



# NIRZER

NEWSLETTER OF MECHANICAL ENGINEERING DEPARTMENT



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## Events & Activities

Date	Event
<b>21<sup>st</sup> July 2016</b>	<b>B.E. Mechanical 2016 Project Exhibition</b>
<b>2<sup>nd</sup> to 9<sup>th</sup> August 2016</b>	<b>IIIE Graduateship Examination</b>
<b>25<sup>th</sup> August 2016</b>	<b>MESA Council Inauguration</b>
<b>28<sup>th</sup> September 2016</b>	<b>Ethics and Motivation talk for S.E. Mechanical Students</b>
<b>2<sup>nd</sup> October 2016</b>	<b>Cleanliness Drive in GEC Campus</b>
<b>3<sup>rd</sup> October 2016</b>	<b>Students of Govt. High School, Balli Visit the Department</b>
<b>4<sup>th</sup> October 2016</b>	<b>Field Visit to ACGL, Honda for B.E. Mechanical Students</b>
<b>20<sup>th</sup> October 2016</b>	<b>Visit to West Coast Paper Mills, Dandeli, Karnataka</b>
<b>24<sup>th</sup> and 25<sup>th</sup> October 2016</b>	<b>MESSERGI Diwali Exhibition</b>
<b>25<sup>th</sup> October 2016</b>	<b>Field Visit to TurboCam, Margao for T.E. Mechanical students</b>
<b>27<sup>th</sup> October 2016</b>	<b>ISHRAE Student Chapter Inauguration</b>
<b>6<sup>th</sup> November 2016</b>	<b>Department Faculty Participate in Dr. Ramani Goa Marathon, Ponda</b>

## Departmental News

- Prof. Akshay Nigalye takes over the charge of Workshop Superintendent from 1<sup>st</sup> July 2016.
- Prof Rajesh Prabhu Gaonkar served as Academic Committee Member of National Conference on “Recent Trends in Mechanical Engineering (NCRTME)”, organized by Walchand College of Engineering, Sangli from 4<sup>th</sup> to 5<sup>th</sup> July 2016.
- Prof Harichandra Chandekar attended International Conference on “Advances in Materials and Manufacturing Applications” organized by Department of Mechanical Engineering, Amrita Vishwa Vidyapeetham, Bengaluru Campus on 14<sup>th</sup> to 16<sup>th</sup> July 2016.
- IIIE Goa Chapter conducted the Graduateship examination in the month of August 2016.
- ISHRAE Chairman Shri Milind Sardesai visits the Department on 9<sup>th</sup> August 2016.
- Miss Druhini Gawde, daughter of our staff Shri Vasant Gawde wins bronze medal in World Kurash Championship, 2<sup>nd</sup> to 8<sup>th</sup> September 2016 held in Korea.

- Prof. Milind Sakhardande, Associate Professor in Mechanical Engineering Department was the faculty coordinator for Renaissance; an inter-branch cultural event organized by the Students' Council on 21<sup>st</sup> and 22<sup>nd</sup> September 2016.
- Prof. Suraj Rane attended one day seminar on “Case Method of Teaching under Faculty Knowledge Program” organised by ICFAI Business School (IBS) Hyderabad on 22<sup>nd</sup> September 2016, held at Panjim, Goa.
- Prof. Akshay Nigalye and Prof. Harichandra Chandekar attended the inauguration of the Indian Institute of Metals (IIM) Goa Chapter at BITS Pilani, K.K.Birla Goa Campus on 25<sup>th</sup> September 2016.
- Prof. Vinay Shiroadkar appointed as the co-ordinator for “Swacch Bharat” cleanliness drive in the GEC campus on 2<sup>nd</sup> October 2016
- Prof. Milind Sakhardande and Prof. Mahesh Caisucar successfully cleared the PhD qualifying examination conducted in October 2016 in Mechanical Engineering Department.
- Prof. Rajesh Prabhu Gaonkar appointed National Advisory Committee Member for the National Conference on “Advances and Latest Trends in Automobile Engineering” organized by Mechanical Engineering Department , Institute of Technology & Management, Gorakhpur, Uttar Pradesh on 18<sup>th</sup> to 19<sup>th</sup> October 2016.
- Prof. Mahesh Caisucar attended a STTP on Energy Options for Sustainable Future under TEQIP-II at DTE, Porvorim from 17<sup>th</sup> to 21<sup>st</sup> October, 2016.
- Prof. Vinay Shiroadkar appointed as subject expert in Mechanical Engineering for the faculty interview at Don Bosco College of Engineering, Fatorda on 4<sup>th</sup> November 2016
- Prof. Vinay Shiroadkar and Dr. Shridhar Mhalsekar attended a one week workshop titled “Accreditation of Programmes Guidelines, Quality and Management” from 07<sup>th</sup> to 11<sup>th</sup> November 2016 at NITTR Porvorim, Goa.
- Affiliation Inquiry Committee (AIC) visited the department/college for affiliation to PhD research centre in Mechanical Engineering Department on 21<sup>st</sup> November 2016. The continuation of affiliation has been granted to the PhD research centre in Mechanical Engineering for three academic years i.e. 2017-18 to 2019-20 by the Goa University.
- Prof. Akshay Nigalye was appointed Chief Conductor and Prof. Gajesh Usgaonkar was appointed as Senior Supervisor for Bachelor of Engineering Goa University November/December 2016 examination.

- Prof. Rajesh Prabhu Gaonkar appointed member of organizing committee of the 2<sup>nd</sup> World Conference on “Applied Science Engineering and Technology (WCASET-16/17)” organized by IFERP-India in Goa from 29<sup>th</sup> to 30<sup>th</sup> December 2016.
- Prof. Vinay Shiroadkar and Prof. Mangaldas Gaonkar were the Internal Test Examination coordinators for the even semester (July to Dec 2016).
- Prof. Rajesh Prabhu Gaonkar appointed as faculty advisor/coordinator of ISHRAE for the year 2016-17.
- One more PhD student Shri Sunay Pai enrolls under Prof. Rajesh Prabhu Gaonkar from the academic year 2016-17.
- AMIE (Section B) practicals conducted in Mechanical engineering department. Dr. Shridhar Mhalsekar coordinated the same.
- Prof. Mahesh Caisucar has been appointed as member of the GEC faculty team participating in the Task Based Training (TBT) conducted by the e-Yantra project of IIT Bombay.
- Prof. Vinay Shiroadkar appointed as the expert in Mechanical Engineering for the Affiliation Inquiry Committee at Don Bosco College of Engineering, Fatorda.
- National Council of Indian Institution of Industrial Engineering (IIIE) has entrusted the responsibilities of Convener / Member of Programme committee to Prof. Rajesh S. Prabhu Gaonkar, Head, Mechanical Engineering Department.
- Prof. Rajesh Prabhu Gaonkar reviewed papers for the International Journal of System Assurance Engineering and Management (Springer) and International Journal of Pressure Vessels and Piping (Elsevier).
- Prof. Mahesh Caisucar has been appointed as member of AAB (Academic Advisory Board) of Mechanical Engineering Department of Don Bosco College of Engineering, Fatorda.
- Prof. Rajesh Prabhu Gaonkar, Prof. Akshay Nigalye, Prof. Vinay Shiroadkar and Prof. Suraj Rane took active part in focuss group discussions in various capacities on Improving Quality of Technical Education in Goa (on 8<sup>th</sup> June 2016 at Mining Dept., GEC; on 18<sup>th</sup> June 2016 at Goa Chamber of Commerce and Industries, Panaji) and on 17<sup>th</sup> November 2016 at Directorate of Technical Education, Porvorim.
- Prof. Rajesh Prabhu Gaonkar appointed Advisory Committee Member of 58<sup>th</sup> National Convention of Indian Institution of Industrial Engineering (IIIE) and International Conference on “Smart Strategies for Digital World - Industrial Engineering Perspective” hosted by Shri Ramdeobaba College of Engineering and Management, Nagpur (21<sup>st</sup> & 22<sup>nd</sup> October 2016).
- Prof. Rajesh Prabhu Gaonkar invited as Chief Guest for the School Annual Day and prize distribution ceremony of Tudal High School and Tudal School Complex on 10<sup>th</sup> December 2016.



## Department Final Year Project Exhibition

Report by Mr. Rajjat Karekar

The Mechanical Engineering Department held its Annual Project exhibition in the Main Building of College on 21<sup>st</sup> July 2016. The exhibition was inaugurated by the chief guests Mr. Ashton Godinho, CEO, Goa Investment Promotion Board and Shri Vivek B. Kamat, Director, DTE-Goa in the presence of Dr. V. N. Shet, Principal, GEC and Dr. Rajesh Prabhu Gaonkar, Head of Mechanical Engineering Department along with all the faculty and students of the Mechanical Engineering Department.



After the inauguration, the guests were explained all the projects done by the students and were shown its working where possible. The students had done a total of 18 projects out of which 6 were done in the industry while 12 were fabricated in the college itself. The industrial projects included, Design and Fabrication of Automatic Tire Bead Painting Machine, Performance Measures Evaluation of Perishable Food Processing Supply Chain, Design and Development of Variable Buoyancy System for Soft Grounding of Autonomous Vertical Profiler, Productivity Improvement in Food Processing Industry using Industrial Engineering Techniques, Design and Fabrication of a System for Automation of Jammer Workstation, and Design and Analysis of Second Steam Super Heater in boiler.



The in-house projects included Ocean Water Purification Using Solar Energy, Electro Magnetically Levitated Conveyor, Design and Fabrication of Coconut Peeling Machine, Improvisation in Betul-nut Dehusking Machine, Improvisation of Wood Stove, Configurations and Applications of Four Wheel Steering Mechanism, Fabrication of Paddy Transplantation Machine, Design and Fabrication of Hull Rice Winnowing Machine, Mango Pulp Extractor, A model of Wind Tunnel, Corn Deseeding Machine, and a Digital Fuel Gauge.



All the in-house projects were present during the exhibition and the working of them was shown to the guests. The guests were impressed with the variety of projects done by the students and congratulated the students and wished them well for their future. The guests were thanked for being a part of the exhibition and a token of appreciation presented to them.



The exhibition was open for all the students and faculty of the college throughout the day. The exhibition also gave an idea to the junior students about the type of projects made in the college and also perhaps helped them decide their own projects. The exhibition concluded with a photograph of all the students present for the exhibition.



Local newspaper clipping of the event.

# GEC holds annual project exhibition

**NT KURIOCITY**

The department of mechanical engineering, Goa Engineering College (GEC) conducted its annual project exhibition which was inaugurated at the hands of CEO, Goa Investment Promotion Board, Ashton Codinho.

Others dignitaries present included director, DTE-Goa, Vivek B Kamat; principal, GEC, V N Shet and head of department, mechanical engineering, Rajesh Prabhu Gaonkar.

Students completed and had on display a total of 18 projects. Six were done in the industry while 12 were fabricated in the college itself. Industrial projects included design and fabrication of automatic tire bead painting machine, performance measures evaluation of perishable food processing supply chain, design and development of variable buoyancy system for soft

grounding of autonomous vertical profiler, productivity improvement in food processing industry, etc.

In-house projects included ocean water purification using solar energy, electromagnetically levitated conveyor, design and fabrication of coconut peeling machine, improvisation in betel nut dehusking machine, improvisation of wood stove, configurations and applications of four wheel steering mechanism, fabrication of paddy transplantation machine, etc.



## MESA Council Inauguration

Report by Susim Singh, B.E. Mechanical

The inauguration of the Mechanical Engineering Student's Association (MESA) Council of Goa College of Engineering and the swearing-in ceremony of the newly elected members of the student council for the year 2016-17 was held at the institute premises on 25<sup>th</sup> August 2016. The function begun with singing of the national Anthem by the gathering followed by a welcome instrumental music performance by the second year mechanical engineering students. The

lighting of the lamp followed soon subsequent to which Mr. Susim Singh chairman of the Council welcomed the chief guest and the gathering which included the students and the faculties of the mechanical engineering department.



Chief engineer Shri Rohit Ganoo, Technical Manager, Delta Corp

Ltd., Deltin Group, a former student of mechanical engineering at GEC was the chief guest on the occasion. Inaugurating the council, Shri Ganoo shared his nostalgic moments in the college and suggested that one should always know their strengths and weaknesses and he urged the students to polish their strengths and overcome the weaknesses. He also said that emulating great role models would help the young people to make themselves great leaders.



Prof. Rajesh S. Prabhu Gaonkar, Head of Mechanical Engineering Department urged the students to develop a positive mindset and a spirit of team work, which would channelize their energies resulting in determined action for the betterment of the institute and society at large. Prof. Vinayak N Shet, Principal Goa College of Engineering presided over the function.

Prof. Milind Sakhardande, MESA advisor, administered the oath of office to the newly elected members of the council. Mr. Anthony Da Silva, General Secretary of the council thanked the students and the management for the trust and confidence reposed in the members of the council.



The MESA council members:

POST	NAME	POST	NAME
<b>General Secretary</b>	Anthony Dasilva	<b>Placement Secretary</b>	Sarvesh Shenai Rajat Sawant
<b>Chairman</b>	Susim Singh	<b>BE Executive</b>	Vibhav Bhat Vaikunth Kossambe Shubham Phadte
<b>Secretary</b>	Devendra Bhat	<b>TE Executive</b>	Aniket Pinge
<b>Treasurer</b>	Pranav Shetye	<b>SE Executive</b>	Rounak Amre Shubham Chowgule Shubham Samant
<b>Auditor</b>	Suraj Mhaladar	<b>FE Executive</b>	Emmanuel De Souza Shahzeb Shaikh Rahul Naik Borkar
<b>Technical Advisor</b>	Tejas Pethker		
<b>Asst. Technical Advisor</b>	Akash Kulkarni Shreyas Parab		
<b>MESSERGI Advisor</b>	Pheku Sharma		
<b>Ladies Representative</b>	Sharayu Naik		

### Awareness talk about IIT Goa

Prof. Rajesh Prabhu Gaonkar addressed the people in various wards in Loliem-Polem village in Canacona as part of awareness talk, where land for IIT Goa is identified by Goa Government.





## Field Visits for Mechanical Engineering Students!

### ACGL, Honda, Satterri

**Report by Rishabh Bandodkar, B.E.Mechanical**

The final year mechanical engineering students were taken to the Automobile Corporation of Goa Limited (ACGL) located at Honda on 4<sup>th</sup> October 2016. The students were accompanied by Dr. Shridhar Mhalsekar and Prof. Mangaldas Gaonkar. The class representative Mr. Shubham Deshpande also assisted in coordinating the students. The field visit was attended by about 70 students. ACGL, the first major engineering unit to be setup in Goa, was jointly promoted in 1980 by TATA Motors Limited (formerly known as TATA Engineering and Locomotive Cooperation Ltd.) the largest automobile manufacturer in the country. The visiting students were given introduction of the company and instructions before entering the construction shade and they were introduced to various intricacies and requirements of the automobile company. First we were shown their shell line 1 where the width settings of the front and the rear parts were done and where these parts are welded. Here the side structures are manufactured as per customers requirement then we were taken to station 2 where finishing off the parts was done and sent to station 3 where the stretch panelings were done and the parts riveted. After the parts pass through these stations then it goes to further station where the quality checks are done to ensure no defects. At another station all the collector weldings are done. In the paint shop, the surface is first applied with a surfacer which is manually carried out then sanding is carried out and then paint is applied and it is kept in the oven at an temperature of about 80°C. Then we proceeded to the AC section where we were shown how auxillary engines were used to drive the AC, the buses manufactured are exported to Ghana, Spain etc. And the cost of the bus is approximately 25 lakhs. The field visit took around 2 hours which were utilised to the fullest. The students benefited immensely as they could learn various techniques and processes required in automobile industry .





On 25<sup>th</sup> October 2016, we the students of third year mechanical were taken for a field trip to the TURBOCAM-MACBROUT factory located at the Margao Industrial Estate. The unit seemed very concise at first glance but definitely it had a lot to offer from the inside.

We arrived at the venue at around 10.45am in our college buses, and upon reaching we all were divided into batches of 15 students so that the plant could be properly witnessed by each and everyone. We were led by Mr. Sundar Tripathi and Mr. Gilroy Coutinho from the Turbocam unit. The unit manufactured turbines for the automobile, power generation and the aviation industry. The component made for each of the industry was different and had very low tolerances not more than few microns.

Initially we were taken to the shop floor where these turbine parts were being machined. We really had a great opportunity to see 3-axis, 4-axis and the 5-axis cutting machines at work. The tool used was the carbide tool with suitable coolant for the machining operations. The Turbocam industry is a plant which caters to its parent company in the U.S. which has big end buyers like the Rolls Royce, Siemens, etc. This Turbocam-Macbrout unit not only produces good and highly reliable products but also takes care of its operations, technicians, trainees and most importantly the environment in which they work.

We the students of T.E. Mech were present with an attendance of 70 and were accompanied by Prof. Mahesh Caisucar and Prof. Ramdas Pandit. It was a great new opportunity for us to learn something new and something off the books for a change. At around 1.30 pm all the batches winded up with their industry observation and we all finally gathered for a group picture. Finally the vote of thanks was given by our fellow classmate Yash Prabhudessai.



## West Coast Paper Mill, Dandeli, Karnataka

Report by Vaikunth Kossambe, B.E.Mechanical

The B.E.Mechanical students Vaikunth Kossambe, Angar Komarpant, Akhil Sinai Bhangu and Pheku Sharma visited the Paper mill on 20th October 2016 regarding their final year project titled “Design and development of paper recycling machine” under the guidance of Prof. Mahesh Caisucar. Instead of disposing off the waste paper into trash, recycling them is a better option. This not only helps the institute/industry in cost saving but will also ensure its contribution towards the protection of the environment. Therefore a machine that can process the waste paper and recycle it to a useful paper is necessary.

West Coast Paper Mills Ltd. (WCPM) is one of the oldest and largest producers of paper for printing, writing and packaging in India. Established in 1955, the mill is located at Dandeli in Uttara Kannada district in Karnataka. The global quality paper produced by the company serves the needs of innumerable industries for printing, writing, publishing, stationary, notebooks and packaging sectors in India, in the process contributing to the development of the nation. WCPM uses the Kraft paper production processes, which involves cooking of wood chips by a sulphate process to delignify the wood. The pulp is then bleached with chlorine gas and is used to make paper. The wood chips come from hardwood trees such as Eucalyptus, Casurina, Acacia and Sabubal. To make one ton of paper, about 2.6 tons of wood is used.

Pulp is obtained by removing impurities from wood and other raw material chips through cooking process. The chips are loaded into a digester and cooking liquors are added. Bleaching is done to increase brightness of the pulp by removal of unwanted elements in the unbleached pulp. Additives are added to the paper pulp. Addition of fillers like talcum

and calcium carbonate is very common and they brightness to the paper. Additives like starch and dyes are also added. Fillers are titanium dioxide, barium sulphate and zinc sulphate. Water is removed from the pulp by passing it through a rapidly moving wire mesh. The objective is to remove 93% to 95% of water in the finished paper. The press roller improves the formation of paper web by application of pressure. The paper is then transferred to a felt blanket which conveys it through many steam heated driers to remove excess of moisture. Then it is made to pass through a series of polished iron rollers stacked one on top of each other, through which the finished paper will pass. The next step is rewinding on a metal or fibre core. Packaging and testing are the final stages of the process.

The company operates six plants with an installed capacity of 320000 TPA. With the latest addition of 500 TPA state-of-the-art Voith paper machine. The quality standards are of international level.





## ISHRAE GEC Chapter Inauguration

Report by Akash Kulkarni, B.E.Mechanical

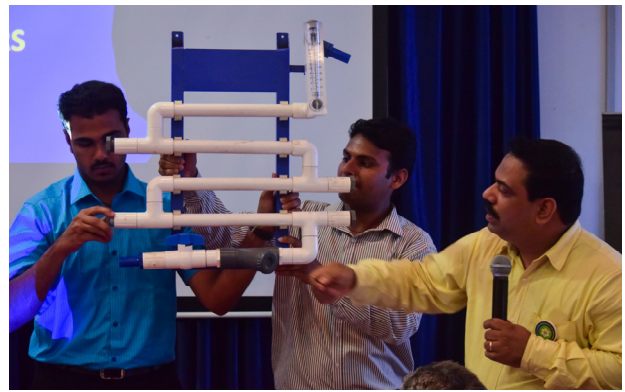
The inaugural ceremony of the Indian Society of Heating Refrigerating and Air Conditioning ISHRAE - GEC Student Chapter was held on 27<sup>th</sup> October 2016 in IT Department Seminar Hall. The programme commenced with singing of National anthem followed by lighting the traditional lamp by dignitaries namely Prof. V. N. Shet (Principal, GEC); Shri Prakash Naik (President ISHRAE, Goa Chapter); Shri Milind Sardessai (Student Chair ISHRAE, Goa Chapter); Shri Micheal Martins (President elect., ISHRAE Goa Chapter); Shri K.B. Kulkarni (Treasurer, ISHRAE Goa Chapter); Shri Manoj Pandey (Secretary, ISHRAE Goa Chapter), Shri Hemant Bhandari (Zonal membership chair, ISHRAE Goa Chapter), Prof. Rajesh Prabhu Gaonkar (Head of Mechanical Engg. Dept., GEC)

After the floral welcome of the dignitaries, Dr. Rajesh Prabhu Gaonkar formally welcomed the gathering. Principal Dr. V. N. Shet expressed his enthusiasm towards participating in the ISHRAE activities and extended full support to the student chapter. As GEC is celebrating the golden jubilee year



he spoke of the vision which one should have for the growth of activities in the institution. He concluded by wishing success for the GEC student chapter. Shri Prakash Naik threw some light on the thrust areas in which ISHRAE GOA CHAPTER is currently active. He described and explained the importance and benefits of being member of ISHRAE. Shri Milind Sardessai made everyone realize the importance of social responsibilities and to see for opportunities of doing so through ISHRAE. It was followed by oath taking ceremony of newly elected Chapter Working Committee. Mr. Akash Kulkarni (President), Mr. Shrinath Bhosle (President elect), Mr. Datta Gawas (Secretary), Mr. Sushant Chougule (Treasurer), Mr. Suraj Mhaldar (Executive) and Mr. Jason D'costa (Executive). The oath was administered by Shri K.B. Kulkarni.

A token of gratitude was presented to the guest speaker of the evening Mr. Micheal Martins by Principal Prof. V.N. Shet. Shri Martins spoke on the technical aspects of water treatments in HVAC systems. Finally the vote of thanks was proposed by Mr. Akash Kulkarni and the function was compered by Miss Sharayu Naik.



This ceremony also did include the felicitation of Miss Dhruhini Gaude, daughter of Shri Vasant Gaude (Staff in Mechanical Engg. Dept.), who has brought laurels to the whole country by winning bronze medal in Kurash during World Martial Arts Mastership held at South Korea. The 2016 Cheongju World Martial Arts Masterships took place in Ilwon, Cheongju City of North Chungcheong Province, for seven days from September 2<sup>nd</sup> to 8<sup>th</sup> under the theme of “Harmony of the World Martial Arts. “I will continue making my parents, coach and country proud”, said Miss Dhruhini.



## Conferences attended

- At the 58<sup>th</sup> National Convention & International Conference on Smart Strategies for Digital World - Industrial Engineering Perspective, 21<sup>st</sup> and 22<sup>nd</sup> October 2016, Shri Ramdeobaba College of Engineering and Management, Nagpur. Following papers were presented by M.E. Industrial Engineering students at this Conference:

- 1) Rajeev Shanbhag and Mahesh Dhawalikar, Line Balancing of Manual Assembly Line
- 2) Rajiv S, Quality and Reliability Issues in ShipBuilding Industries.
- 3) Pundalik Bhushan Salkar and Mahesh Dhawalikar, Analysis of Musculoskeletal Disorders using Biomechanical Approach.





## Interaction with students

Shri Milind Sardessai, ISHRAE Goa Chapter President, visited the department on 9<sup>th</sup> Aug 2016 and also addressed the T.E.Mechanical students



## Faculty Development Programme

Dr. Rajesh Prabhu Gaonkar conducted three sessions on “Discrete Random Number Generation”, “Continuous Random Number Generation” and “Simulation Programming in MATLAB (Lab Session)” for DST sponsored and ISTE approved one week National level Short Term Training Program (STTP) on “Modelling and Simulation” from 27<sup>th</sup> June to 2<sup>nd</sup> July 2016 organized by Mechanical Engineering Department, Maharashtra Institute of Technology, Aurangabad.

Dr. Suraj Rane conducted two sessions on “Probability Concepts” along with additional hands on session.

Prof Vinay Shirodkar delivered a talk titled “Modeling and Simulation”



## Guest Faculty Lecture

Prof. Uday Dabade, Head of Mechanical Engineering Department, Walchand College of Engineering, Sangli interacted with our B.E.Mechanical students and presented a session on “Advances in Manufacturing”





## MESSERGI Activity

Report by Susim Singh, B.E. Mech.

A sale for festive items and handicrafts prepared by physically challenged children was organized by Mechanical Engineering Department under MESSERGI activity in association with Gujarati Samaj on 24<sup>th</sup> and 25<sup>th</sup> October 2016 in the college campus of Goa College of Engineering. The sale was held in the main building of the Goa College of Engineering with the permission of our Principal Dr. V.N. Shet and Head of Mechanical Engineering Department Dr. Rajesh Prabhu Gaonker for two days from 24<sup>th</sup> and 25<sup>th</sup> October 2016. The students from the MESA council arranged the tables and other accessories and the sale begun at 9:00 am. The items displayed on the tables were different types of earthen lamps (diwali lamps), sky lamp, different candles of various designs, paper bags, and a lot of other useful products for the Diwali festival which was made by the children. A routine time table with proper slots for the volunteers who will stay on the stalls for the sale was prepared. Our target was to cross the sale of product of Rs. 2000. In the beginning, there was no one buying the product but after 11:00 am, staff and students from various departments started coming to buy the products and at the lunch break time there was a huge crowd for the products. The students of the Mechanical Council informed faculty/staff about the products at the exhibition. At the end of day one, we closed the sale at 5:30 pm and the total amount had crossed Rs.1000. On the second day, the sale started at 9:00 as usual and people had come with money to buy the products. The Diwali decoration products were very colourful and bright with good designs as if they were made from factories. The teaching and non-teaching staff and students from all the departments bought the



products. The second day also ended well, with the total amount collected crossing our expected target of Rs.2000. Very few products were left unsold. The sale finally came to an end. We had a nice experience during these two days sale specially to market products and how to pack products.



### Internship data of T.E.Mechanical Students

Name	Company Name	Period	
Sanil Naik	Sai Service Station, Curti, Ponda	26-Dec-16	14-Jan-17
Frenzil D'Costa	Sai Service Station, Curti, Ponda	26-Dec-16	14-Jan-17
Sohan Naik	Sai Service Station, Curti, Ponda	26-Dec-16	14-Jan-17
Ashwin Naik	Goa Shipyard Ltd., Vasco	26-Dec-16	14-Jan-17
Kartik Naik	Goa Shipyard Ltd., Vasco	26-Dec-16	14-Jan-17
Chandradeep Dessai	Goa Shipyard Ltd., Vasco	26-Dec-16	14-Jan-17
Ganesh Kole	Goa Shipyard Ltd., Vasco	26-Dec-16	14-Jan-17
Kowshik Srivatsan	IFB Industries Ltd., Verna	26-Dec-16	14-Jan-17
Shashank R. Gaude	IFB Industries Ltd., Verna	26-Dec-16	14-Jan-17
Sandat S. Barve	ACGL, Honda, Satterri	26-Dec-16	14-Jan-17
Siddhinath L. Bhat	Chowgule Industries Pvt. Ltd., Fatorda	27-Dec-16	14-Jan-17
Chandradeep Dessai	Chowgule Industries Pvt. Ltd., Fatorda	27-Dec-16	14-Jan-17



## Ethics and Motivation Talk

**Report by Shubham Chowgule (S.E.Mechanical)**

A talk was organized by S.E. Mechanical students on the topic “Ethics and Motivation” under the guidance of Prof. Mahesh Dhawalikar, Associate Professor in Mechanical Engineering Department. The talk was



scheduled on 28<sup>th</sup> September 2016 from 11 am till 1 pm in the seminar hall, Mining Engineering Department. The speaker for the talk was renowned personality and a wonderful orator Shri Dilip Betkikar. The talk was for all S.E. Mechanical students and students participated in large numbers along with the students there were mechanical faculty members too. Amongst them were Shri Mahesh Dhawalikar, Prof. Harichandra Chandekar and

Dr.Raghvendra Naik. The talk was mainly organized to motivate the students regarding engineering ethics

and to motivate them in their field of interest. The talk was

an interactive session between the students and the speaker.

Mr. Sohan Sirvoikar escorted the speaker sir to the dais.

Mr. Shubham Kale and Mr. Govardhan Parker sang a

welcome song creating a sense of positive vibes in the

atmosphere. Mr. Omkar Rai welcomed the speaker with a

warm welcome speech. Mr.Gavin D’Mello introduced the

speaker to the audience. After the formal welcome and

introduction of the speaker the interactive session began. He asked the students about what social issues

they face in their everyday life. He talked about the responsibilities of students towards their career and the

society. He talked about how people behave in society regarding any issue and how we being engineers and

mature people should handle and tackle the problems. Decision making plays an important role in

everyone’s lives. He motivated students to speak up and improve their interaction skills with people around

them. A portrait of the speaker Shri Dilip Betkikar was given to him which was sketched by S.E.

Mechanical student Mr. Akash Parab. Miss Sampada Shendure did compering for the function and

eventually Mr Shubham Samant proposed the vote of thanks.



## Indian Institution of Industrial Engineering (IIIE) Graduate Ship Exam

**Report by Prof. Gajesh Usgaonkar**

IIIE Graduate Ship Examination was conducted by IIIE, Goa Chapter at GEC from 02<sup>nd</sup> August 2016 to 09<sup>th</sup> August 2016. A total of 26 candidates answered Preliminary, 32 candidates answered Section-A and 59 candidates answered Section-B examination. All the candidates who answered the exam were from the industry. The exam was conducted for 35 subjects, spread over nine sessions, each session being of three hours duration. The timing for the sessions was in the evening from 6 pm to 9 pm on working days and on Sunday it was in the morning from 10 am to 1 pm. Prof. Suraj Rane, Professor of Mechanical Engineering Department and Chairman, IIIE Goa Chapter was the Chief Exam Superintendent for this exam, assisted by Prof. Ramdas Pandit, Assistant Professor (Contract) of Mechanical Engineering Department. The examination was conducted smoothly under the guidance of Prof. Milind J. Sakhardande, Associate Professor of Mechanical Engineering Department and Prof. Rajesh Prabhu Gaonkar, Head of Mechanical Engineering Department. Many IIIE members from the institute and industry took active participation in smooth conduct of exam and were also involved in the invigilation work. The candidates answering the exam expressed their gratitude towards the authorities of IIIE, Goa Chapter, GEC and the Principal, GEC for having the centre in the college, which was very convenient for them or else they were forced to apply for 15 days leave and go to Pune or Bangalore for answering the exam.

### Faculty visit to Industry/Academic Institutions

#### Kolhapur Institute of Technology

Prof. Rajesh Prabhu Gaonkar visited Department of Production and Mechanical Engineering, Kolhapur Institute of Technology and interacted with Department faculty there for collaboration on 28<sup>th</sup> December 2016





### Invited Resource faculty

Dr. Rajesh Prabhu Gaonkar was resource person for the topic “Reliability” and Dr. Anant Naik, HoD (IT Dept.) was resource person for the topic "Modeling and simulation" at two days workshop on “Recent Trends in Manufacturing Technology (RTMT 2016)” from 7th to 8th October 2016, organized by Walchand College of Engineering (WCE), Sangli.



### Alumini donation

Mr. Ray Pereira B.E.Mechanical student batch of 2015 donated a sum of Rs. 10,000/- to the Department. Mr. Ray Pereira seen handing over the cheque to Prof. Milind Sakhardande, present alongside is Dr. Shridhar Mhalsekar



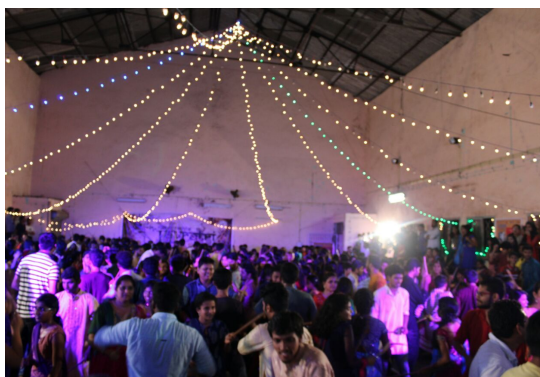


## Extra curricular activities

- Inauguration of SPIC MACAY (Society for Promotion of Indian Classical Music and Culture Amongst Youth) Farmagudi Campus Chapter 18th October 2016, 11.00 am at Old Library Hall (Academic Section) GEC Farmagudi in the presence of Padmashri Girija Devi, renowned Hindustani Classical Singer and Ms. Rashmi Malik, SPIC MACAY National Coordinator for Goa. Prof. Milind Sakhardande, Associate Professor in Mechanical Engineering Department was the faculty co-ordinator for the event.



- On the occasion of Navratri celebrations, Dandiya was organized for the students in the college premises on 3<sup>rd</sup> October 2016. Our final year mechanical students attended in large numbers.



- In the Golden Jubilee year of GEC, Saraswati Pooja was performed on a large scale. The Pooja took place in the Multi-purpose hall in the Academics Section on 10th October 2016. Shri Anand Naik, Lab. Assistant from Mechanical Engineering Department performed the Pooja. Students and Staff members gathered and took the blessings of the Goddess of knowledge, Saraswati.



- Also on the occasion of Dussehra on 10<sup>th</sup> October 2016, the department faculty did pooja of machinery in the I.C. engine laboratory. All the teaching, non-teaching staff and few students seen gathered in the laboratory.



## Papers published

- Following papers were presented at National Conference on Recent Trends in Mechanical Engineering (NCRTME 2016), 4<sup>th</sup> to 5<sup>th</sup> July 2016, Department of Mechanical Engineering, Walchand College of Engineering, Vishrambag, Sangli, Maharashtra.
1. Rajesh Prabhu Gaonkar, Optimization of supply chain in construction company, in proceedings of National Conference on Recent Trends in Mechanical Engineering (NCRTME 2016), pp. 161-165.
  2. Rajesh Prabhu Gaonkar, COPRAS based comparative analysis for multi criteria decision making under information uncertainty, in proceedings of National Conference on Recent Trends in Mechanical Engineering (NCRTME 2016), pp. 311-316.
  3. Rajesh Prabhu Gaonkar, Raw material inventory management in tyre industry: a case study, in proceedings of National Conference on Recent Trends in Mechanical Engineering (NCRTME 2016), pp. 317-320.
  4. Rajesh Prabhu Gaonkar, Understanding effect of reliability on warranty, in proceedings of National Conference on Recent Trends in Mechanical Engineering (NCRTME 2016), pp. 355-360.



- Following papers were presented at the 1<sup>st</sup> “International Conference on Emerging Trends in Mechanical Engineering (ICETiME 2016)” organized by ICFAI, Hyderabad from 23<sup>rd</sup> to 24<sup>th</sup> September 2016.

1. Prashant Mishal and Rajesh Prabhu Gaonkar, Facility location using fuzzy TOPSIS: Indian automotive industry case, pp. 580-583.

2. Rylan Caldeira and Vinay Shirodkar, Comparison of heuristics for cell formation in cellular manufacturing, ICETiME 2016, Hyderabad.

Shri Rylan Caldeira, M.E. Industrial Engineering student bagged the first prize in best paper award in Manufacturing section for his paper at this conference.



Prof. Rajesh Prabhu Gaonkar chaired a session in the 1<sup>st</sup> International Conference on “Emerging Trends in Mechanical Engineering (ICETiME 2016)” organized by ICFAI, Hyderabad from 23<sup>rd</sup> to 24<sup>th</sup> September 2016.

- Harichandra Chandekar and Vikas Chaudhari, “Flexural creep behaviour of jute polypropylene composites” in IOP Conference Series: Material Science and Engineering, 149, (2016) 012107.  
doi: 10.1088/1757-899X/149/1/012107
- Mahesh Caisucar, International Journal of Research in Engineering and Technology, “Special Purpose Drilling Machine for Ship Hulls”, IJRET journal, Volume 5, Issue 10; October 2016.

## Swachh Bharat Abhiyan: Clean Goa Initiative

Report by Prof. Vinay Shiroadkar

Goa Engineering College successfully organized Swachh Bharat Cleanliness drive in the college campus on 2<sup>nd</sup> October 2016 from 9.00 am to 1.00 pm under the leadership of Dr. V. N. Shet, the Principal of the College. The college campus area starting from the Maruti temple at the entrance to the Infinity football ground at the exit was demarcated for cleaning and assigned to various departments and sections. Total of 18 departments and sections were formed for the cleaning purpose under the respective department and section heads. There was an overwhelming response from faculty, staff, NSS volunteers, students, gardeners and sweepers who participated in big numbers in the cleanliness drive. The campaign began with internal cleaning of the offices and departments and thereafter the garbage in the form of plastic, bottles, papers, e waste etc. was collected from the entire campus and accumulated at the designated areas. Total of approximately 110 sacks of garbage was collected and the internal campus roads were cleaned. The event was successfully coordinated by Dr. Vinay A Shiroadkar, Professor in Mechanical Engineering Department with active support from Prof. Milind Sakhardande, Associate Professor in Mechanical Engineering Department and Dr. Ulhas Sawaikar, Professor in Civil Engineering Department along with all faculty, staff and students.





## Workshop and Conferences attended by faculty

Faculty from Mechanical Engineering Department attended National Level Symposium on “Materials Characterisation and Manufacturing” organized by Department of Mechanical Engineering, Padre Conceicao College of Engineering, Verna in collaboration with Department of Physics, Goa University at Goa University on 18<sup>th</sup> and 19<sup>th</sup> August 2016.



Prof. Rajesh Prabhu Gaonkar was appointed as the Member of Local Advisory Committee for the National Level Symposium.



Prof. Akshay Nigalye was appointed Chairperson for one of the session on the Composite Processing on the first day while Prof. Harichandra Chandekar presented a paper titled “Time-Temperature Superposition principle applied to natural composites” on the second day of the Symposium.

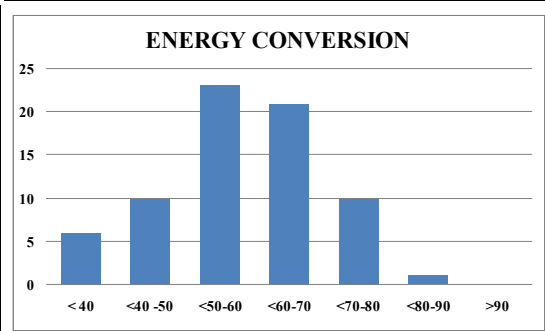
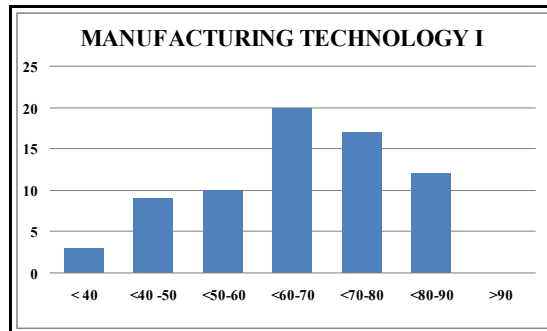
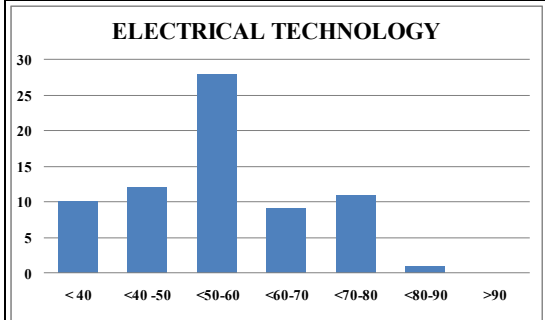
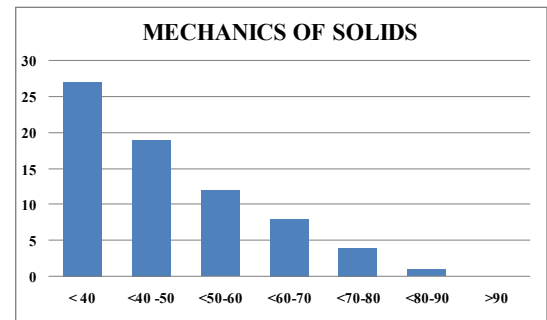
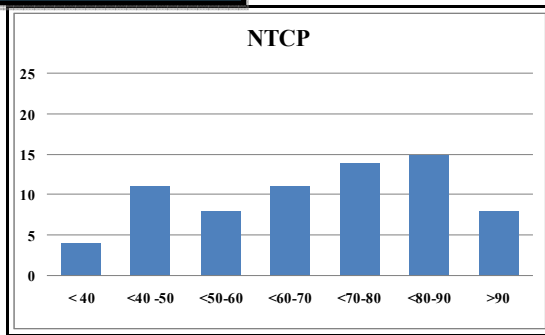
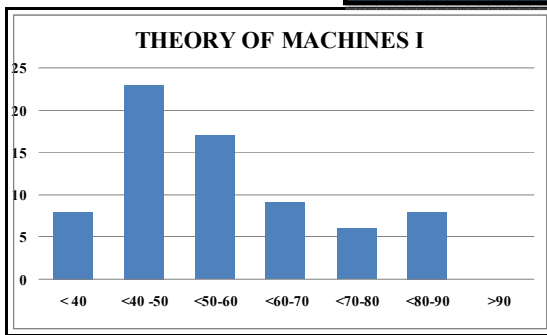
- Prof. Harichandra Chandekar attended International Conference on “Advances in Materials and Manufacturing Applications” organized by Department of Mechanical Engineering, Amrita Vishwa Vidyapeetham, Bengaluru Campus on 14<sup>th</sup> to 16<sup>th</sup> July 2016.



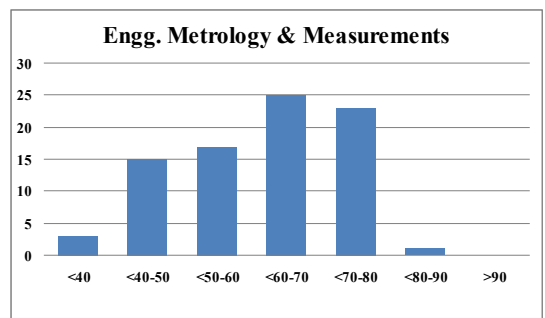
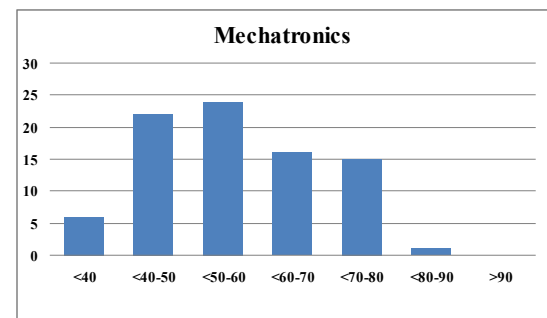
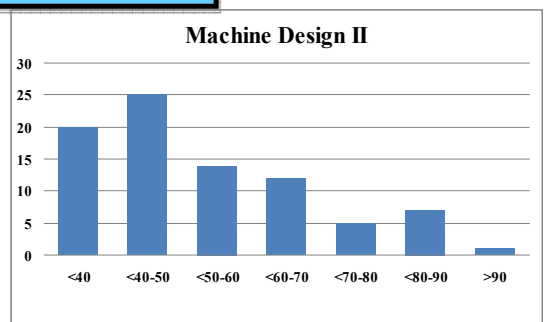
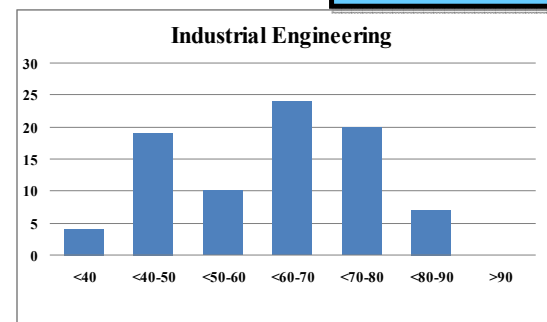


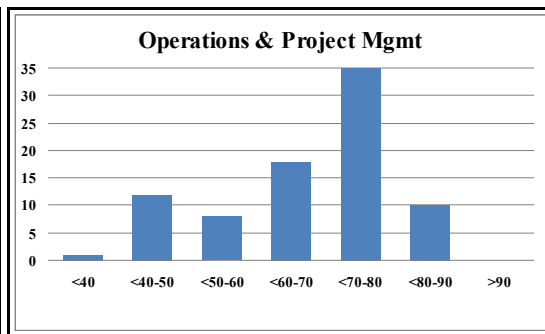
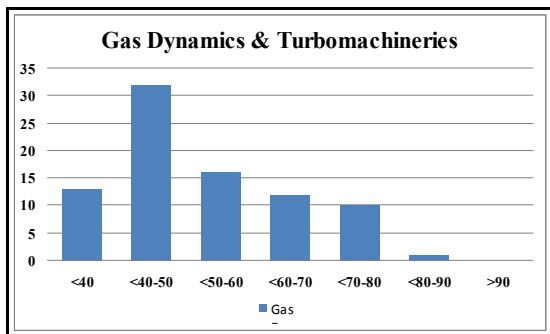
# Result Analysis May/June 2016 (Number of student's v/s Range of marks)

## SEMESTER IV

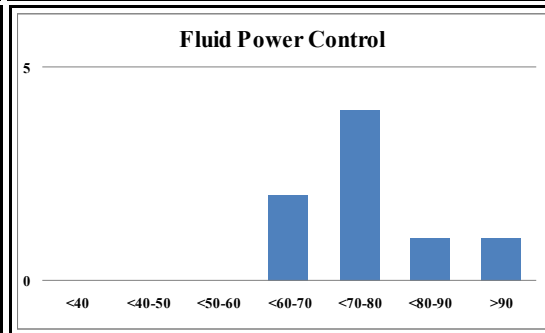
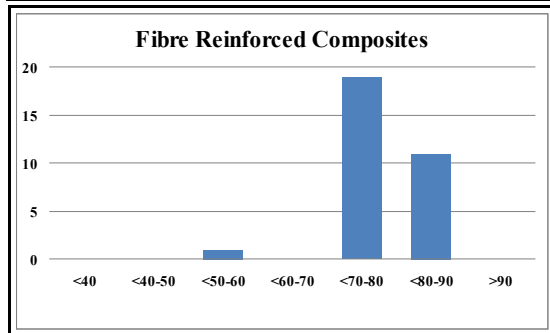
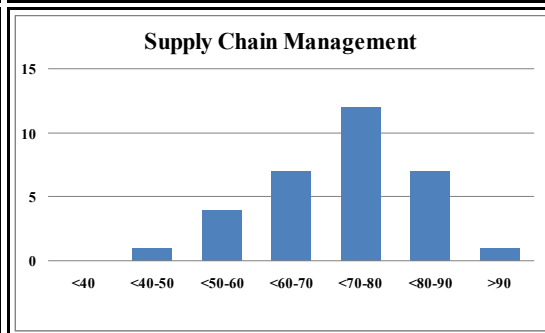
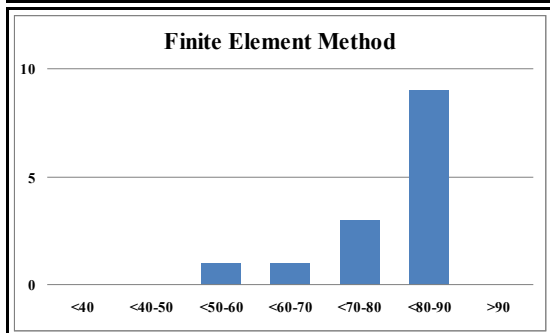
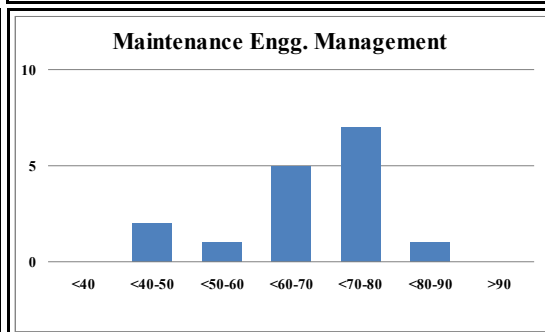
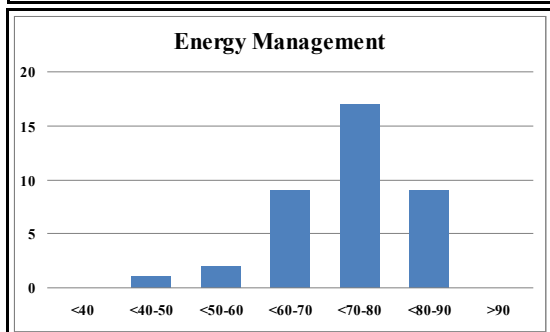
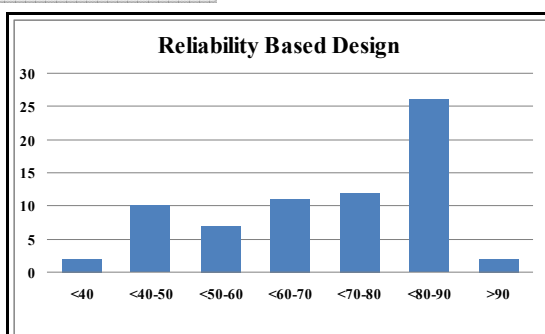
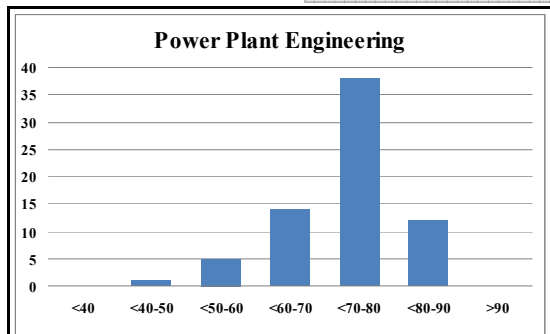


## SEMESTER VI





**SEMESTER VIII**

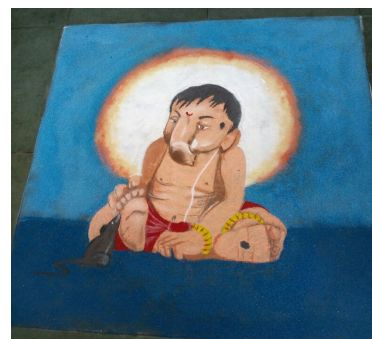




## Ganesh Chaturthi Festival



The college celebrates the Ganesh festival with a great fervor. This year the celebration started on 5th September 2016 and was celebrated for 11 days. The preparations were in full swing for the week before the “Pratishthapana” of the Ganesha idol in the Mining Engineering Dept. The idol was made fully of natural clay as we planned to make it a Green or Ecofriendly festival. Everyday of the festival, each branch from the college got an opportunity to perform the “Pooja” in the morning or evening or both the times. Even some faculties performed the “Pooja” on the scheduled days. Rangoli and Ghumat Aarti Competition were organized for the college students which received a great response from the students. Prof. Mangaldas Gaonkar, Assistant Professor (Contract) in Mechanical Engineering Dept. won the first place in Rangoli competition.



Prof. Mangaldas Gaonkar also won a prize in “Best out of Waste” competition for making a sculpture of Buddha out of clay. He is also seen sketching a drawing at a social activity at Vanarmari Jamat Bethoda village.





Few paintings of Prof. Mangaldas Gaonkar, Assistant Professor (Contract) in Mechanical Engineering Dept.



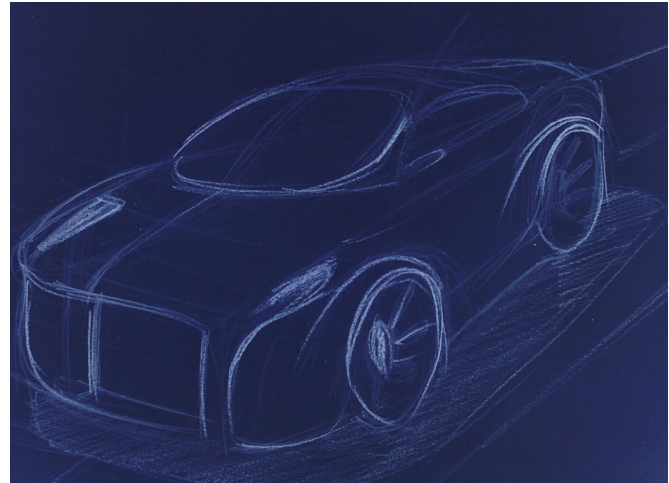
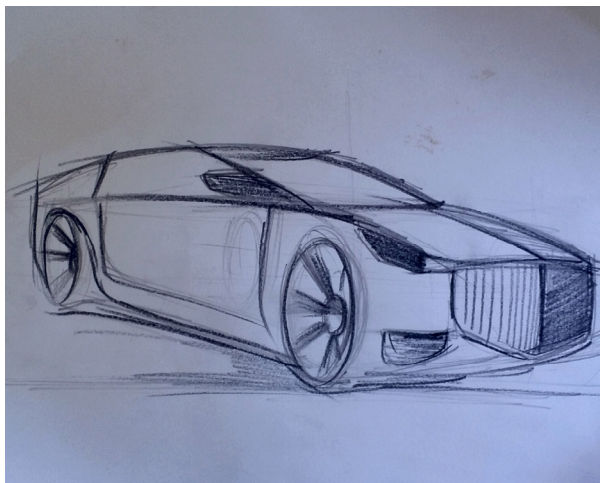
Some of the canvas paintings which were displayed at Art Exhibition at Bambolkar's Art Gallery, Ponda, Goa.







Other pencil sketches drawn by Prof. Mangaldas Gaonkar



## Gold Medal in Swimming at Goa University

Mr. Akash Fulkar of BE mechanical had participated in the inter collegiate swimming championship in July 2016 which was organized by Goa university at Campal swimming complex. He won 2 gold medals. One in 100m freestyle with a timing of 1 min 2 sec and other in 200m freestyle with timing of 2min 36sec .This enabled our college to secure runners-up position at Goa university.



## Teacher's Day Celebration

Being Ganesh Chaturthi on 5<sup>th</sup> September this year, the Teacher's day celebration was postponed to 16<sup>th</sup> September 2016. The celebration was held in the Mining Engineering dept. The celebration went on till 5:30 p.m. The celebration started by cutting of cake followed by various fun games along with Quiz and Bursting the balloons. Two of our faculty, Dr. Raghvendra Naik and Prof. Saurabh Raikar won prizes in the competitions conducted

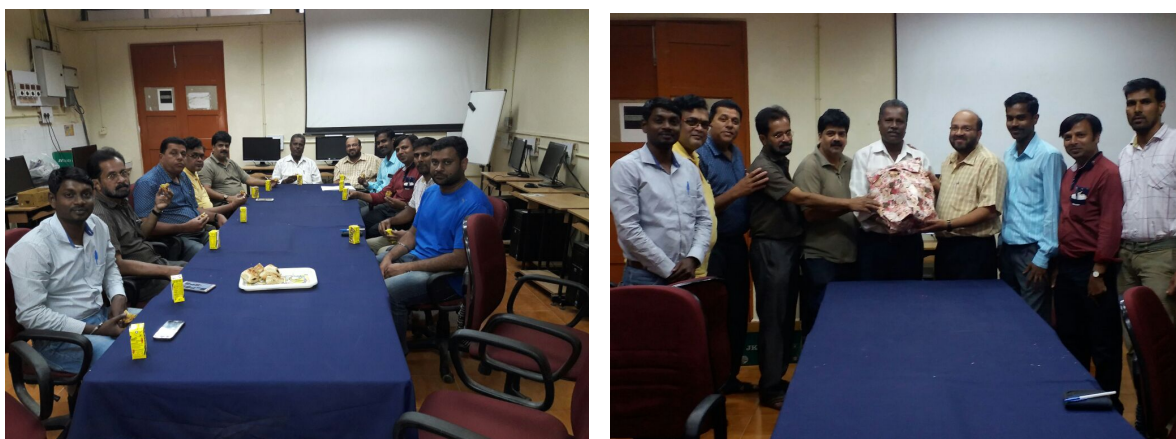


Diwali is marked by Narkachaturdashi, in which effigies of the demon Narkasur are built and then burnt. The Department faculty seen with the effigy of Narkasur on the eve of Diwali on 28<sup>th</sup> October 2016



## Farewell to Staff

Mechanical Engineering Department gave farewell to Shri Shantaram Ganu Priolkar, Technical Assistant on 30<sup>th</sup> December 2016. Prof. Rajesh S. Prabhu Gaonkar presented him a memento as a token of gratitude for his services.





## Trailer Consultancy



Prof. Rajesh S. Prabhu Gaonkar, Prof. Vinay Shirodkar, Prof. Akshay Nigalye, Prof. Milind Sakhardande and Prof. Mahesh Caisucar were seen on the site during the trailer consultancy at Vasco on 10<sup>th</sup> December 2016.



## Department Sports Activities

Mechanical Engineering Department faculty participated in most of the marathons organized in Goa in the year 2016. Prof. Mahesh Caisucar and Prof. Harichandra Chandekar participated in Rotary Rain Run at Bambolim on 31<sup>st</sup> July 2016.



Department faculty participate in Goa River Marathon promo runs held across Goa. The third promo run was held at Mapusa starting from the Taxi Stand on 2<sup>nd</sup> October 2016. Prof. Mahesh Caisucar and Prof. Harichandra Chandekar participated in the promo run.



For the Goa River Marathon 1<sup>st</sup> trial run on GRM route (Chicalim to Jacinto island and back) held on 23<sup>rd</sup> October 2016, Dr. Shridhar Mhalsekar, Prof. Mahesh Caisucar and Prof. Harichandra Chandekar participated.



For the Goa River Marathon 2<sup>nd</sup> trial run on GRM route held on 20<sup>th</sup> November 2016, Prof. Rajesh Prabhu Gaonkar, Dr. Shridhar Mhalsekar and Prof. Harichandra Chandekar participated.



## Dr. Ramani Goa Marathon 2016



Department faculty and students participate in Dr Ramani Goa Marathon in Ponda on 6<sup>th</sup> November 2016. Prof. Rajesh Prabhu Gaonkar, Prof. Suraj Rane, Dr. Anant Naik, Prof. Ramdas Pandit participated in 5 kms run, while Prof. Milind Sakardande and Dr. Shridhar Mhalsekar participated in 3 kms run. Prof. Mangaldas Gaonkar, Prof. Saurabh Raikar participated in 10 kms run. Prof. Mahesh Caiscuar and Prof. Harichandra Chandekar completed their first 21 kms run in 2 hr 15 mins time.



Our students Mr. Yogesh Mahale and Mr Kiran Naik from B.E. Mechanical successfully completed 10 kms run.





## Engineering Badminton League 2016

The first ever Engineering Badminton League was organized in the first week of November 2016 in the GEC Gymkhana. This tournament was aimed to encourage college staff participation and awareness about badminton as a sport and as a fitness activity. The response was encouraging as it consisted of 10 Mixed double teams and 16 men's double teams. As it turned out this event was played with competitive but with a true sportsman's spirit. This was evident as the matches were closely fought.



Faculty participation from Mechanical Engineering Department was in large number comprising Prof. Rajesh Prabhu Gaonkar, Prof. Milind Sakhardande, Prof. B.S.Manohar, Prof. Mahesh Caisucar, Prof. Harichandra Chandekar, Prof. Saurabh Raikar, Prof. Mangaldas Gaonkar and Prof. Ramdas Pandit.

The Men's doubles finalist were Prof. Milind Sakhardande and Prof. Ramdas Pandit and Prof. Mahesh Caisucar and Prof. Harichandra Chandekar. Mixed doubles finalist were Prof. Harichandra Chandekar and Miss Smita Aldonkar (Asst. Professor, Civil Engineering Department) and Prof. Sandesh Dessai (Librarian) and Mrs Judy Branganza (GEC Establishment).

Milind Sakhardande and Ramdas Pandit were the Men's doubles champions while Prof. Harichandra Chandekar and Miss Smita Aldonkar were the Mixed doubles champions.

The Chief Guests for the prize distribution ceremony were Prof. Rajesh Prabhu Gaonkar and Dr. Anant Naik. Prof. Ramdas Pandit was one of the key member of the organizing committee.





## Goa River Marathon 2016

The Mechanical Engineering Department faculty participated in the 7<sup>th</sup> edition of Goa River Marathon organized by the Vasco Sports Club in partnership with NEB, Bangalore at SAG Chicalim, Vasco on 11<sup>th</sup> December 2016. Two faculty completed the 10 kms distance in less than 60 mins. Prof. Mangaldas Gaonkar completed in 59 mins 42 secs while Prof. Harichandra Chandekar completed the 10 kms run in 59 mins 52 secs. The other faculty successfully completing 10 kms distance were: Prof. Mahesh Caisucar finishing in 1 hr 06 mins 18 secs, Prof. Saurabh Raiker completing the run in 1 hr 25 mins 32 secs and Prof. Ramdas Pandit completed in 1 hr 34 mins 18 secs. Dr. Shridhar Mhalsekar participated in 5 km dream run.



Few of the Mechanical Engineering Department students also participated in the Goa River Marathon 2016. Mr. Kiran Naik, B.E.Mechanical student completed 10 kms run in 1 hr 5 mins 59 secs while, Mr Yogesh Mahale, B.E.Mechanical student participated in 21 kms run and successfully completed it in 2 hrs 5 mins 2 secs.





Mechanical Engineering Department Batch 1989-1993 Reunion in December 2016

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