	87.5%
T.E.(C)	45	—	5	19	5	29	64.5%	51.2%
T.E.(M)	89	2	28	36	1	67	75.28%	78.3%
T.E.(E)	76	—	8	47	5	60	79%	81.5%
B.E.(C)	41	1	11	23	—	35	85.36%	85.4%
B.E.(M)	90	—	20	36	—	65	72.22%	76.6%
B.E.(E)	74	—	13	40	—	53	71.62%	74.5%

6

S.E. (Elec.) May 1976 : The Anandrao Pandit Scholarship at the S.E.(E) Examination has been awarded to Shri Gosalia P. P.

Shri Gosalia has topped the list of successful candidates of University of Bombay at the S.E.(E) Examination.

T.E.(Civil)

: Shri D. P. Shirke has topped the list of successful candidates of the University of Bombay at the T.E.(C) Examination.

T.E.(Mech.)

: Shri Raju B. Advani has topped the list of successful candidates of the University of Bombay at the T.E.(M) Examination.

F.E.

Shri Jayant Janardan Sane of F.E. class and Shri Ishwar Subramanian of F.E. class have been awarded Late Rao Saheb Vishwanath Narayan Mandlik Prize (additional) for 1976.

Shri Jayant Janardan Sane of F.E. has also been awarded the Maharaja Shri Ganga Sinhji Scholarship for 1976-77.

RESULTS OF NOVEMBER 1976 EXAMINATION:

Class	Total No. Appeared:	PASSED:			Total Class Passed	Percentage of Pass;	Results Reserved
		1st Class	2nd Class	Pass			
F.E.	41	—	3	25	28	68.2%	6
S.E.(C)	25	1	5	14	20	80%	
S.E.(M)	24	—	—	20	20	83.3%	
S.E.(E)	5	—	—	1	1	20%	
T.E.(C)	13	—	—	11	11	84.6%	
Revised	1	—	—	—	—	—	
Old	14	—	—	9	9	64.2%	
T.E.(M)	9	—	—	4	4	44.4%	
Revised	14	—	—	13	13	96.6%	
Old	3	—	—	1	1	33.3%	
B.E.(C)	2	—	—	—	—	—	
B.E.(M)	25	2	18	3	23	92%	
B.E.(E)	7	—	2	—	2	28.5%	

The following are the prizes awarded to the students of this college for the year 1976-77.

KULPATI'S GOLD MEDALS:

- | | | |
|------------------------|-----------|---|
| 1. Shri Munshi S. S. | B.E.(M) : | For securing first rank in first attempt amongst the students of this college and first class with Distinction at the B.E.(M) examination held in June '76. |
| 2. Shri Divasli K. Y. | B.E.(E) : | For securing first rank in the first attempt amongst students of this college and first class at the B.E. examination held in June '76. |
| 3. Shri Aggarwal D. H. | B.E.(C) : | For securing first rank in first attempt amongst the students of this college and first class in B.E.(C) examination in June '76. |

KULPATI'S SILVER MEDALS:

- | | | |
|------------------------|-----------|---|
| 1. Shri Vanoo Iqbal G. | B.E.(M) : | For securing 2nd rank in the first attempt and first class with distinction in B.E.(M) examination held in June 1976. |
| 2. Shri Shah T. S. | B.E.(E) : | For securing 2nd rank in the first attempt in the college and first class in B.E.(E) examination held in June 1976. |
| 3. Shri Damania N. J. | B.E.(C) : | For securing 2nd rank in the first attempt in the college and first class in B.E.(C) examination held in June 1976. |

SHRI PRUTHVISH NARAYANDAS KILLAWALLA PRIZES (Rs. 100/- each):

- | | | |
|----------------------------|-----------|---|
| 1. Shri Das Arjun | F.E. : | For securing highest marks in the first attempt amongst the students of this college at F. E. examinations held in June 1976 and joined S.E.(E) class for 1976-77. |
| 2. Shri Gosalia Pradeep P. | S.E.(E) : | For securing highest marks in the first attempt amongst the students of this college at S.E.(E) examination held in June 1976 and joined T.E.(E) class for 1976-77. |

3. Shri Billimoria Cyrus R. T.E. (E) :

For securing highest marks in the first attempt amongst the students of this college at T.E. (E) examination held in June 1976 and joined B.E. (E) class for 1976-77.

4. Shri Divasli Kaizer Y. B.E. (E) :

For securing highest marks in the first attempt amongst the students of this college at B.E. (E) examination held in June 1976.

SMT. AHALYABAI TEMBE PRIZE (Rs. 100/-):

1. Shri Damania N. J. B.E. (C) :

For standing first in B.E. (C) examination held in June 1976 with Structural Engg. subjects.

SHRI JAYANTI SATYANARAYANA PRIZE : (Rs. 50/-):

1. Shri Shirke D. P.

(Oct. '75) B.E. (C)

For securing highest marks in the subject of Structural Analysis II (Semester V) at T.E. (C) examinations held in October 1975 & 1976.

2. Shri Ramachandran J.

(Oct. '76) T.E. (C)

MERIT PRIZES ON THE BASIS OF MERIT IN THE PRECEDING EXAMINATIONS

F.E.	I Shri Tilak Arvind P	T.E.(M)	I Shri Walawalkar A. A.
	II Shri Shah A.M.		II Shri Subramanian R.
S.E.(C)	I Shri Kadiani M. R.	T.E.(E)	I Shri Gosalia P. P.
	II Shri Mehta R. C.		II Shri Rath R. M.
S.E.(M)	I Shri Jambusaria P. B.	B.E.(C)	I Shri Shirke Dilip I
	II Shri Galwankar S. N.		II Shri Jain R. S.
S.E.(E)	I Shri Das Arjun	B.E.(M)	I Shri Advani R. B.
	II Shri Bakhle S. S.		II Shri Abhyankar V. A.
T.E.(C)	I Shri Damle V. R.	B.E.(E)	I Shri Billimoria C. R.
	II Shri Bulsara V. D.		II Shri Devnani A. P.

The College started in June 1962, and was privileged to be given the inaugural address by the late Pandit Jawaharlal Nehru. The College has been offering degree courses in the Civil, Mechanical and Electrical branches. A

few staff members recognised by the University of Bombay as post-graduate teachers offer at present, on a very limited scale, facilities for post-graduate course.

A stage comes when every organisation feels the urge for further development. Very recently, the management of the College has decided to start as early as possible, the under-graduate degree course in Electronics and Telecommunication Engineering and the post-graduate courses on a systematic basis in the Mechanical, Electrical and Structural Engineering branches. The College is approaching the Government of India and the Government of Maharashtra for obtaining the necessary grants for these courses. I may place on record that the Central and the State Governments have been very considerate and have been giving encouragement in achieving the progress of this College right from its inception in 1962. On behalf of my College and myself, I take this opportunity to extend our deep sense of gratitude to the Deputy Technical Adviser, Government of India and to the Director of Technical Education, Maharashtra State.

The College has further decided to undertake research project and other consultancy service on the institutional basis. It has rapidly expanded its Material Testing activities and has in the past eight months multiplied five-fold its revenue from these activities.

With the introduction of post-graduate courses and consequent up-to-date equipment added to the laboratories, I am confident, the College will offer a wide variety of research facilities to provide answers to various problems of the industries. This will provide a beginning to bridge the wide gap between the industry and educational field. To provide services to the trans-

port authorities, the College intends to offer the facilities of calibration of taxi-meters and rikshaw meters. I may state that revenue from all these sources will help in providing resources for bringing in more modernised equipment.

The Staff Members of this College have constantly been provided an opportunity to improve upon their qualifications and to undergo training in industries to enrich their theoretical knowledge with practical experience provided in industries. I am very happy to mention that the Doctoral thesis of Prof. J. V. N. Rao from Structural Engineering Department has been accepted by I.I.T. Kanpur, in January 1977. Prof. Rao was deputed by this College for this course under the scheme of Quality Improvement Programme of the Government of India. Five other professors were deputed this year for training in industries.

Our President, Shri Dharamsey Khatau, has not been able to attend this evening due to prior engagements. He has conveyed his best wishes for the College Day Celebrations.

The Executive Vice-Chairman of this College, Shri Shantilal Shah, in spite of his advanced age, has been working ceaselessly to build up this College. He has been indisposed for past few days and has not been able to be amongst us this evening. He has conveyed his best wishes for success of this College Day. I shall be failing in my duty if I were not to express my deep sense of gratitude to him for providing able guidance to me in my work in the College.

Our Executive Secretary, Shri Ramakrishnan, has from time to time given very valuable advice and suggestions in my work. I am indebted to him for his guidance.

I am thankful to the members of the Governing Council of this College for the close co-operation extended from time to time.

Our staff members provide a very good team of teachers. If the results are good, the credit goes to them. My congratulations to them.

from their studies, I wish them a happy time.

With the co-operation of the College Authorities and the Staff, I am sure that the College will make rapid strides in its development and diversification and the day will not be far when this College will become a monument of great national importance.

Our students are a well behaved disciplined lot who work hard for their studies. To-day, when they are free
THANK YOU.

* * *

A THOUGHT FOR TODAY

Men are born with two eyes, but with one tongue, in order that they should see twice as much as they say. It is the close observation of little things which is the secret of success in business, in art, in science, and in every pursuit in life. Human knowledge is but an accumulation of small facts, made by successive generations of men.

S. Smiles

SUNDAY STANDARD

Training can take the horse to the water but cannot make it drink. Efficiency is not mere knowhow, it is the will to apply it. Training may give the knowhow but will is a matter of character. There is no known method of training which can build up character in a matter of a few months or years. It is a long-term process which takes two to three generations and we have safely neglected it for the last generations.



GUNITE

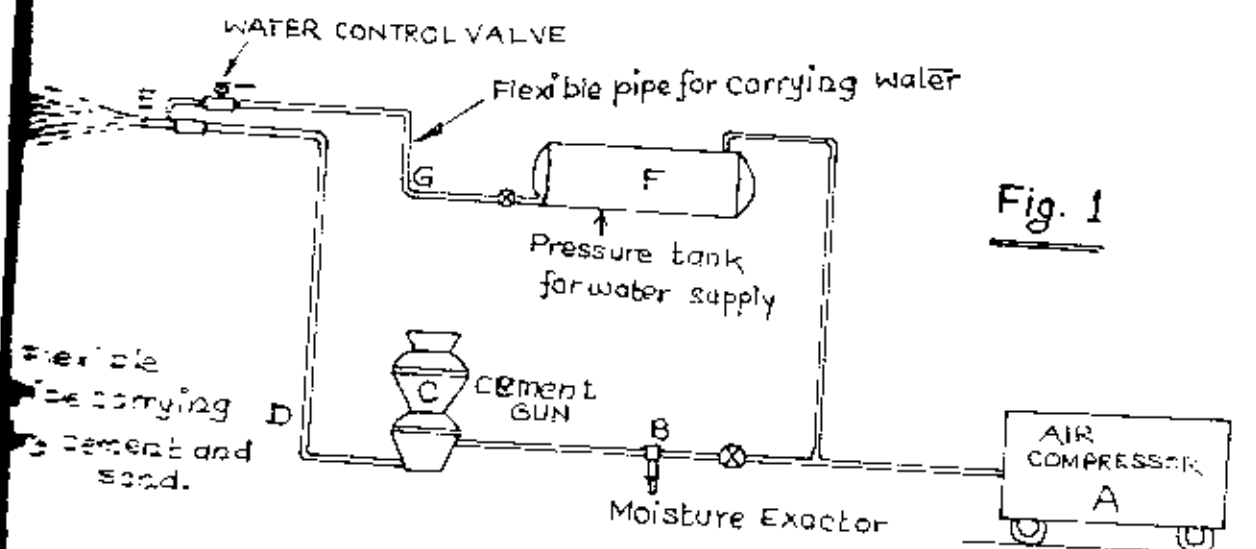
Vora Susmit
B.E. (Civil)

Gunite is the name given to the concrete formed to cement and sand, propelled with great force by the air pressure from the cement gun. A large compressor is required to supply the compressed air to the cement gun at a defined pressure. The mix is blown dry through the hose and water just sufficient for the purpose of hydration is added at the nozzle. A separate hose carries the water to the nozzle under defined air pressure. The nozzleman, who is the prime man at the site regulates the quantity of water by means of hand operated valve.

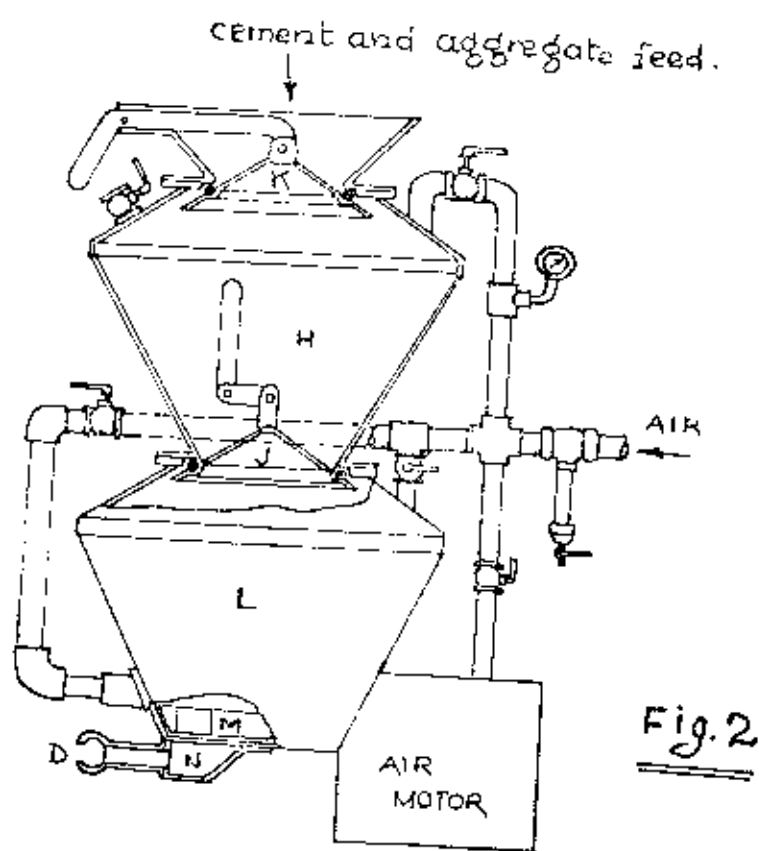
The cement gun process was invented by Carl E. Akeley, a naturalist of England in 1911. He was interested in making the carcass of large animals. He initially tried with frame of expanded metal or metal lathe and for filling this carcass he used plaster of

Paris. The use of Plaster of Paris made it a job of sculpturing. However, because of the rapid setting properties of Plaster of Paris, the idea was dropped. But the experiment did focus the attention on the point that a dry powder or granular material or a mixture of the two could be carried in a suspension with the help of compressed air in a flexible tube and water under pressure through another flexible tube. The water is made to unite with the mixture just at the time of deposition. Several experiments with Portland cement and sand turned out to be successful. Thus the cement gun came into being.

The study diagram of the process is shown in Fig. 1. Air compressor (A) supplies the compressed air at a defined pressure. The air is made moist free by moisture extractor (B) before entering



General arrangement of apparatus in
GUNITE SYSTEM



PNEUMATIC CONCRETOR

ing the pressure container (C). A mixture of cement and fine aggregate in the pressure container (c) is then blown through the hose (D) to the nozzle (E). Compressed air is also supplied to the pressure tank (F) filled with water. The water is then delivered under pressure through the separate hose (G) to the nozzle (E). At the nozzle (E), the water is mixed with the mix by means of water control valve prior to reaching point of deposition.

The details of pressure container are given in Fig. 2. It consists of two compartments viz; upper one and lower one for the continuous flow of material. The cement and sand are initially mixed in dry condition on the floor. Keeping bell valve (J) closed the dry mix is placed in top compartment (M). Then the bell valve (K) is made to close. The compressed air is released in top compartment until the air is released in top compartment until the air pressure in the upper compartment is equal to the air pressure in the lower compartment. The bell valve (J) is now opened. The mix is allowed to enter the lower compartment. The bell valve (J) is then closed. The air pressure in the upper compartment is released. The bell valve (K) is opened for the entry of fresh charge of mix. When all the cement and aggregate mix is discharged through the nozzle (E), the process is repeated. The process is thus made continuous.

The lower vessel which is the working chamber has at the bottom a feed wheel (M) with long thin radial teeth. It is made to rotate at a speed of 10.15 r.p.m. It is operated by a gear and suitable air motor. At one point in a

lower compartment, in the bottom of the lower vessel at the edge of the feed wheel there is an outlet for the connection of the material delivery line CD to the nozzle. Through the side of the gun above this opening there is a small opening (N) and air pipe is placed under this gear wheel (M). The mix rests on the gear wheel (M). Pockets formed by the radial teeth are filled by the mixture. As the teeth passes over the opening (N), a small amount of cement aggregate mix falls in the opening. It is carried in air stream through the material hose (D) to the nozzle (E). There is a pressure indicator in the lower compartment attached to the lower vessel to indicate the air pressure in the chamber. The size of the nozzle depends upon the type of the work. The air pressure from the compressor is adjusted according to the speed of the feed wheel (M) for the suitable nozzle size.

General Conditions and Requirements:

The length of the hose used with cement gun should be normally 40 ft to 150 ft but greater lengths upto 450 ft are allowed. The hose for delivery of cement and aggregate is normally of 1 inch to 2 inches internal diameter. The diameter of 1/2 inch to 5/8 inch is sufficient for the water supply hose. The max. vertical rise above the gun is 250 ft. The nozzle should be kept 3 ft to 4 ft. away from the surface to be treated. It should be kept moving all the time, so that the mortar is placed in series of thin layers. The nozzle should be normally so held that the jet is perpendicular to the work. It is unadvisable to use gun on windy days. Adequate ground wires should be installed to establish thickness and surface planes of the gunite build up. Both

horizontal & vertical ground wires should be installed at corners & offsets not clearly established by formwork.

Preparation for work:

All normally accepted rules for good quality concrete construction work are applicable to this work.

Surface should be cleaned. All dirt, grease or oil is removed by air blast or a jet of water.

All loose defective material should be dismantled.

Guniting should not be deposited near running or standing water. All loose rust should be removed from the reinforcement. The sand must comply in every way with the specification for its use in good class concrete construction.

Properties:

There are five properties which are to be taken into account while discussing the merits of guniting 1) Complete adhesion 2) Absolute density 3) Strength in compression 4) Entire freedom from cracking 5) Resistance to fire.

1) Complete adhesion: The concrete placed with a trowel only makes a weak joint with the face to which it is applied because of two main reasons;

a) Sand and gravel particles do not fit in the minute holes and crevices of the face.

b) Air pockets prevent contact between the mix & the face, but a forced driven spray of the cement gun achieves both these purposes.

2) Absolute Density: It is very large because of low water/cement ratio. The water for hydration of cement is added to the cement sand mix at the outlet. The water is introduced just prior to the point of application at a greater pressure than the material.

3) Strength: Gunned concrete cures to a product of extreme hardness and abrasive resistance. Approximately 60% of maximum strength is attained in about 7 days. Quality of sand is a great factor in the ultimate strength.

4) Resistance to fire: It is a fire resisting coating to the structure. Experiments show that it can withstand upto 2100°F temperature without failure.

5) Immunity from cracking: Immunity of guniting from cracking is of greater importance. Due to powerful adhesion between guniting & reinforcement steel fabric and also coefficient of expansion being almost equal for both, there is entire freedom from cracking.

Mix Proportion:

The mix proportion of 1:3 is generally used, where great strength is not required or in the interior work a proportion of 1:4 may be used. Aggregate should be mixed dry with cement and sand on a hard wooden platform. The mix is made to pass 4" to 3/8" sieve. This is a check on entry of oversized lumps into the feeding chamber of the gun. Sand with a moisture content of 4 to 8% is usually preferred. Quantity of water is determined by the judgement of the operator. Correct quantity of water usually causes slight film of water to appear on the finished work. An active pozzolona is added to the mix to make it more plastic.

Operating Pressure :

Usually air pressure in the gun should be between 40 to 50 psi. Fluctuating pressure causes a spotty application, as air or water pressure changes, the hydration at the nozzle also changes. This causes rapid passage of certain amount of too dry or too wet material through the nozzle, so the pressure should be kept uniform. For standard guniting work, a compressor of 250 cft to 365 cft size can be used. Air should be as dry as possible. The quantity of free air required under normal conditions is 225 cft/min.

Steel :

A 4" mesh in both directions of 3/16" ϕ of 12 gauge steel fabric (spot welded) is normally placed. It controls initial shrinkage and cracking. The fabric should be supported or kept away at least 1/4" to 3/8" from the surface to be coated.

Rebound :

In application of gunite rebound is one of the most important consideration. It should be kept as minimum as possible. The extent of rebound depends on many factors such as hydration efficiency, water cement ratio, fine aggregate content, nozzle velocity, grading of the sand, angle of nozzle flow, distance of impact and thickness of application etc.

Grading of rebound is usually much coarser than the original mix itself. Only the larger particles tend to fall back. Experiments carried out on the rebound material clearly show that the percentage of cement is 10-25% of the content of the gunite. The normal amount of rebound of the material varies between 15 to 25% for vertical

walls and 30 to 40% for overhead works.

Application :

The guniting technique can be applied to the best advantage for the following kinds of jobs :—

- 1) Costing of thin sections such as those of shells.
- 2) Construction of thin walls.
- 3) Canal and tunnel lining
- 4) Swimming pools
- 5) Repairing deteriorated concrete and concrete damaged by fire, chemicals, and earthquakes
- 6) Refractory linings
- 7) Stabilizing rock and earth slopes
- 8) Encasing steel for fire proofing
- 9) Protected coating over prestressed wires and steel pipes (10) Repair of hydraulic structures such as water tanks, dam walls etc.

References :—

1. Concrete Technology Vol. II Practice by D. F. Orchard Asia Publishing House, Bombay
2. "What is Gunite" M/s. Pneumatic guniting Equipments Panalal Bansilal Building 24-B, Hamam Street, Bombay-400 001.
3. Gunite in Building Construction — A paper read before the Institute of Architects by Mr. Arthur J. Moore C/o John Fleming & Co. Baston Road, Bombay-400 001.
4. Gunite The cement Gun Co. Ltd. 53/Victoria Street, Westminster. London SW-1.

erhead

appli-
the fol

ach as

concrete
re che-

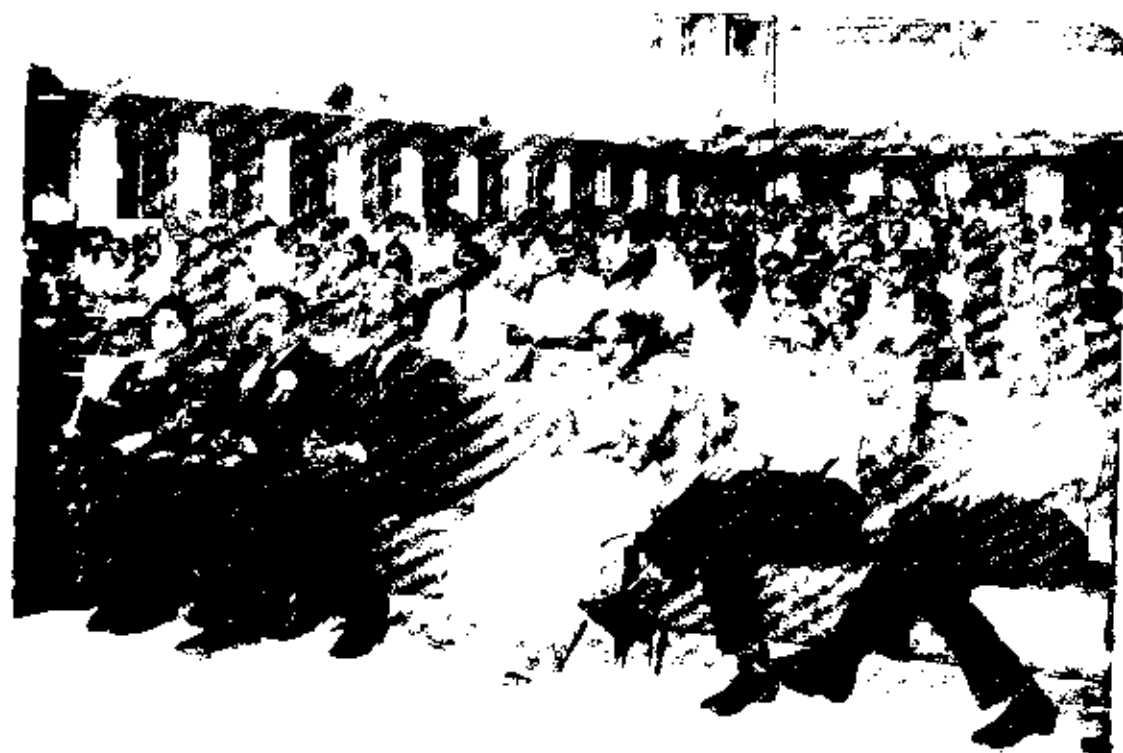
opes
ing
ressed
Repair
ect, as

ay

son --
stitute
J.

n.

er.



Good Show - Good Audience



At the exhibition organised by our boys



An occasion to display talents



Our boys 'Sing a Song of.....'

FLIGHT

Nikhil G. Antani
B.E. (Mech.)

The Supersonic Transport (S.S.T.)

Commercial Supersonic aviation has become a subject of controversy all over the world, as it involves not only possible damage to person and property, but also the pride, anxiety and envy of so many powerful nations. The British and French Governments have put in about £1,200 million (about Rs. 2,200 crores) into the Concorde development programme. The Soviet Union has also made a S.S.T., the TU144 in many ways very similar to the Concorde. Let us think of the tremendous sonic nuisance that this forbiddingly expensive aircraft will cause to crores of people living in the lands which they will literally thunder over to carry a hundred or so wealthy passengers merely to save a few hours of their travel time.

A passenger on the Concorde pays 2½ more than First Class fare on other aircraft and finds that he has less room for himself than on an economy seat. With the petroleum becoming dearer all the time, the almost three-fold higher fuel consumption of the Concorde per passenger — kilometer will make its operating costs substantially high. As far as India is concerned the gains seem to be nil. In the first place, few Indians will be able to afford the fare. And, unless the Arabs permit overland Supersonic flights the time saved on travel to European Cities will not be Substan-

tial. Greater savings will be possible on flights to Australia because much of it will be over the ocean; but Indian traffic in that direction is very small.

Yet, one cannot help admiring the extra ordinary technological daring that has gone into the making of this aircraft.

THE VTOL AND STOL AIRCRAFTS

Modern Aeroplanes require airstrips upto three or four kilometers long for landing and take off run. Because of rapid Urbanisation, it is becoming difficult to find land near big cities for constructing aerodromes with such lengthy runways. Thus, the journey to the airport takes a 'sufficiently long time.

Aircraft designers are now working on short take off and landing (STOL) planes and verticle take off and landing (VTOL) planes that can use shorter runways. Till now, the helicopter has been the only successful VTOL Aircraft. A (STOL) aircraft uses high lift devices for producing the high lift. A VTOL, takes off vertically, changes from hovering to forward flight cruises to its destination then hovers again and lands vertically.

The Harrier, a British Fighter interceptor VTOL Aircraft, has, however completed successful development and is also being acquired for the fleet air arm of the Indian Navy.

WORLD'S FIRST REUSABLE SPACECRAFT

It will be a manned reusable space vehicle which will carry out various missions in the earth orbit. The shuttle, which looks like an airplane, will have rocket engines instead of jet engines. It will be launched vertically, fly into orbit, under its own power, stay there as long as needed and then glide back in to the atmosphere and land on a runway. In short, the world's

first reusable spacecraft would be born.

The crew will consist of two pilots and two flight engineers. A special pressurized sortie module can be carried in the payload bay to accommodate upto 12 persons, or passengers who are not astronauts. Scientists and engineers will have an opportunity to accompany their experiments into space for the first time. Each vehicle will be capable of carrying out 100 space missions.



Sunday Standard: Nov. 28, 1976.

Do not despise the opinion of the world; you might as well say you do not care for the light of the sun because you can use a candle.

Do not think of knocking out another person's bair because he differs in opinion from you. It would be as rational to knock yourself on the head because you differ from yourself of ten years ago.

Horace Mann

"A man who does not think about the welfare of the society and tries to keep himself aloof from the society is a sinner," he added.

"Never think of what the God has given to others but always think of what the almighty has given to you and be content," he observed.

Rev. Pandurang Shastri Athavale

POWER & PRUDENCE

Mahesh H. Mehta

— T.E. (E)

"Nobody has ever thought that oil can create such a friction" — a news item. It is needless to say that these words are referred to oil crisis only. But instantly an unscrupulous creature will say, "Tutt! Those Arabs!" "It seems that they are under the impression that with oil they can topple the Western world or they can triumph over everything and anything they wish" or a War monger would say, "Those Americans! It seems that they are coward people! Why don't they use their power on the Arabs & blast the oil fields. So that there won't be any type of tension in the world for oil supply ban or price hike?"

Here is the collision between Western world and Middle East. But I would rather describe it as the confrontation between Power & Prudence. "The Price of Prudence," says the Bible "is above rubies". Thus without prudence, power is useless. But power has to be used for Peace, some times, when prudence fails. Thus failure of prudence leads to darkness of war; of course, in some cities 'Power failure' also leads to darkness. The war is believed to be the Measure of Power. War is an instrument by which power is measured. ("Pacifist" use watt-meter or so, for Measuring "Power"!) If one seeks always the help of power then logically there is no difference between a rational man and a low graded animal.

These are all boring theoretical matters. Let us come to practical application of this theory for better under-

standing. Once a man slapped a child for some reason. The child went to his father and told him the story and had shown his reddish swollen cheek. "Who is that brute who dared to slap my dear son?" The father came out side speaking such angry words and with determination to take revenge. Seeing out side a stalwart -- 6.5 feet tall, like Bud Spencer, he used prudence, "Oh! You slapped my child? Give him one more. He is really a naughty fellow. Did he hurt you anywhere?" Note this point. 'Waqt' (time) is an important and inseparable factor of the theory.

In deriving the theory of such an odd subject, we have made the following assumptions:

(1) Power and Prudence do not obey the law of conservation i.e. it is not true that if one person loses it, another person will gain it by the same amount.

(2) Power and Prudence are not real matter made up of electrons and protons but they are imaginary things. Former is possessed by super powers and the latter is invented by the U.S. Secretary Henry Kissinger.

(3) Reducing former, the latter has to be increased by a person or country to make constant peace. Otherwise probability of war increases.

(4) Persons who have neither of these, power or prudence their caste can be easily abolished by Darwin's

law of, "Survival off the fittest". As for, example, Idi Amin — his performance at Antebbe Air-Port shows he is lacking power as well as prudence

(5) The temperature of the person using power should be sufficiently low; otherwise the prudence will be obscured. The best example is Richard Nixon's threat to use nuclear power when he was accused of being involved in the Water-gate Scandal.

(6) Power and Prudence should be used depending on the situation as in the example of child. But when used both together like blow hot blow cold, then the position is similar to C.P.I.'s position, when it was accused of betraying during freedom movement. One can advise them that, (like a frustrated candidate) "The greatest glory is not in never failing but in rising up every time we fall". Use of both together, power and prudence, is the registered trade mark of Hindi films hero.

(7) Curve of time versus prudence is a curve having zero prudence at the time of birth, steadily increasing to maximum at adolescence & abruptly decreases to zero at the time of marriage, thus gradually goes to negative part.

Now let us find the scope of this theory. Theory of power and prudence is applied anywhere, any person. But its efficiency depends on the person using it.

Theory is used by a body builder teenager to hammer his colleague as he teased a girl. (so he can make himself chivalrous and make way to the girl's heart). If a lad being hammered does not act by Newton's Third law of motion, then he will be considered a coward. Power and prudence dogma may be effectively used in Family Planning. In dowry problem it is used with certain modifications by the society. Maharashtra Government has applied this theory to expel beggars. It has been observed that our theory is consistent with prohibition policy. Hence it implies that our theory is efficacious in prohibition policy. Experiments are carried on to apply the concept in making clean & green Bombay. Of course, theory is indispensable in war. Thus theory acts as Panacea in problems of production to destruction.

Now referring to the theory and practicability of power and prudence, it is urgent need for the nation to define power and prudence.

Electrical students will say, "Power is defited us product of V , I and $\cos \phi$ (V means we all, man, plants, dogs, monkeys, stumps etc. and I means, of course, himself. How broad minded! First 'we' then 'I'. And $\cos \phi$ We need not think of it.)

The above definition and even theory is not pure, but crude and hence one may not find it in any book of M-Graw Hill Publication. Other definitions, not given here are left as an exercise for the readers, or seated tenders may be invited from 'definition mongers.'

under
as he
himself
girl's
does
of
red a
igma
family
used
the
it has
gears.
theory
policy.
ry is
superi-
cont-
bay.
he in
ea in
ction.
and
ence.
de-
power
cos \$
dogs.
means,
ded !
need
theory
one
Graw
not
for
ay be

**You smoke for momentary pleasure.
But in turn, plant that deadly cancer.
Which makes your heart choke.**

Once if you happen to try,
Remember, if you get the kick,
The habit will never die.

And spoils your natural breath.

Some take it to forget their troubles,
And with their life they gamble.

But life is like an onion, friends.
You peel it off one layer at a time.
And sometimes you weep.

By
B. K. Gurnani
B.E. (Mech.)

When our results come,
Surprised and dumb,
Many go numb

The student remains the same.
Once he achieved some fame.
But now he hides his face in shame.

Is something wrong with HIM.
Or has assessing gone dim
Something is wrong, no doubt

So,
Experts, please apply,
Without hopes of reply,
Informants Information,
Suprised and dumb,
Bring no reformation.
How long will this period last?

In this country so vast,
Where they feed only grass,
And expect good marks.

By
B. K. Curnani
B.E. (Mech.)

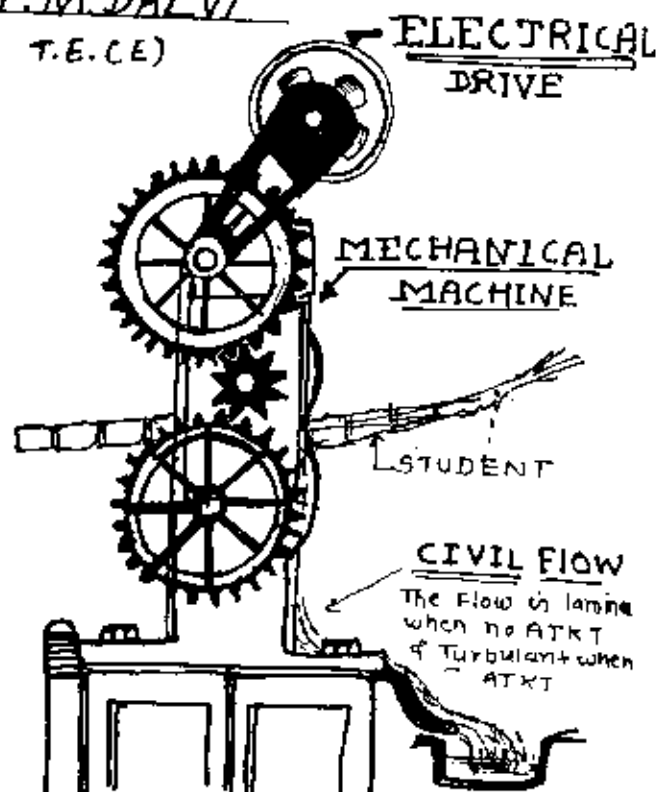


"I HAVE'NT ANYTHING ELSE, BUT
YOU MAY TAKE HER AWAY, IF
YOU WISH!"

OH GOD! HERE COMES HIS SMELLY
HEAD AGAIN!



P.M. DALVI
T.E.(E)



ELECTRICAL
DRIVE

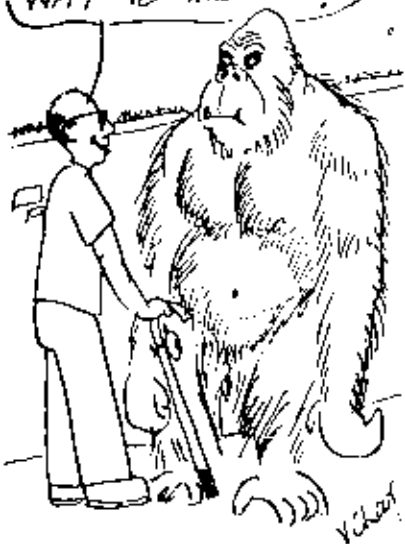
MECHANICAL
MACHINE

STUDENT

CIVIL FLOW

The Flow is Laminar
when no ATKT
& Turbulant when
ATKT

EXCUSE ME SIR, COULD YOU
SHOW ME THE SHORTEST
WAY TO THE ZOO?



A POPULATION POLICY OF INDIA

Pramod Gore
B.E. (Mech.)

"Population is the problem of our age". The rate of increase of population results in low standards of living. Tremendous growth of population is eating up world's resources and industrial materials at a terrific rate.

R. T. Malthus, a century and half years ago alarmed the world by pointing out that the population increase was more and if unchecked would result in wide spread misery and starvation. According to him man multiplied in geometrical ratio while food supplied in arithmetical ratio.

People, who try to find a way out of this quandary are of two types. According to pessimist while every effort is made to increase the food production birth control is necessary as soon as possible. Optimist firmly believes that science will find a way out. They think that situation can be taken over by enlarging the extent of irrigable land, improved agriculture technique, by tapping the food resources of ocean, utilising atomic energy or by organisation of all the techniques.

According to the reports presented by National committee on Environmental Planning and Co-ordination (NCEPC), the population of India is expected to increase from 548 million in 1971 to about 945 million in the year 2001. The reasons for such a rapid growth are many.

Agriculture is our main occupation and so the joint family system is continuous. The responsibility of looking after the children is taken over by the entire family. This provided temptation for not restricting the family. Age of the girls getting married is low, so that there is lot of time for reproduction. People in India are ignorant and superstitious. They regard children as the gift of God. Moreover recent discoveries in physiology and hygiene have checked the death rate.

Government of India took over major steps regarding family planning. But family planning has to operate in a country like India with the following constraints.

One criteria for allocation of the central finances to the states is the total population of the state. Similarly the number of seats in parliament is decided on the basis of population. These criteria conflict with the family planning programme and offer no incentive to a state to make family planning an effective programme. Family planning being centrally sponsored and financed, states are not much bothered about its success or failure.

Family planning did not have impact as expected, on birth rate, which is 35.0 per 1000 far behind the national objective 25 per 1000.

To fill up this gap there should be some remarkable steps taken by the government. The contraceptives and the pills which are more reliable should be sold as cheaply as possible. In order to achieve the target of sterilisation, cash awards should be increased for the people who are willing to get operated. Nurses, doctors in hospitals, dispensaries and maternity homes should be instructed to motivate the women.

New service rules should contain penal provision for non-observance and non-fulfilment of this duty. Also special monetary incentives should be given to the people, who work in family planning centres in rural areas. Compulsory sterilisation should be there for diseased persons. Regarding religious opposition, ammendment of constitution is essential and communal representation in parliament should be removed.

There are several external agencies like World Bank which are interested or involved in assistance of the popu-

lation programme in India. Full advantage should be taken of all these agencies.

In general our population policy should be based by considering the following objectives :

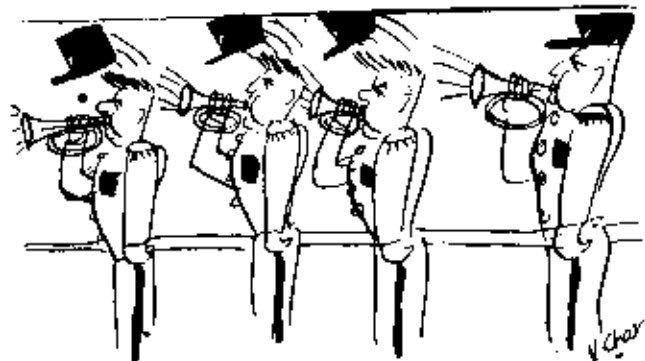
i) Our plans should be designed and developed to meet requirements of the present population and the future.

ii) The quality of our population should be improved through better health programme and education scheme.

iii) Rapid industrialisation should be the aim of economic policy, so that surplus rural population is transferred to industrial employment.

The population growth is a vital challenge to economic progress and the realistic way in which it is tackled would make for rapid development of economy.

(Prize winning topic at the A. D. Shro Memorial Elocution Competition)



MODERN CALENDER YEAR

Subhaschand V. Singhai
S.E. (Mech)

A proposed idea with its advantageous aspects. The time rocks and rolls on musical tuning of the world clocks. If today the time is 5-30 in the evening, the other day also the time will be the exactly same. But it is not absolutely essential that if Monday is coinciding with a particular day of a particular month, it may or may not coincide with the same day of the successive month. Why is it not possible to have the link of continuity and regularity between hours and days and days and months.

It is well known that the Earth moves around the Sun in the period of 365.1/4 days. Routine Calendar year is of 365 days or 12 months. Each month does not contain same number of days. Every fourth year is known as "LEAP YEAR" containing 366 days.

Keeping the traditional definitions of second, minute, hour, day and week unaltered we can find the newly changed definition of MONTH. In a month we will have only four weeks i.e. 28 days; so in a year only 13 months or 52 weeks or 364 days will be accommodated and 365th day can be considered as zero day of the coming year. And there will be two zero days in a Leap Year.

According to this mathematical suggestion Monday will coincide with 1st date of every month i.e. so much

so there will be regularity and proper link of coincidence between days and months and so between months and years.

For example if you celebrate your 21st birthday on Tuesday of 9th March 1977, then your birthday will remember you on the same day of next year on 9th March.

With the fast change of time we will have to divert our traditional mind towards the modern concept of this modern calendar to have more convenience and smoothness in our daily routine.

If we accept this new concept we will have many advantages e.g. there will be no complications in the accounting affair regarding time in industrial field. Wage problems will be solved in no time. If we will have clear vision regarding planned frame-work of days, months and years there will be no problems in dealing statistics. And the ultimate result will be increased production and hence increased prosperity.

People with empty pockets on the last days of every month i.e. on 29th, 30th or 31st day will be maximum benefited, when according to this modern calendar they will get 13 months salary in a modified year.

HOW TO EAT AN OOTHAPAM (UDAPPA)

Raju B. Advani
B.E. (M.)

So tomorrow is Oothapam day in Bhavan's canteen. Are you just one of those who partake this South Indian delicacy every other day as a colourless ritual, or are you a connoisseur desirous of making the best of those oily moments? If you belong to the second category, go ahead and read the strategy outlined below, designed to yield maximum Oothapam satisfaction.

Let us assume that you conclude after some simple exercises in memory that the Oothapam should make its appearance tomorrow on the menu. Just for confirmation, you make incidental inquiries in the canteen at lunch-hour today. And don't have any inhibitions of letting out a whistle of 'Joy' if the answer is in the affirmative. From this moment onwards, till the moment of reckoning, the Oothapam should be the prime object of your thoughts. Anticipate the Oothapam: develop an intense passion for it!

If you wake up next morning (in the hostel room) only to be reminded of 9.30 class who means well, don't have any compunctions about cutting that. A morning lecture missed is a price worth paying for the delights of a relaxed breakfast more so, if it is Oothapams you have to deal with.

Time your entry into the canteen or mess so that you secure a seat somewhere in the second row. If some generous friend offers a seat in the first row, refuse him. What the early birds often fail to realise is that

Oothapams from a under-heated slab are not of the best quality.

Having obtained a seat in the right place, make two cursory observations: 'Who is the last man with chutney-stained fingers?' If an inordinate wait is necessary, deposit a valued possession of yours (a key chain should suffice) on the plate to indicate 'reserved' and go out for a quick perusal of the morning papers. The other alternative is to bait one of those Oothapam-haters who may be making disparaging remarks about the delicacy — and extoll the virtues of the dish to him.

Even as the Oothapams are brought towards you, prepare yourself for some gargantuan eating. You must collect the 'chutney' and 'sambhar' separately, or else they make excursions into the circular area of the plate and eating becomes clumsy. When your turn comes, be sure you choose the pinkish brown ones, if you like the roasted variety, or the light white, if you like it soft. Begin by picking onions that are curled inside and finish them all. Now, for the first bite. It is advisable to begin along the periphery and proceed in small pieces till all that is left is the paper-like filmy centre. Hold this up triumphantly and put it in your mouth, even as you watch your friends proceed in random fashion destroying the rotundity of the Oothapam. Top the meal with a glass of that highly diluted coffee. Ah! What Oothapam satisfaction!

Oothapam lovers of the college,
UNITE!!!

GYMKHANA

Volley-ball, Basket-ball, Hockey

Students have shown keen interest in the above games.

College participated this year in Volley-ball and Basket-ball Inter Collegiate Zonal tournaments. Students had taken enough regular practice, and secured coaching in Basket-ball also.

Thirty seven colleges participated in Zone I Volley-ball tournaments. We had 'bye' in the first round. We won second and third round against Somaiya Science College, and Commerce College Mulund respectively. We entered quarterfinals where we lost against M.L. Dahanukar College.

In Basket-ball tournaments we couldn't show much progress as the team was sent for the first time.

It is proposed to make available some more facilities to the students for playing these games.

Secretary

Shri V. M. Uchil B.E. (E.)

Ex-Officios

Prof. M. M. Ranade

Prof. R. M. Joshi

Indian Games

Our college usually participates in Inter-Collegiate Kabaddi and Kho-Kho tournaments. This year after a rigorous practice and selection trials as usual, a Kabaddi team was selected to represent our college in Inter-Collegiate (1976-77).

Our team got 'bye' as they were last year's semifinalist. In quarter finals our Kabaddi team got a handsome victory against Bhavan's College, Chowpatti.

In semifinals against Government Law College team, some good players of our team got serious injuries and that affected the performance at semifinals. We had to lose semifinals inspite of good efforts.

Kho Kho team couldn't be formed due to lack of response from students and little time available.

M. M. Ranade

Ex-Officio Indian Games.

REPORTS OF ELOCUTION & ESSAY COMMITTEE

During the year 1976-77 Elocution and essay activities were really taken up with enthusiasm by the students. In the first semester we held group discussions in B.E. (Mech.) & (Elect.) classes on various subjects. We also arranged for public speaking for C. R. contest in B.E. (Mech.) class before the Gymkhana Committee elections. Mr. Virendra Joshi of B.E. (Mech.) had submitted an essay on "Fair Trade Practices and Consumer Protection" for the essay competition held by Fair Trade Practices Association. During the month of September following

students represented our college in the inter collegiate Debate and Group Discussions held at Bombay University.

- (1) Mehta J. S. TE (Elect.)
— English group discussion.
- (2) Manek N. TE (Elect.)
— English debate.
- (3) Gosalia P. P. TE (Elect.)
— Gujarati group discussion & debate.

During the second semester, this year after a long time, we held A. D. Shroff memorial elocution competitions, sponsored by Forum of Free Enterprise in December 76. For this competition we had a very good response from the students. Prof. Mrs. Naukikar of Bhavan's College, Dr. Ranade and Prof. Goyal honoured us by acting as judges and Prof. Chandrasekhar presided over the function and distributed prizes to the following winners :

- (1) Mr. Bhatt. S.E. (Civil)
- (2) Mr. Gore. B.E. (Mech.)
- (3) Mr. Mehta J. T.E. (Elect.)
- (4) Mr. Hedge. S.E. (Civil)
- (5) Mr. Mehta M. T.E. (Elect.)
- (6) Mr. Fernandes. T.E. (Mech.)

NITIE had arranged for Shri N. S. Barneswamy Intercollegiate Debate Competition in January 1977. Mr. Bhat and Mr. Chinwala were our representatives.

Shri Virendra Joshi of B.E. (Mech.) won 1st prize in the essay competition sponsored by Lion Club of World. Subject was Education Systems in India.

For the first time we held inter class Quiz competition this year. First round was held as a closed door one and next two were open door. Our colleagues Mr. Bhat, Mr. Kulkarni, Miss Thalamani, Mrs. Vatsala and Mrs.

Gogate helped a lot in arranging this competition. Prof. Kalra took special interest and co-operated throughout this competition. The students were very enthusiastic and very well prepared. S.E. Civil class was the winner and F.E. II class was adjusted as runner up.

Our sincere thanks to all the staff members and students for their interest and co-operation. We look forward for more enthusiastic activities next year.

J. S. Mehta
Secretary.

Prof. Pendharkar
Prof. Parachure
Ex-Officios.

WALL PAPER

The Wall Paper has completed five years of its useful existence. It has always believed in encouraging the creative talents of our students. We feel that we have succeeded in this objective, since we have a large number of enthusiastic participants year after year. Interesting items from B. K. Gannani, R. B. Advani, Nikhil Antani, Pradeep Gosalia, Bhaskar Gauras, Sunil Mehta, Satish Verma and several others were received during this year. Further, the ideal location of the Wall Paper board near the reading room attracted a good number of readers.

This year we organized competitions in paintings, posters, cartoons and essays for our students. There was active participation in these competitions. The best contributions were suitably rewarded. V. S. Gharat, secured the

first prize for his excellent paintings. Vijay T. Char got the first prize for his very fine cartoons and the second prize for paintings was awarded to Prashant Banganekar. Virendra Joshi, Pramod Gore, Lester Fernandes & M. M. Crasto (Essays), Manik H. Naik, Raju Advani & P. M. Dalvi (Cartoons), G. V. Shah (Paintings), were given consolation prizes. J. V. Kamatkar was awarded a certificate of merit for his valuable suggestions in the article "Improving the services rendered by a College Library". We extend our hearty congratulations to all the winners.

The Wall Paper arranged an 'Art Corner' in the exhibition organized by our students during the college day celebrations held on 10-2 1977.

We express our grateful thanks to our principal for giving us all the facilities to conduct the activities of the Wall Paper.

We are also thankful to Prof. V. S. Chandrasekhara and Sri S. L. Perdisa of the Civil Engineering department for their valuable help in judging the contributions received for the competition.

Miss L. E. Thailaman
(Physics Dept.)

Mr. Pradeep Gosalia
T.E. (E.) Class

B.E. (MECH) SOUTH-INDIA TOUR —by B. K. Gurnani

'Will this Tour, so rich was so much publicised in the college, materialise?' was the stalwart question on every student's lips, till the second last day

of the proposed departure date. The question was very much natural due to the fact that there were so many problems coming our way — beginning with the allotment of the bogie by the Railways and finally collecting a good number of members for this Tour. However, we surpassed all the critical stages initially and somehow this Tour became a reality.

The 11th of Dec. '76 dawned wonderfully for us. We all met at the Bombay-V.T. Station. I could see excitement and thrill on each face. Our bogie was in excellent condition and we enthusiastically decorated it with the college banner and captions. After sometime everybody started cheering and shouting "Hip-pip-hurrah", as the train gushed out of the station. Atlast, the B.E. (Mech) class of our college was on Tour, after a lapse of five years.

The adventure started with a singing session - 'Bambai Se Aaya Meri Dost', 'Aaji Aisa Mauka Phir Kahan Milega', ... etc. Getting exhausted from this, some went to relax, some started playing cards while the others chitchatted. Thus after a good day we had an excellent night. Most of us had dinner at Sholapur. This energised us and once again began the gay session of singing and dancing. There was nobody to restrict us and our enjoyment had no limitations — we were all on our own, in our bogie, which was more than our house. But getting sleep was a problem for some of us, as this being the first night in our bogie, none of us was acquainted with the rhythm of the running train.

Early next morning we reached Secunderabad. The climate here was

pleasant enough for a Bombay dweller to admire it. Everybody was delighted to have a good company in the next compartment at the siding station. This wonderful day, being a Sunday, we devoted it for sight-seeing various places in this historical twin city. We visited the famous Golconda Fort, the Nehru Zoological Park, the Lake and finally the most reputed historical museum -- the Salarjung Museum. The ancient collection made by this king is beyond the scope of imagination. All the same, this collection provides ample proof that the ancient man was aware of most of the arts and technology, which is in practice today.

Next day, the visit to the Hyderabad Metal Works, Manufacturers of Allwyn Refrigerators, was much below our expectations, we were disappointed to see the untidy and haphazard work carried on inside the factory, which was mainly due to poor management. Even a glass of water was not available in this refrigeration concern. Tuesday, the 14th of December, being the final day of our stay here most of us went for shopping at Charminar. That evening, we left for Madras. By this time, everybody had got used to the rhythm of the moving train, so getting a good night's sleep was no longer a problem.

Our three day stay at Madras was once again pleasant. Everybody was getting along smoothly and we had no problems -- and if we had any, we also had readymade solutions for these. Here we visited The Hindustan Teleprinters at Guindy and Reactor Research Centre (Atomic Energy Dept.) at Kalpakkam, which is still under construction. It was fun to learn about getting a good night's sleep was no the battle of atmos, neutrons and

electrons. On the third day, the bold and devoted students visited the famous Balaji Temple at Tirupathi. Climbing the stairs for five hours in the chilling cold of the night, was an experience of our life-time.

From here we proceeded to the ever-green city of India viz. Bangalore. Words alone are not sufficient to describe the beauty and cleanliness of this city. The roads were wide enough for a concorde to land quite safely. Now and then, one couldn't resist the temptation of appreciating this beautiful place. Here we visited the marvellous Vishvesharaya Technical Museum, Hindustan Machine Tool Factory and the Indian Institute of Science (IISc). From Bangalore, we made a trip by bus to Mysore and Ooty. The Brindavan Gardens at Mysore and boating at Ooty Lake are unforgettable. Here at Mysore everyone bought some sandalwood articles as a souvenir to take back home. Also some of us (the bold ones, of course) had an experience of sleeping on the bus-roof in the chilling cold of the night.

Those three days in Bangalore, were the outstanding feature of our tour -- the other outstanding features of course being the willingness to co-operate, discipline and unity amongst our serious-minded B.E. (nech.) students. Leaving Bangalore was a like a bird leaving its nest, but we were compelled to do so and proceed once again to Madras for one more day. Here I may mention that Madras has improved a lot and stands a degree better as compared to Bombay. Patroy's Corner, Mint Road and Marina Beach (second largest beach in the world) are places worth seeing over her. The only problem here was the language problem.

Now our next halt was at Poona. Here we had yet another experience. We reached Uune Station around Zero Hours and had to leave our home sweet home (i.e. the bogie) due to certain reasons. Our problem was accommodation during the night time. But the solution was easily met with by our budding engineers — all of us slept on the platform, surrounding the luggage in the centre. This was a sight to see. A few of us guarded the baggage and the buddies by playing cards for the rest of the night. After two hours hunting on that chilly morning we got a beautiful accomodation at Wadia College in the Gymkhana Pavilion. Here suddenly everybody seemed to

We then visited some of the big industries at Pimpri. The names of the Industries worth-mentioning are Mahindra Sintered Products and

Bajaj Auto Ltd., Our visit to other two industries viz. K S P Pumps and Co-oper Engg. Works was just a formality fulfilled by the respective companies.

This was the last day of our four and fortunately enough it was 25th of Dec. — the Christmas Day. We all celebrated it by having a delicious dinner at Deccan Gymkhana — the spotlight area of Poona, and returned to the station, to proceed back to Bombay. Thus we triumphantly reached Bombay, early next morning.

Finally I would like to mention that we had no casualties, no loss of property and no major problems as such, throughout the tour, which provides ample proof for the success of the tour. These fifteen colourful days, evaporated away too quickly, but all of us will never forget them for years to come.

FREE FORTY-THREE

— by B. K. Gurnani
B.E. (Mech.)

We were students forty-three,
First-time on Tour,
Singing loud and free,
Under the blue sky,
We would lie,
And wish everybody good-bye,
The birds went gay,
Seeing us sway,
Under the banyan tree,
We were students forty-three,
First-time on Tour,
Singing loud and free.

On our own we all were,
Rules nobody to utter;
We all had great fun,
Though everybody was a son,
Shouted we in glee,
We were students forty-three,
First-time on Tour,
Singing loud and free,
Such colourful days
We will never again see.

સ્લાઈડ્સ

પાંપણોને પટપટવામાં સરી જતી કણિ
શી કુદ, કુલ્લક શુન્યતા ને ગુણે
ને કાળના કૂપણ અને કે કુદ કરતુને વડે
જિંદગી સ્લાઈડ્સ પર તૂટી પ્રત્યુત્તર મલે

વિજ્ઞાન

ગાળ્યા મનિના વણુ નિગમ
ન્યુટન તણા સમજ અમે
આધાત પ્રત્યાધાત ને
વાળ્યા કીધી સૌ જાનતી
તેણે ના પેપી શકું ?
આ કાળ ને જીવન ત્યાં
ગનિઓ, પ્રવેશ ને બધી
આધાતી આણે પ્રીતની ! !

પ્રેમનું ગણિત

અંકગણિતના અર્થમાં એક એક છે એક
પ્રેમ તણા પંચક મહી એ અર્થ નવ એક

જીવનની ટ્રેન

કુળતા મીને વળે, જીવનની ટ્રેન ચાલે
બાકી ગનિ, દિશાની કેને ખમર રહે છે ?

જિંદગીનાં અર્ધવતુલ

'અર્ધ' ના કંપાસથી
'ક્રેન્ટ' કાળગ પર ન કોવ
(ભાવિના પેપર પર
ભગવાન ગિતોરે રચેલાં
કાળના કંપાસથીને
સમીપીશન સવળાં સર્જેલાં)
'રીઝ' થી ઈન્ક્રીમ કરેલાં
મૂલવી શકશુ કહી આવી 'રીઝર'નાં 'દાર્દ' બુલક
રોધી શકશુ 'નું' કહી બુલક

વિશ્વ આખું લેથ છે

જગાં સમય, સંજોગની 'પુત્રી' એ થઈ
શક્તિઓ સવળી, જીવનના 'એન્ટ' થી
'આદમી' ને 'આદમી' નો ઘાટ દેવા વડી જતી
ને અનુભવની 'થીજર'થી, ટન' આવા આદમીનો
ઘાટ દા સાથે વગતો
'વેન' દા 'રીપીટ' થાતો

★ ★

હતા લઈ શુ આવ્યા ?
ને શુ લઈ જવાના.
જીવે મતીમાં ને
જુદાવો ખમતના

પ્રદીપ ચોસલીયા
T. E. (Elect.)

★ ★

ન જલ

ફિલના ખૂણમાં મગી છે જીવનના એકને મળવાની
પણ મિત્રન પછીનું તરન મિલન શક્ય નથી.
નમ્રાઓ દિલોળે અટી છે તેમનું સૌંદર્યપાન કરવાને
પણ હોનનર સિવાય બીજા રસનું પાન શક્ય નથી.
રાત લીધી છે રાત મં કાંટાળી એ દિલખર !
પણ કાંટા સિવાય ફલ સુધી પહોંચવું શક્ય નથી.
યાત્રા પછી, ફૂલોમાં એ નહીં મલે સુવાસ,
તો સિવાય કિરમનેલોળ બીજુ કંઈ શક્ય નથી.
વા ખૂબ થયા છે અમ જગર પર એ 'આશિક'
પણ મારી નમાઓ, ગાલને વાલ રાખવો શક્ય નથી.
નામે જીંદગીની જીંદગી જીવી ગયા અત્યાર સુધી,
દવે તો મૃત્યુ સિવાયનું જીવન પણ શક્ય નથી.

મહેશ ડી. રાહોડ

'આશિક'

B. E. (Civil)

B. E. (Mech.) Tour



Watch out He is mad



Golkonda Fort-Hyderabad



Nandi Bull Mysore



Smoker's Paradise-'Charninar'



Fice Forty Three

Success Treads on the Heels of Every Right Effort



Gosalia Pradip S. E. (E)
Stood First



Arun Walavalkar S. E. (M)
Stood First



Chaulkar S. G. T. E. (Mech)
Stood 2nd



Nitin J. Damanja
B. E. (civil)



Shirke D. P. T. E. (civil)
Stood First



Raju B. Advani T. E. (Mech)
Stood First

जिंदगी के सफर अधूरे रह जाते हैं तो
 मौत नहीं आती, सफर के सैखाने में
 जिंदगी बीत जाती है, कौन कहता की
 दीन का आईना चहेरा होता है, दीलका
 आईना वो उसका व्यवहार होता है,
 ये सब सच है, काश तुमने
 मेरा दीन तोड़ा न होता, ... घाव
 तो मांट बाने, मगर घाव के भीषान
 नहीं जाने, मगर याद रखो
 हम गूँही जिंदगी का सफर कठिमे
 तुम्हारी याद आयेगी तो शराब पी लेंगे,
 और ये भी याद रखो .. हमने जाने के
 बाद तुम जरूर पलताओगी तुम्हारी गलियों
 तुम्हें सुनी महसूस होंगी, फीर ये दीवाना
 कभी तुम्हारी गलियोंमें नहीं आयेगा
 वैसे तुम्हें हमसे भी अच्छे दीवाने
 मिल जायेंगे, फीर हमारी याद न डपड़िगी
 अच्छा तो मैं जाना हूँ
 जाना हूँ मैं छोड़ के तेरे ये अफसाने,
 नहीं आऊँ कभी तेरी गलियों अपनाने,

Trivedi B. K.
 T. E. (civil)



We regret to inform our readers that not a single
 article has been received in marathi We hope the
 students will take more interest in future.

—ED.

**NAMES OF STUDENTS, WHO PASSED B. E. (C. M. E.)
EXAMINATION HELD IN MAY, 1976 IN ORDER OF MERIT.**

B.E. (Civil) 1st Class with Distinction

Shri Aggarwal Deepak H

B.E. (Civil) 1st Class Honours :

Shri Damania Nitin J.
Shri Shah Hemant M.
Shri Kripalani Kumar K.
Shri Shah Sureshchander R.
Shri Desai Bhooshan R.
Shri Mandali Dilipkumar M.
Shri Chalke Ashok Arjun
Shri Kothari Ashok K.
Shri Shaikh Yusuf Ismail
Shri Thakur Hareesh G.
Shri Shah Dilip Champaklal

B. E. (Civil) IInd Class Honours :

Shri Clerk Amrish Harikant
Shri Negandhi Jayant V.
Miss Parikh Geeta Ramniklal
Shri Koranne Vilas R.
Shri Khairaz M. E.
Shri Patharpekar R. D.
Shri Doshi Dilip Kashinath
Shri Argade Charudatta R.
Shri Mehta M. D.
Shri Jhaveri Manoj J.
Shri Mudarikandi Haridas K.
Shri Majithia Kundanlal Narandas
Shri Vaghela Dhanji Vasabhai
Shri Gandhi Prakash Deepchand
Shri Punjabi Ashok Mohanlal
Shri Patel Yahya Abduoruzzab
Shri Desai Shailesh Manyalbhai
Shri Patel Minesh Thakorabhai

Shri Khairullah Khozama Hader
Shri Amin Rajeshkumar Champakbhai
Shri Shah Satish S.
Shri Khichodia Milind Bhagwandas
Shri Khan Sikander Ahmed

**B. E. (Mechanical) First Class —
Honours :**

Shri Munshi Srinivas Seshadri
Shri Vazeo Iqbal Gafoor
Shri Sabnis Pradeep Sarjanand
Shri Parab Prakash Shenkar
Shri Bhandari Virendra Kalash
Shri Pradhan Sunil Shantaram
Shri Dhoble Arun Parshuram
Shri Bhandarkar Gadesh Mukund
Shri Iyer Jaikishan R.
Shri Karambelkar Subhash V.
Shri Parulekar Ajit Vasant
Shri Garodia Ashok N.
Shri Joshi Avadhut Dattatraya
Shri Lad Maheshkumar Lallubhai
Shri Shevade Sharadchandra A.
Shri Shinde Dipak Raghunath
Shri Coutinho Michael Archango
Shri Andharia Mahendrakumar H
Shri Arolkar Chandrabas Maruti
Shri Dharia Nitin R.
Shri Dhongde Vijay Anant
Shri Avabharat Shrikant Shivram
Shri Gokhale Shreekrishna Vinayak
Shri Jagasia Suresh
Shri Joshi Nitin Madhukar
Shri Nagpal Ashok P.
Shri Vora Visanji Bhavanji
Shri Iyer Sekhar Sundaram
Shri Sane Sunil Laxman

**B.E. (Mechanical) Second Class —
Honours**

Shri Mehendale Kishor Madhusudan
Shri Paharia Vimalkumar R.
Shri Matharoo Dalitsingh P.
Shri Chaugule Pramod Vasantao
Shri Shroff Rohinton Jahangir
Shri Acharya Bhupendra Bhaktiram
Shri Havewala Navroz Manekji
Shri Gandhi Naisadh Muljibhai
Shri Pandit Umesh Dinkar
Shri Ananthakrishnan P.
Shri Kamdar Rohit Muljibhai
Shri Shah Sureshchandra Damji
Shri Ambekar Ashok Mahadiro
Shri Sivaswamy Shankaran
Shri Sukhatankar Ravindra C.
Shri Nabar Rajeev Bhalechandra
Shri Poddar Pawankumar Shrinivas
Shri Rege Umesh Vishnu
Shri Kale Sushil Sashikumar
Shri Patadia Pradinkumar Tulsidas
Shri Riyaz Ahmad Nisar Ahmad
Shri Vartak Jayant Ramchandra
Shri Benerjee Alo
Shri Lalwani Ramesh Tahilram
Shri Kaji Anil Ramonlal
Shri Almeida George Paul
Shri Samant Arun Kamalakar
Shri Iyer Venkatramani S.
Shri Mangaokar Niranjan S.
Shri Kuppaswamy Gopal
Shri Shah Suketu Thakorlal
Shri Thatte Vivek Sharadchandra
Shri Pathare Chandrakant Ram
Shri Bhandari Mahendra Z.
Shri Phadnis Dilip Shripad
Shri Sable Shashikant Kashinath

B.E. (Electrical) 1st Class Honours

Shri Divasli Kaizer Y.
Shri Shah Tushar Shantilal
Miss Mahant Leena Raghunath

Shri Shah Siddharth Dhirajlal
Shri Saigal Nawal Ajudhianath
Shri Malhotra Mukesh
Shri Kadle Homentkumar A.
Shri Jaisinghani Amar G.
Shri Gajjar Pankaj J.
Shri Kadakia Kartikeya R.
Shri Shah Kaushik Nanubhai
Shri Talwalkar Subodh Gopal
Shri Thakar Bharat Ramniklal

B.E. (Electrical) 2nd Class Honours

Shri Maniar Deepak J.
Shri Raje Nitin Manohar
Shri Shah Nayankumar Chimanlal
Shri Chitre Jagdish S.
Shri Nair Vivek Kumar
Shri Vaidya Dilip Mukund
Shri Parikh Mahendra Narandas
Shri Bhuta Pankaj K.
Shri Kulkarni Rajiv M.
Shri Nawathe Shekhar Padmakar
Shri Punjabi Deepak Ishwardas
Shri Tanden Sushil Jyotiprasad
Shri Mirajkar Ulhas V.
Shri Shah Rajendra Babulal
Shri Agarwal Ramesh S.
Shri Pankh Ashok C.
Shri Deshpande Dilip Dattatraya
Shri Teleng Vijay Vishwanath
Shri Dharia Chetan R.
Shri Rana Yaganesh Janardhan
Shri Holey Sudhir J.
Shri Mehta Jitendra Jayantilal
Shri Patel Chetan Chimanbhai
Shri Patil Vilas Dattatraya
Shri Nansi Shekhar M.
Miss Shakiba Parvaneh
Shri Patil Atul Gopinath
Shri Shah Jitendra Chimanlal
Shri Parikh Harshwadan P.
Shri Pathare Dilcep Suryakant
Shri Patel Lakhamshi R.

Shri Mehta Kaushik M.
Shri Sachdev Ashok Rajinder Sain
Shri Desai Rajesh J.
Shri Pradhan Pradeep Dwarkanath
Shri Mehta Ghanshyam G.

Shri Kelkar Dilip M.
Shri Sanghvi Sudhir Shamaldas
Shri Dandekar Pralhad Narayan
Shri Desai Apurva H.



**LIST OF THE STUDENTS WHO HAVE PASSED B. E. (C.M.E.)
EXAMINATION HELD IN OCTOBER, 1976, IN ORDER OF MERIT.**

B.E. (Civil)

Shri Hebbur Ashok S.
Shri Golam Dilip K.

B.E. (Mech.)

Shri Kharge Anil Laxman
Shri Kukreja Kumar Govindram
Shri Gaikwad Vijay Wamanrao
Shri Bhonsle Subas Ramchandra
Shri Patil Prakash Bhaskar
Shri Shah Hasmukhlal Manilal
Shri Shah Niranjan Shantilal
Shri Golatkar Tanaji Vishwanath
Shri Ved Mulraj Vallabhdas
Shri Pathare Chandrakant Ram
Shri Chapnerkar Jaychandra B.

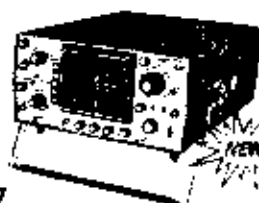
Shri Thakur Pramod Jaywant
Shri Laul Ajay Trimbak
Shri Hegiste Satish Sitaram
Shri Dadia Kirtikumar Navtamlal
Shri Bist Chandrakant K.
Shri Pawar Suresh Sitaram
Shri Paranjpe Kumar Dattatraya
Shri Dang Kimatecelal Manoharlal
Shri Karnik Prashant Anant
Shri Abuja Tejkumar Madhavdas
Shri Mehta Lalit Narbheram
Shri Agarwal Ashokkumar Laxmandas

B.E. (Elect.)

Shri Bhatt Uday N.
Shri Desai Sunil Manubha



NOW presents **TWO NEW TRIGGERED OSCILLOSCOPES** the S147 DC — 25 MHz with Delay Line and S107 DC — 2 MHz



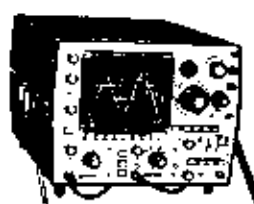
147

- DC to 25 MHz (1.5 MHz/div) • Vert. Sensitivity 5 mV/div • Sweep rates 20 nSEC/div to 2.5 SEC/div • Delay Line for measuring rise time of triggering pulses • 8 cm x 10 cm Display • X-Y Facility • Solid State Circuitry using IC's • 6 KV acceleration • Bright Display



107

- 100 MHz • DC to 2 MHz Band width • Sensitivity from 10 mV/cm to 100 V/cm • Triggered Sweep from 1 μ SEC/cm to arrest 250 mSEC/cm • Solid State Circuitry



97

- DC 35 MHz Dual Trace • Solid State Triggered • Vert. Sensitivity 1 mV/cm • Sweep rates 20 nSEC/div to 2.5 SEC/div • Delay Line for measuring rise time of pulses • Delayed sweep • X-Y operation • 8 x 10 cm ra. trated display • 12KV acceleration voltage • Bright Display



7016

- Frequency: 5 Hz to 50 MHz (4 ranges)
- Elapsed Time 0.01 to 19999.99 sec.
- Totalize: 1 to 199999
- Large 1.5 cms. Display



7026

- Frequency: 5 Hz to 50 MHz (7 ranges)
- Period: 100 μ SEC to 0.2 sec • Mult. Periods Averaged: 100 nS to 0.2 sec
- Ratio and Multiple Ratio of 2 Frequencies
- Time Int. 100 μ SEC to 1599999 x 10 sec



464

- 2 1/2 Digit, 1 cm LED Display • Automatic Polarity Indication • Autozero B Over Range Indication • 28 Ranges, 2 Ranges for 10A AC & DC

It's Simpson all the way!

Simpson
 INSTRUMENTS THAT STAY ACCURATE

HIGH-FREQUENCY SCALAN 7020 extends the range of 7016 and 7026 to 512 MHz. Push button selected direct frequency division of 1, 10 and 100. Input Sensitivity: 50 mV MIN. 2V Max. (1 mV), 50 V.

THE LARGEST SELLING ELECTRONIC TEST EQUIPMENT IN THE WORLD
IN INDIA RUTTONSHA SIMPSON PRIVATE LTD.
 International House, L B S Marg, Vikhroli, Bombay-400083
 Cable: LECRUT Bombay • Phone: 881584 (3 lines) • Telex: 011-2388

WITH BEST COMPLIMENTS
FROM
NEW STANDARD ENGG. CO. LTD.

MANUFACTURERS OF
PLANT & EQUIPMENT
ROLLING MILLS
ANTENNAE
EOT CRANES
MACHINE TOOLS
TEXTILES MACHINERY
FOUNDRY EQUIPMENT
GREY IRON/STEEL CASTINGS

NSE Estate
Goregaon East
BOMBAY-400 063

PHONE: 695 261 (10 Lines)
Gram: STEELBUILT
Telex: 011-2982

WITH BEST COMPLIMENTS
FROM
ANDHERI ADARSH DUGDHALAYA

HEALTHY CENTRE FOR
MILK, CURD, SWEETS, PARSAN, SRIKHAND
DUDHPAK, BASUNDI ETC.

Customer's satisfaction is our motto Orders taken for
marriage parties, get togethers etc.

Head Office: DHAKE COLONY, JAIPRAKASH ROAD,
ANDHERI (WEST), BOMBAY-400 058.

Branch at: VISHWAGEET APARTMENTS, SHOP No. 5,
FOUR BUNGALOWS, VERSOVA ROAD, ANDHERI (WEST)
BOMBAY-400 058.

—: Proprietors :—
PANDEY BROTHERS

INTRODUCING

a Non greasy, Non staining, Non irritating

Pleasant Smelling Mosquito Repellent Cream

Mos Mos

Manufactured by: Amee Pharma, Ahmedabad.

Marketed & Distributed by: Themis Distributors Pvt. Ltd.
Bombay.

Available at: All Leading Stores

**Statement about ownership and other particulars about "SARJANIKA"
as required by Form IV (Rule 8) of the Registration of Newspapers
(Central) Rules 1956.**

- | | | |
|--|-------|---|
| 1. Place of Publication | | Bombay. |
| 2. Periodicity of its Publication | | Annual. |
| 3. Publisher's Name | | V. D. Khatri |
| Nationality | | Indian. |
| Address | | Bhavan's Sardar Patel College
of Engineering, Andheri,
Bombay-400 058. |
| 4. Printer's Name | | V. D. Khatri |
| Nationality | | Indian. |
| Address | | Bhavan's Sardar Patel College
of Engineering, Andheri,
Bombay-400 058. |
| 5. Editor's Name | | V. D. Khatri |
| Nationality | | Indian. |
| Address | | Bhavan's Sardar Patel College
of Engineering, Andheri,
Bombay-400 058. |
| 6. Names and Address of individuals
who own the newspapers and
partners or shareholders, holding
more than one per cent of the
total capital | | Bharatiya Vidya Bhavan; Regis-
tered under Societies Regis-
tration Act, XXI of 1860 and
Bombay Public Trust Act, 1950
No F-358 (Bombay). |

I, Officiating V. D. Khatri, hereby declare that the particulars given
above are true to the best of my knowledge and belief.

July, 1977.

V. D. KHATRI,
Signature of Publisher

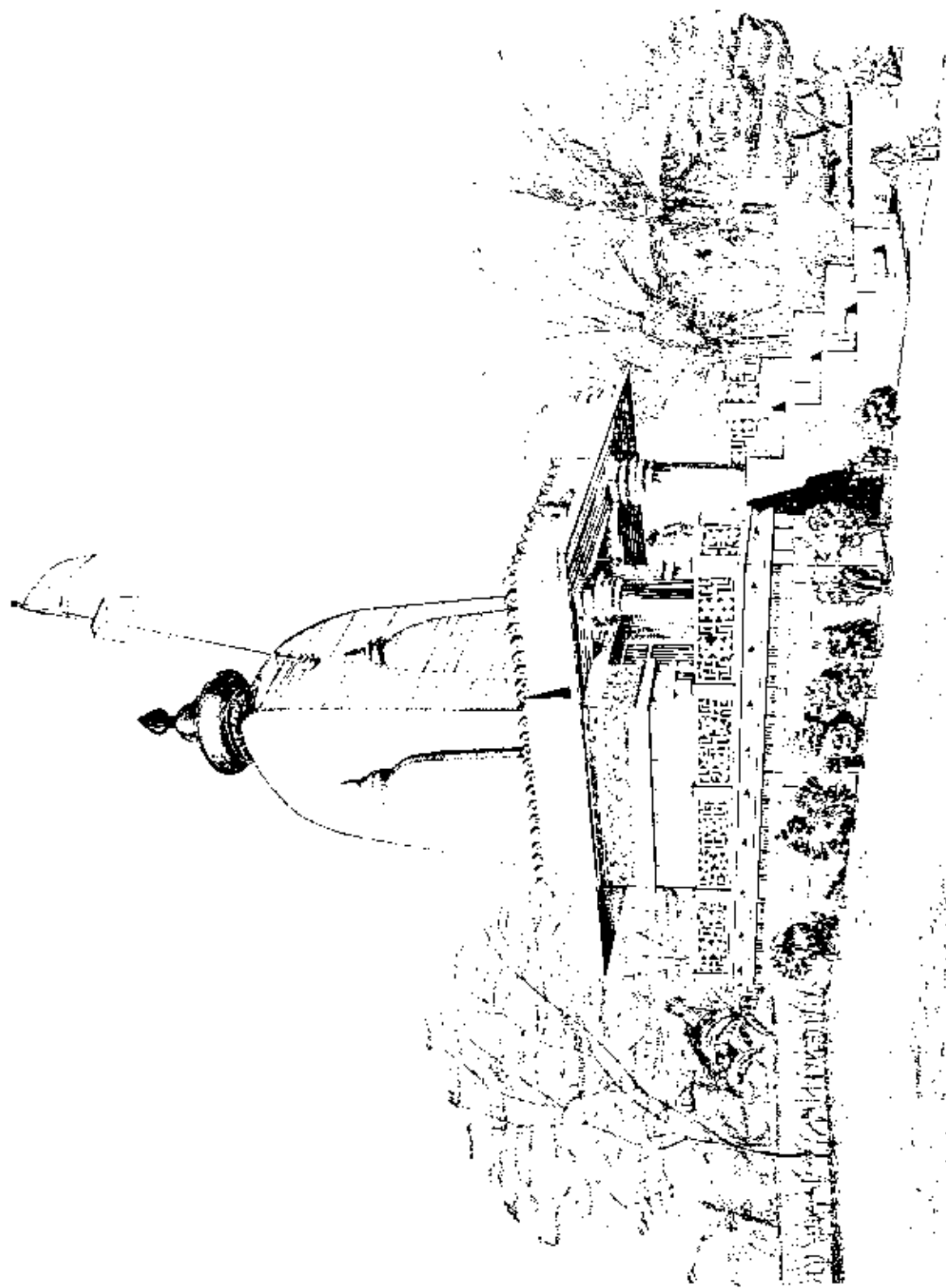


(1908 - 1977)

Principal R. H. Chokhavatia joined this College in July, 1962 and continued upto July, 1971

He was the main architect from beginning through all stages of development of the College. He looked after the College building constructions brick by brick and personally directed the development of all faculties during the initial years. He was responsible for bringing up the College to the present status. The College has lost an architect who moulded and guided its destiny during its difficult years

The Principal, Staff and Students of the Sardar Patel College of Engineering are deeply grieved over Prof. Chokhavatia's demise and convey their condolences to the members of his family.



Loro Chandrasekhar Temple
Bhavani's College Campus,
Andhra.

