



IGNITION

VOLUME 9 ISSUE 1

IGNITE THE IM AGINATION

Department of Mechanical Engineering,

College of Engineering (Poly.), Pandharpur

26th Jan. 2022



❖ BrahMos supersonic cruise missile, with enhanced capability, successfully test-fired off Odisha coast

New Delhi, 20 January 2022. BrahMos supersonic cruise missile, with increased indigenous content and improved performance, was successfully test-fired from Integrated Test Range, Chandipur off the coast of Odisha at 1030 hrs on January 20, 2022. The launch was conducted by Brahmos Aerospace in close coordination with the teams of Defence Research and Development Organization (DRDO). In this text-book flight, the missile followed the predicted trajectory meeting all mission objectives. Teams from DRDO and NPOM, Russia participated in the test. BrahMos Aerospace, the joint venture between DRDO and NPOM, Russia, has been continuously upgrading the powerful, highly versatile BrahMos to increase its effectiveness and lethality against sea and land targets. BrahMos is the potent missile weapon system already inducted into the Armed Forces. Defence Minister Rajnath Singh has complimented the Brahmos, DRDO teams and industry for the successful flight test. Secretary, Department of Defence R&D and Chairman DRDO Dr G Satheesh Reddy appreciated the scientists and engineers for continuously putting efforts to maximize the weapon systems efficiency and more focus on indigenous content. Director General, BrahMos Shri Atul D Rane congratulated the joint teams of NPOM, Russia and DRDO teams involved in the test.

DOSHI ATHARVA BHARAT (TY A)

Inside This Issue

- 2 Message from the HOD
- 2 Electrical vehicles in India
- 3 Rafale jets
- 3 4D Printing technology
- 4 Results
- 4 Editorial

- NBA Accredited
- One faculty has completed M.Tech.
- 04 staffs are appearing for M.E./M.Tech. program.
- 34 - Students scored above 98/100 in various subjects.

Vision

To be recognized for excellence in mechanical engineering education reinforced by overall development.

Mission

1. To impart value based technical education in Mechanical Engineering.
2. To enhance the technical knowledge of students.
3. To make the students ready with various skill sets in Mechanical Engineering.
4. To motivate students for lifelong learning.

Message from the Head of Department

India is celebrating 73rd "Republic Day" On this occasion as we proudly said our country is developing in start-up sectors that ratio is increased as compare to last year. As academics concern of our college, I congratulate all pass out students, and welcome to newly admitted first year students. As we all are facing pandemic of 'COVID-19' from March 2020, in positive angle all the children of 15-18 age vaccination started from this month so that there is possibility of offline classes as per guideline of MSBTE it will implement. In this online learning process, I appeal all the students to develop their habit of reading reference book, text books of concern subjects so that online learning plus your own learning through books will get rigid knowledge to survive in industry or higher education also. This COVID-19 pandemic the world is facing very tough issue of survival of humans but due to hard effort of scientist we get lifeline through invented VACCINATION. We learned a lesson that nobody can stop living, so we have to move ahead by adopting three rules like use of hand sanitizer, wearing mask and maintaining social distance. In this pandemic situation, education cannot stop; we solve this problem by using engineering technology. Therefore, I can say that engineering technology is also a type of weapon to fight against invisible corona virus. I heartily congratulate all the students for showing excellent achievement in academics. Maintain consistency and do hard work to achieve your goal. Wish you all the best for coming semester.

Mr. S. V. Kulkarni

Electric Vehicles in India

India's commitment to the EV30@30 initiative - to reach a 30 percent sales share for EVs by 2030 - presents a cumulative investment opportunity of as large as INR 19.7 lakh crore (\$US266 billion). There has been a recent increase in public budgetary allocations and corporate investment in EVs in order to achieve this. Central and state governments have approved fiscal incentives for EVs, charging infrastructure, and manufacturing that are helping achieve parity in total cost of ownership with internal combustion engine (ICE) vehicles for several segments and use cases. Original equipment manufacturers (OEMs) and component manufacturers are investing in indigenous manufacturing and supply chains. EV start-ups are attracting significant venture funding due to their product and business model innovation, capturing as well as creating the market opportunity presented by EVs. The following four types of batteries are commonly used today in EVs: Lead Acid, Nickel Cadmium (NiCd), Nickel Metal Hydride (NiMH), Lithium - ion (Li-ion) - Lithium - ion batteries have higher specific energy relative to the other battery types. In the future, technology innovations with Li-ion and other battery technologies are expected to result in batteries with much higher specific energy and lower costs.

DOMBE PRASAD DHANANJAY (TY B)



RAFALE JETS



The five Rafale fighter jets that land in Ambala on Wednesday morning will resurrect the Number 17 Golden Arrows squadron of the Indian Air Force. It will take the IAF's squadron strength to 31. When all the 36 Rafale jets are delivered by 2022, it will take it to 32 squadrons, still well below the 42 squadrons of the sanctioned strength. The state-of-the-art 4.5 Generation Rafale jet can reach almost double the speed of sound, with a top speed of 1.8 Mach. With its multi-role capabilities, including electronic warfare, air defence, ground support and in-depth strikes, the Rafale lends air superiority to the Indian Air Force. The first batch of five Rafale fighter jets to be inducted into the Indian Air Force (IAF). The Rafale fighter jet will be the most advanced fighter aircraft in the IAF's fleet. Rafale is a twin-jet combat aircraft manufactured by Dassault Aviation. The aircraft is intended to perform air supremacy, interdiction, aerial reconnaissance, ground support, in-depth strike, anti-ship strike and nuclear deterrence missions.

/Sarawale Shraddha Keshav (TY A)

The Next Wave: 4D Printing and Programming the Material World

Now a new disruptive technology is on the horizon that may take 3D printing to an entirely new level of capability with profound implications for society, the economy, and the global operating environment of government, business, and the public. Programmable matter (PM), here described as 4D printing (4DP), has the economic, environmental, geopolitical, and strategic implications of 3D printing while providing new and unprecedented capabilities in transforming digital information of the virtual world into physical objects of the material world.³ The fourth dimension in 4D printing refers to the ability for material objects to change form and function after they are produced, thereby providing additional capabilities and performance-driven applications.

/Patil Komal Hanmant (TY A)



MSBTE RESULT: - SUMMER 2021**Second Year****Third Year**

Sr. No	Name of Student	Marks %	Sr. No	Name of Student	Marks %
1	/Sarawale Shraddha Keshav	91	1	Disale Prasad Pradip	96.67
2	/Patil Komal Hanmant	89.75	2	/Gohad Sumedha Trivikram	96
3	Gururaj Bhandarkavthe	89	3	Khandekar Hemant Rajgopal	94.78

❖ The students who scored above 98/100 in respective subjects

Sr.No	Name of Student	Sub.	Marks	Sr.No	Name of Student	Sub.	Marks
1	DISALE PRASAD PRADIP	ETM	100	18	KALE YASHRAJ NAVNATH	MEM	98
2	SOLANKAR PRAKASH BIRA	ETM	100	19	GHADAGE SANKET SATYAWAN	FMM	98
3	BAGAL TRUPTI BHAGWAT	ETM	100	20	SARAWALE SHRADDHA KESHAV	FMM	98
4	GOHAD SUMEDHA TRIVIKRAM	ETM	100	21	PATIL KOMAL HANMANT	FMM	98
5	SARADE KESHAV RAJENDRA	ETM	100	22	PATIL KOMAL HANMANT	MPR	98
6	MORE SAGAR SANTOSH	ETM	100	23	GAIKWAD SHUBHAM ANIL	MEM	98
7	DISALE PRASAD PRADIP	IHP	100	24	GAVADE VISHAL SANTOSH	MEM	98
8	MORE TEJAS BALASAHEB	ETM	99	25	DOMBE PRASAD DHANANJAY	FMM	98
9	GAIKWAD SURAJ PANDURANG	ETM	99	26	DOSHI ATHARVA BHARAT	MPR	98
10	YADAV NIKITA VITTHAL	MEM	99	27	DUDHALE PRAGATI MAHALING	ETM	98
11	GOHAD SUMEDHA TRIVIKRAM	IHP	99	28	NAIKNAWARE ROHAN KESHAV	AEN	98
12	KHANDAGALE PRATHAMESH SAHEBRAO	IHP	99	29	PATIL VIVEK SUBHASH	AEN	98
13	SARADE KESHAV RAJENDRA	IHP	99	30	PATIL SHUBHAM VINAYAK	AEN	98
14	GOHAD SUMEDHA TRIVIKRAM	AEN	99	31	DISALE PRASAD PRADIP	AEN	98
15	DISALE PRASAD PRADIP	IEQ	99	32	GOHAD SUMEDHA TRIVIKRAM	IEQ	98
16	SOLANKAR PRAKASH BIRA	IEQ	99	33	BAGAL TRUPTI BHAGWAT	IEQ	98
17	KOTHAWALE MAHESH ANIL	MEM	98	34	KADAM ADITI ARUN	IEQ	98

EDITORIAL-

It gives me a great pleasure to present the ninth volume of our departmental newsletter **IGNITION** to you which gives us the opportunity to put forth the achievements of our department. In this issue, we have covered different activity carried out at the Department of Mechanical Engineering. I am thankful to all the faculties & students who have contributed to this newsletter.

Mr. Y.D. Chavan