



JODHPUR INSTITUTE OF
ENGINEERING AND TECHNOLOGY



MECHLITE

Dept. of Mechanical Engineering
Issue - 11 | December, 2017 | Half Yearly Newsletter



JIET

Group of Institutions

www.jietjodhpur.ac.in

VISION

To be a center of excellence for education and research producing leaders in Mechanical Engineering serving the nation and the world.

- M1:** To develop strong foundation in mathematics, scientific and engineering fundamentals.
- M2:** To generate knowledge skills and behavior in students and making employable across a wide range of Mechanical Engineering profession.
- M3:** To develop Entrepreneurial skills and promoting interest in higher education and Research.
- M4:** To develop excellent academic environment for life-long learning.

MISSION

Programme Educational Objectives

All objective are not static but they have to be maintained dynamic and flexible within frame work of basic parameters including preparation of core competence, breadth, professionalism and at last learning environment. Under the present global scenario, Program educational objectives (PEOs) realized and recognized are mentioned as below:

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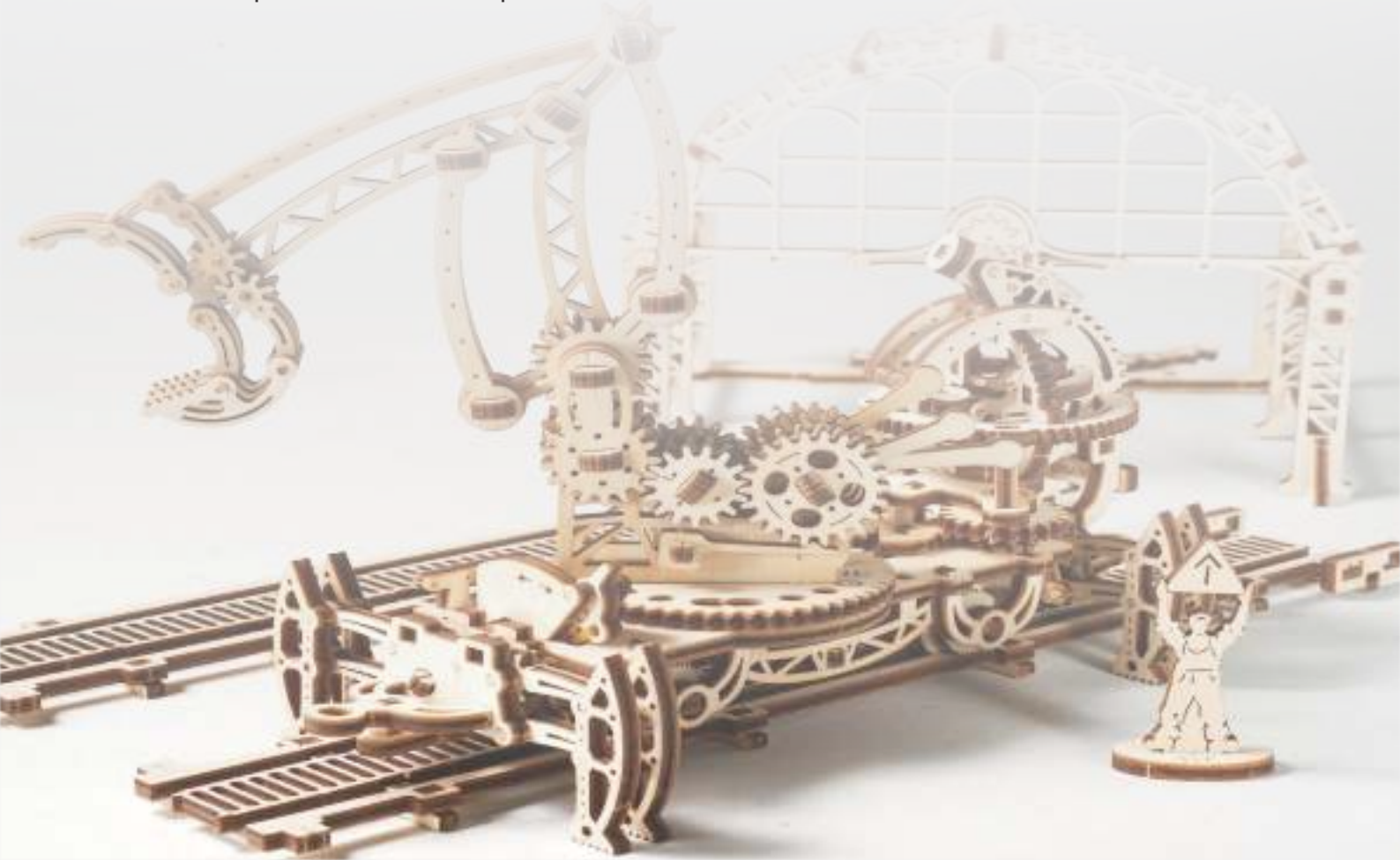
- I. To provide students with a sound foundation in mathematical, scientific and engineering fundamentals necessary to formulate, solve and analyze engineering problems and to prepare them for higher studies and research.
- II. To develop the ability among students to synthesize data and technical concepts for application in product design and development with innovation, invention and creativity.
- III. To develop the ability of the students in solving complex engineering problems using computational techniques.
- IV. To enrich the intellectual skills of the students for analysis so as to provide opportunity to work as part of team on multidisciplinary projects.
- V. To prepare students for successful career in industry that meets the needs of national and international companies. To have multidirectional and multifunctional knowledge to fit in the varying and demanding employment opportunities self-explored or available in today's industrial world within country and across the world.
- VI. To promote awareness among the students about life-long learning through motivation and to introduce to them professional ethics and codes of professional practice.
- VII. To achieve perfection to bridge the gap between knowledge received and conceived in the subjects - theoretically and practically.



Programme Outcomes

Programme outcomes are the knowledge, skills and abilities students possess on successful completion of curriculum so as to have the following outcomes from the programmes:

- a. Graduates will demonstrate basic knowledge in Mathematics, science and engineering.
- b. Graduates will demonstrate the ability to identify, analyze and design and conduct experiments, interpret and analyze data, and report results.
- c. Graduates will demonstrate the ability to design a mechanical system or a thermal system or a process that meets desired specifications and requirements.
- d. Graduates will demonstrate the ability to function in engineering and science laboratory in teams, as well as on multidisciplinary design team to propagate research environment.
- e. Graduates will demonstrate the ability to identify, formulate and solve mechanical engineering problems.
- f. Graduates will demonstrate an understanding of their professional and ethical responsibilities.
- g. Graduates will be able to communicate effectively in both verbal and written form so as to compete in national and global environment and succeed in competitive examination like GRE, GATE, IES, CAT, MAT and UPSC etc.
- h. Graduates will have the confidence to apply engineering solutions in global and societal contexts and develop eco-friendly products and solutions.
- i. Graduates will be capable of self-education and clearly understand the value of lifelong learning.
- j. Graduates will be broadly educated and will have an understanding of the impact of engineering on society and demonstrate awareness of contemporary issues.
- k. Graduates will be familiar with modern engineering software tools and equipment to analyze mechanical engineering problems.
- L. Graduates will demonstrate the modern management skill, knowledge, finance and quality of leadership at the time of team performance.



The HEAD Converses ...



Dear students, acknowledge that the power is of two kinds. One is obtained by the fear of punishment and the other by acts of love. Power based on love is thousand times more effective and permanent than the one derived from fear of punishment.

All of us believe in power of love.

Best wishes,

Prof. M.R. Baid

HOD, ME (JIET)

From the Editor's Desk

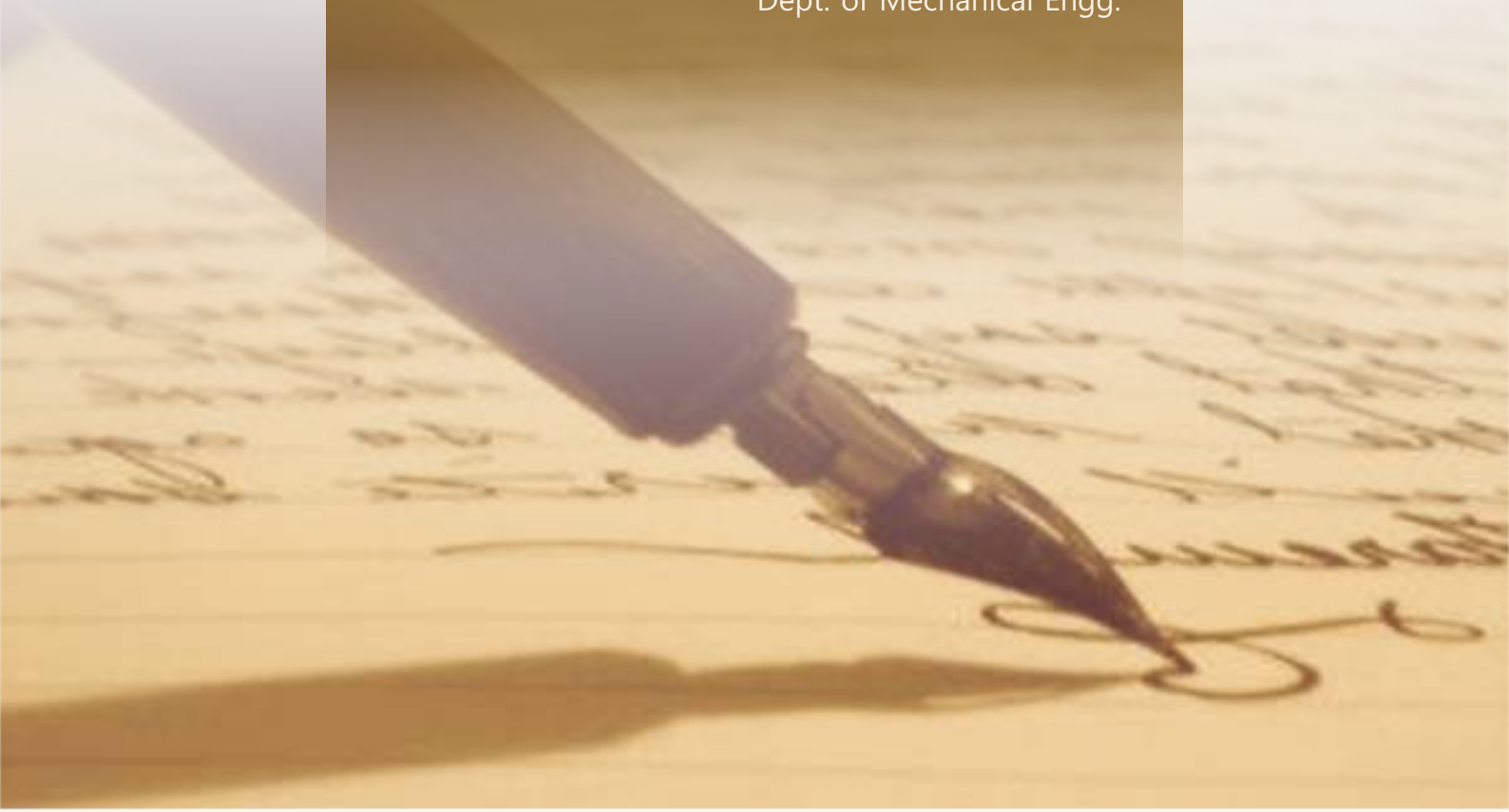
It gives me an immense pleasure in presenting in 10th edition of MECHLITE (July-December 2017). The magazine includes all the activities undergone in the Department from July to December 2017. It is our duty to take the institution to new heights so we must work together in every field to excel and make our students participate at global level. I hope you will find the edition useful. Enjoy reading.....



Mr. Abhishek Dixit

Asst. Prof. (Sr.)

Dept. of Mechanical Engg.





INSIDE THIS ISSUE

Expert Lectures (Experts from Within JGI)	-	01
Faculty Accomplishments	-	03
Student Achievements	-	03
Orientation Programme (II Year)	-	03
Workshop	-	04
Open House 2017	-	04
University Results	-	05
Final year placements at a glance	-	05
Technical Question Bank	-	05

EXPERT LECTURES (EXPERTS FROM WITHIN JGI)

- Prof. M.R. Baid (HOD, ME) delivered an expert lecture on 'Material Science' to II year students (3H) on July 28, 2017.
- Ms. Manjulata Bhati (Asst Prof. (Sr.)) delivered an expert lecture on 'Manufacturing Processes' to II year students (3H) on July 22, 2017.
- Mr. Vivek Singh Shekhawat (Asst. Prof.) delivered an expert lecture on 'Material Science' to II year students (3G) on July 19, 2017.
- Mr. Vikas Dave (Asst. Prof.) delivered an expert lecture on 'Sociology' to III year students (5H) on July 29, 2017.
- Mr. Sunil Gupta (Assoc. Prof.) delivered an expert lecture on 'Heat and Mass Transfer' to III year students (5H) on July 27, 2017.
- Mr. Vivek Singh Shekhawat (Asst. Prof.) delivered an expert lecture on 'Automobile Engineering' to III year students (5H) on July 29, 2017.
- Prof. M.R. Baid (HOD, ME) delivered an expert lecture on 'Quality Assurance and Reliability' to III year students (5G) and (5N) on August 21 and 31, 2017 respectively.
- Prof. M.R. Baid (HOD, ME) delivered an expert lecture on 'Sociology and Elements of Engineers' to III year students (5G) and (5N) on August 24, 2017.
- Prof. (Dr.) Bhagwat Singh Sisodia delivered an expert lecture on 'Heat Transfer' to third year students (5G) on August 16 and 24, 2017 respectively.
- Mr. Vijay Suthar (Asst. Prof.) delivered an expert lecture on 'Automobile Engineering' to the III year students (5G) on August 22, 2017.
- Mr. Sunil Gupta (Assoc. Prof.) delivered an expert lecture on 'Heat Transfer' to third year students (5H) on August 16, 2017.
- Mr. Vijay Suthar (Asst. Prof.) delivered an expert lecture on 'Automobile Engineering' to III year students (5H) on August 24, 2017.
- Mr. Alakshendra Pratap Singh (Asst. Prof.) delivered an expert lecture on 'Metrology and Measurement' to III year students (5H) on August 24, 2017.
- Mr. Vikas Dave (Asst. Prof.) delivered an expert lecture on 'Sociology and Elements of Economics for Engineers' to III year students (5N) on August 19, 2017.
- Mr. Chandan Pandey (Asst. Prof.) delivered an expert lecture on 'Turbo Machines' to Final year students (7H) and (7N) on August 22 and 25, 2017 respectively.
- Mr. Pawan Kumar Gupta (Asst. Prof.) delivered an expert lecture on 'Turbo Machines' to the Final year students on August 11, 2017.
- Mr. Sunil Gupta (Assoc. Prof.) delivered an expert lecture on 'Turbo Machines' to Final year students (7N) on August 12, 2017.
- Mr. Sunil Gupta (Assoc. Prof.) delivered an expert lecture on 'Heat Transfer' to Third year students (5H) on August 11, 2017.
- Mr. Vivek Singh Shekhawat (Asst. Prof.) delivered an expert lecture 'Automobile Engineering' to Third year students (5G) on August 12, 2017.
- Mr. Mohit Ostwal (Asst. Prof.) delivered an expert lecture on 'Manufacturing Process' to II year students (3G) on August 12, 2017.
- Ms. Manjulata Bhati (Asst. Prof.) delivered an expert lecture on 'Manufacturing Process' to II year students (3H) on August 12, 2017
- Mr. Bhawesh Shakey (Asst. Prof. ME) delivered an expert lecture on 'Manufacturing Processes' to II year students (3H) on September 11, 2017.

- Mr. Vinay Mathur (Assoc. Prof., CSE, JIETCOE) delivered an expert lecture on 'Object Oriented Programming Systems' to II second year students (3G and 3H) on September 12, 2017.
- Mr. Mohit Ostwal (Asth. Prof., ME) delivered an expert lecture on 'Nano and Micro Machining' to Final Year students (7G) on September 12, 2017.
- Mr. Chandan Pandey (Asth. Prof., ME) delivered an expert lecture on 'Material Science and Engineering' to II year students (3H) on September 23, 2017.
- Mr. Manoj Kumar (Asth. Prof., ME) delivered an expert lecture on 'Nano and Micro Machining' to Final Year students (7N) on September 18, 2017.
- Prof. M.R. Baid (HOD, ME) delivered an expert lecture on 'Quality Assurance and Reliability' to III year students (5G, 5H, 5N) on October 9, 2017.
- Prof. M.R. Baid (HOD, ME) delivered an expert lecture on 'Operation Research' to Final year students (7N) on October 23, 2017.
- Prof. (Dr.) Bhagwat Singh Shisodiya delivered an expert lecture on 'Heat Transfer' to III year student (5G) on October 24, 2017.
- Mr. Ashwani Mathur (Assoc. Prof., ME and COE, JIET) delivered an expert lecture on 'Dynamics of Machines' to III year students (5N) on October 28, 2017.
- Mr. Manish Bafna (Assoc. Prof. ME, Astt. Dean) delivered an expert lecture on 'Refrigeration and Air Conditioning' to Final year students (7H and 7N) on October 5, 2017.
- Mr. Manish Bafna (Assoc. Prof. ME, Astt. Dean) delivered an expert lecture on 'Refrigeration and Air Conditioning' to Final year students (7H and 7N) on October 23, 24, 25, 2017.
- Mr. Sunil Gupta (Assoc. Prof. ME,) delivered an expert lecture on 'Heat Transfer' to third year students (5H) on October 23, 24, 25, 2017.
- Mr. Chandan Pandey (Asst. Prof., CSE, ME) delivered an expert lecture on 'Turbo Machines' to Final year students (7N) on October 9, 10, 2017.
- Mr. Saurabh Kumar (Asth. Prof., ME) delivered an expert lecture on 'Air Conditioning in Automobile' to III year students (5G, 5H, 5N) on October 7, 10, 13, 2017.
- Mr. Manoj Kumar (Asth. Prof., ME) delivered an expert lecture on 'Operation Management' to Final year students (7G) on October 24, 2017.
- Mr. Pawan Kumar Bissa (Asth. Prof., (Sr. Sc.), Dy. Head (Admin)) delivered an expert lecture on 'Turbo Machines' to Final year students (7G) on October 24, 2017.
- Ms. Sushmana Sharma (Assoc. Prof., First Year) delivered an expert lecture on 'Micro and Nano Manufacturing' to Final year students (7G, 7H, 7N) on October 28, 2017.
- Mr. Alakshendra Pratap Singh (Asth. Prof., ME) delivered an expert lecture on 'Measurement and Metrology' to III year students (5N, 5H) on October 25, 28, 2017.
- Mr. Vivek Singh Sekhawat (Asth. Prof., ME) delivered an expert lecture on 'Automobile' to III year students (5N) on October 27, 2017.
- Mr. Mohit Ostwal (Asth. Prof., ME) delivered an expert lecture on 'Manufacturing Process' to II year students (3G) on October 30, 2017.
- Mr. Mohit Ostwal (Asth. Prof., ME) delivered an expert lecture on 'Powder Metallurgy' to second year students (3G) on November 2, 2017.

FACULTY ACCOMPLISHMENTS

- Mr. Mohit Ostwal (Asth. Prof., ME) completed his M.Tech degree in Production Engineering from JECRC University, Jaipur, Rajasthan.
- Mr. Abhishek Dixit (Asth. Prof. (Sr.), ME) promoted to Dy. Head (Academics) in Mechanical Engineering, JIET.
- Dr. B. S. Sisodiya (Prof., ME) has been awarded Doctorate Degree. He has completed his PhD from IIT Delhi under the supervision of Prof. (Dr.) Sanjiv Sangi and Prof. (Dr.) Punit Mahajan of the department of ME at IIT Delhi. The Title of the thesis is "Design and Optimize of Air Ventilation System for Improved Heat Transfer Characteristics in Helmets".

STUDENTS' ACHIEVEMENTS

- Students of II and III year had an interactive session with Director General, Er. Navneet Agarwal for the upcoming semester and year and know about qualitative and quantitative system of Academics as well as Administration to grow more and achieve heights of success on July 7 and July 8, respectively.
- Shubham Kaushik and Rohit Rai, (students of III Year Mechanical Engineering) won I and II prize respectively at Dialogue Competition organized by PMU Cell, Directorate of Economics and Statistics, Jodhpur held at Atal Seva Kendra (Collectrate Office), Paota, Jodhpur, held on July 31, 2017 and are selected for State Level Dialogue competition.
- Students of Final year with team 'Suryoday' attended an exhibition 'Ahaan' at Pragati Maidan, Delhi in August 2017.

ORIENTATION PROGRAMME (II YEAR)

Orientation programme for the II Year students took place in the Department from 3-5 July, 2017. The orientation programme was meant to welcome the students to the field of Mechanical Engineering and nurture them to get moulded into the learned atmosphere of the Degree course of Mechanical Engineering. Prof. M.R. Baid (HOD, ME) guided the students to the fullest and enormous motivation throughout the three day programme. Campus Director (JIET), Prof. (Dr.) Rajendra Karwa and Dean Engineering Prof. O.P Vyas provided their valuable guidance to the students for their fruitful future. Mr. Pawan Kumar Bissa (Asst. Prof. (Sr.) and Dy. Head (Administration), ME) gave valuable suggestions to the students for their upcoming life as a Mechanical Engineer. Mr. Abhishek Dixit (Asth. Prof. (Sr.) and Dy. Head (Academics) took a session on GRE, GMAT, IELTS and other such competitive exams and their requirements. Mr. Tejendra Sharma (Asst. Prof., ME) gave his spiritual and motivational lecture on our own Sanskrit language and its beautiful culture that inspired number of students to do something great. Mr. Manoj Kumar (Asth. Prof., ME) delivered his lecture on the importance of software and their application in the real world situation to simulate and make the work for Engineers easy. Mr. Vikas Dave (Asth. Prof., ME) delivered his lecture on technical skills and its requirements. Mr. Mohit Ostwal (Asth. Prof., ME) guided students with reference to GATE and PSU examinations.



WORKSHOP

A workshop titled “Startup Oasis” was organized under the banner of EDC cell, JIET under the supervision of Prof. M.R. Baid and faculty members Mr. Pawan Bishnoi and Mr. Parmeshwar Kumawat. (August 18-21, 2017).

OPEN HOUSE 2017

Department Theme: “Infir India: Intelligent, Inexpensive, Integrated, Innovative Development.”

Judges: Prof. R.S Gaur (JGI), Mr. Tushar Gehlot (Industrialist) and Mr. Nitin Gehlot (Alumni, JIET)

Chart, Poster & Flexi Competition				
S.No.	Position	Title of Model	Name of Student	Year / Class
1	I	“Wimshurt Machine	Tushar Sharma, Virat R Mehta, RiteshMundra	II Year
2	II	Bio-Mechatronics	Naveen Kumar, Pushpit Tiwari	Final Year
3	III	Hyperloop	Girdhari Ram, Anil Parihar	III Year
Working Model Competition				
S. No.	Position	Title of Model	Name of Student	Year / Class
1	I	“Rocker Bogie Tank”	Digvijay Khatri, PrateekVerma, Rahul Mishra, Pankaj Kumar, Praveen Panwar, Umesh Kumar	III Year
2	II	“CNC Machine”	Piyush Goyal	II Year
3	III	“Wimshurt Machine”	Tushar Sharma, Virat R Mehta, RiteshMundra	II Year
S. No.	Position	Title of Model	Name of Student	Year/ Class
1	I	“Camless Engine”	Hitesh Ojha, Ashish Mathur	III Year
2	II	“Design & Simulation of Solid Works.”	Naveen Kumar	Final Year
3	III	“Design of Blender in Solid Works”	Ankit Dubey, MohitJangid	Final Year



UNIVERSITY RESULTS

B.Tech VI SEM (Batch 2014-2018)

Top 3 Students		
Position	Name of Student	%
I	Devendra Dan Charan	82
II	Parasmal Suthar	82
III	Prashant Rajpurohit	81.1

B.Tech IV SEM (Batch 2015-2019)

Top 3 Students		
Rank	Name of Student	%
I	Lokender Singh	84.4
II	Ashish Mathur	82
III	Daya Sagar Bhati	80.2



PLACEMENTS AT A GLANCE

- Mr. Kanishk Varshney (7G), Mr. Naveen kumar (7H), Mr. Pushpit Tiwari (7H) and Mr Rajat Jangid (7N) got placed in Appeal Group.
- Kunal Joshi (7G) got placed in HFFC.



TECHNICAL QUESTION BANK

- For a given heat flow and for the same thickness, the temperature drop across the material will be maximum for
(a) Copper (b) Steel (c) Glass-wool (d) Refractory brick
- In descending order of magnitude, the thermal conductivity of
a. Pure iron,
b. Liquid water,
c. Saturated water vapour, and
d. Pure aluminium can be arranged as
(a) a b c d (b) b c a d (c) d a b c (d) d c b a
- Subjected to symmetrical heat transfer from one face of each block. The other face of the block will be reaching to the same temperature at a rate:
(a) Faster in air block
(b) Faster in copper block
(c) Equal in air as well as copper block
(d) Cannot be predicted with the given information
- Thermal diffusivity of a substance is:
(a) Inversely proportional to thermal conductivity
(b) Directly proportional to thermal conductivity
(c) Directly proportional to the square of thermal conductivity
(d) Inversely proportional to the square of thermal conductivity
- Which one of the following expresses the thermal diffusivity of a substance in terms of thermal conductivity (k), mass density (ρ) and specific heat (c)?
(a) $k^2 \rho c$ (b) $1/\rho k c$ (c) $k/\rho c$ (d) $\rho c/k^2$
- Which one of the following forecasting techniques is most suitable for making long range forecasts? [IES-2005]
(a) Time Series Analysis (b) Regression Analysis
(c) Exponential Smoothing (d) Market Surveys
- Which one of the following methods can be used for forecasting when a demand pattern is consistently increasing or decreasing?
(a) Regression Analysis (b) Moving Average
(c) Variance Analysis (d) Weighted Moving Average
- Production Flow Analysis (PFA) is a method of identifying part families that uses data from
(a) Engineering Drawings (b) Production Schedule
(c) Bill of Materials (d) Route Sheets
- Routing in production planning and control refers to the
(a) Balancing of load on machines
(b) Authorization of work to be performed
(c) Progress of work performed
(d) Sequence of operations to be performed
- The routing function in a production system design is concerned with.
(a) Manpower utilization
(b) Machine utilization
(c) Quality assurance of the product
(d) Optimizing material flow through the plant
- A system in which even energy is not allowed to cross the boundary is called.....
- A vapour that is about to condense is called vapour.
- The equation $PV=RT$, the constant of proportionality R is known as
- Ammonia absorption refrigeration cycle requires
- An important characteristics of absorption system of refrigeration is.....
- The relative coefficient of performance is.....

ANSWERS:

- (c) Which one has minimum thermal conductivity that will give maximum temperature drop
- (c)
- (b)
- (b)
- (c)
- (d)
- (a)
- (b, c)
- (d)
- (d)
- Isolated System
- Saturated
- Gas Constant
- Very little work input
- Quite operation
- Actual COP/ Theoretical COP

Work

Team



PATRON

Prof. (Dr.) Rajendra Karwa
Campus Director - JIET

CHIEF EDITOR

Dr. Ankita Mehta
Associate Prof. (English)
Member - Personality &
Skills Development (PSD), JGI

FACULTY COORDINATOR

Mr. Abhishek Dixit
Asst. Prof. (Sr.)
Dept. of Mechanical Engg.

JAS MEMBER

Er. Sejal Parihar

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