



**SANDIP  
FOUNDATION**

SANDIP FOUNDATION'S  
SANDIP INSTITUTE OF TECHNOLOGY AND RESEARCH CENTRE ,  
NASHIK  
DEPARTMENT OF MECHANICAL ENGINEERING  
**E-BULLETIN**

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### VISION OF SITRC

**TO BE ACCLAIMED  
INSTITUTION FOR  
LEARNING AND RESEARCH**

### MISSION OF SITRC

**TO IMPART IN-DEPTH TECHNICAL  
KNOWLEDGE.**

**TO CREATE CONDUCIVE  
ENVIRONMENT FOR RESEARCH,  
INNOVATION AND  
ENTREPRENEURSHIP.**

**TO INSTILL THE SOCIAL AND  
CULTURAL VALUES.**



### **FROM THE HOD'S DESK**

I am happy to learn that Mechanical Engineering Department, Sandip Institute of Technology and research Centre is coming out with the quarterly departmental E-Bulletin. This E-Bulletin will help to share the news, events achievements of the department among alumni. This E-Bulletin will provide an opportunity for the staff and students to showcase their talents in technical writing. I would like to appreciate and congratulate editorial team of the department for their unrelenting efforts in compiling this E-Bulletin.

### **FROM THE EDITOR'S DESK**

It gives us an immense pleasure to introduce this E-bulletin of Mechanical Engineering Department. Proper communication plays a vital role in institution's development. This E-bulletin will serve to reinforce and allow increased awareness, improved interaction and integration among all of us. This E-bulletin will be a medium to provide proper acknowledgement and respect all of these efforts and its results.

## VISION OF THE DEPARTMENT

To achieve excellence in the domain of Mechanical Engineering by inculcating a culture of learning and research.

## MISSION OF THE DEPARTMENT

- To nurture the students of Mechanical Engineering to be competent, motivated and ethical professionals.
- To foster research, innovation and entrepreneurship skills leading to employable and self-reliant technocrats.
- To groom the socio-techno potential for up-liftment of society.

## PROGRAMME EDUCATIONAL OBJECTIVES ( PEO'S )

- PEO 1: To pursue and establish the career in Mechanical Engineering.
- PEO 2: To demonstrate personal growth by pursuing higher studies, professional development course and/or engineering certifications.
- PEO 3: To inculcate entrepreneurship skills and nurture the ethics in the domain.

## PROGRAMME OUTCOMES

1. **Engineering Knowledge** – Apply knowledge of mathematics, science and engineering to solve the real life problems in Mechanical systems. An ability to analyze and interpret data.
2. **Problem Analysis** – Identify, formulate and solve Mechanical Engineering problems in thermal, manufacturing and machine design and conduct new experiments.
3. **Design/development of Solutions** – Design systems like thermal, robotics, mechatronics and machines within realistic constraints.
4. **Conduct investigations of complex problems** – Design and conduct experiments to interpret data and analyse the results.
5. **Modern Tool Usage** – To develop awareness and work on emerging technologies like CAD/CAM software's, Robotics.
6. **The engineer and society** – Understand the impact of an engineer in general and Mechanical Engineering knowledge for welfare of society in particular.
7. **Environment and Sustainability** – Develop or modify eco-friendly and highly reliable as well as sustainable systems.
8. **Ethics** – Take professional decision with a sense of ethical responsibility.
9. **Individual and team work** – Function effectively as an individual and as a member or leader in multidisciplinary and/or cross cultural teams.
10. **Communication** – Communicate effectively for achievements of goals.
11. **Project Management and Finance** – Execute disciplinary and interdisciplinary projects in day-to-day life.
12. **Life-Long Learning** – Imbibe habit of lifelong learning.

## ABOUT THE DEPARTMENT

The department is having highly qualified, experienced & motivated faculty members. The department has laboratories with latest testing facilities like multifuel VCR engine, computerized UTM (capacity 100 tonnes), computerized diesel engine test rig & exhaust gas analyzer for Engines. The CAD Centre of the department armed with latest hardware & software like Pro-E wildfire-5, ANSYS, Hypermesh, Mastercam, and AutoCAD etc. Department also have MOU with Altair Engg. Corporation (India) for conducting training on HyperMesh, Radioss (Linear), HyperForm, HyperCrash etc. The strength of department enables to offer the consultancy in all fields related to Mechanical Engineering.

**Professor and Head**

## DEPARTMENTAL ACTIVITIES

### Workshop

#### Road Safety Driving on Simulator

Sandip Foundations Sandip Institute of Technology and Research Centre, Department of Mechanical Engineering. Mechanical Engineering Students Association (MESA) has organized one day Road Safety driving. This event was organized in association with Rushabh Honda, Nasik on 24 August 2018. The event consists of Simulator Driving, which is proven to be excellent practical and effective educational tool to impart safe driving training techniques for all drivers. In this session guidelines given about the safety driving and what precautions have to take while driving. Mr. S. B.Nangia, Manager Safety drive Rushabh Honda and his team has conducted this event. More than 100 students participated in this Workshop.



## “Aptitude & Technical Sessions”

Department of Mechanical Engineering organized one week “*Aptitude & Technical Sessions*” delivered by Mr.Satish Maniyar, Technocad , Nasik for BE Mechanical.

Mr.Satish Maniyar explains the introduction to basic techniques of aptitude & review of sample question paper, time management techniques while solving aptitude, numericals on work and time taking into consideration no. of workers, their wages, number of days and daily hours of work. Numericals on combine and individual efforts of workers and no. of days or hours required to complete that work.

He also cover the topic on numericals on trains varying parameters like length, speed & direction of train, length of platform & time taken by train to pass no. of poles/platform. Numericals on boats taking into consideration speed & time of boat travel, direction of river flow and rate of flow of water. Numericals on Pipes and Cisterns taken into account time required to fill tank, reservoir when tap are in open or close position. Basic techniques to solve incomplete paragraphs when given in jumbled form.

He also delivered Topic related to solve age problem, Numericals on mixed and individual ages by varying parameters like no. of years. Numericals on direct proportion where parameters are directly proportional to each other i.e one parameter increases with variation in other parameter. Numericals on Indirect proportion where parameters are indirectly proportional to each other i.e one parameter decreases with variation in other parameter.



## Guest Lecture “Strength of Materials”

Department of Mechanical Engineering organized Expert Lecture on “*Strength of Materials*” delivered by Mr.Satish Maniyar, Technocad , Nasik for SE Mechanical. Mr.Satish Maniyar, having vast experience in the field of *Strength of Materials*.

Mr.Satish Maniyar explains the basic concept of slope and deflection of determinate beams & Macaulay’s method for finding out the slope and deflection at a section in a loaded beam. He addressed to students that **Strain Energy** of the member is defined as the internal work done in deforming the body by the action of externally applied forces.