THE MET LEAGUE OF COLLEGES
MET
AS SHARP AS YOU CAN GET
Bhujbal Knowledge City
Institute of Technology, Polytechnic, Nashik
Approved by AICTE, DTE Mumbai & Affiliated to MSBTE

NEWSLETTER

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THE MET LEAGUE OF COLLEGES
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POLYTECHNIC

INSIDE

From Principal's Desk...

We all welcome you to the second issue of Newsletter of MET-Institute of Technology-Polytechnic, Bhujbal Knowledge City, Nashik.Our Institute has made tremendous progress in all areas academic, nonacademics, capacity building relevant to staff and students. After receiving Excellent Grade in External Institute Monitoring Conducted by MSBTE every year, Institute has now preparing for getting NBA (National Board of Accreditation) in upcoming years. I hope this will add one more feather of in the cap of MET regarding Mission of Imparting Quality Technical Education in the region.

I am confident that this issue of Department News Letter will send a positive signal to the staff, students and the person who are interested in the Technical education and Technology based activities. A News Letter is like a mirror which reflects the clear picture of all sorts of activities undertaken by a Department and develops writing skills among students in particular and teaching faculty in general. I congratulate the Editorial Board of this News Letter who have played wonderful role in accomplishing the task in Record time.

This semester has been full of achievement for our institute. I appreciate all the staff and Students associated with this Newsletter and hope it will comprise more valuable news in Future.

- Dr. Rajendra Narkhede

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Institute Vision :

To give emphasis and focus on the development of competent technocrats to accept need based challenges with a sense of social responsibility.

Institute Mission :

1. To incorporate the educational programme, from basic engineering to emerging trends.
2. To establish standards of education to meet the requirements of Technology and Industry.
3. To make continuous efforts to inculcate the sense of social responsibilities among students.

Mumbai Educational Trust

Our Vision

To shape professionals, to conquer the present and future challenges to the socio-economic fabric of our society, by institutionalizing search, development, research and dissemination of relevant knowledge through structured learning systems

Our Mission

To evolve, develop and deliver dynamic learning systems to equip professionals with conscience and commitment to excellence and courage to face business challenges.

Our Inspiration

Mahatma Jyotiba Phule (1827 - 1890) Shrimati Savitribai Phule (1831 - 1897)

विद्येविना मती गेली । मतीविना नीती गेली ।
नीतीविना गती गेली । गतीविना वित्त गेले ।।
वित्ताविना शुद्र खचले ।
इतके अनर्थ एका अविद्येने केले ।।

Lack of knowledge leads to indiscretion; Indiscretion leads to lack of ethics. Lack of ethics leads to absence of direction and momentum; Absence of direction and momentum results in bankruptcy. Such is the HAVOC caused by the lack of knowledge.

- Mahatma Jyotiba Phule

Our Faith

न चौर हार्यम् नव राज हार्यम् ।
न भातृभाज्यम् नच भारकारी ।।
व्यये कृते वर्धते एव नित्यम् ।
विद्याधनं सर्वधन प्रधानम् ।।

Knowledge can neither be stolen by a thief, nor snatched by a king. It is indivisible unlike ancestral property, it never burden the bearer, it multiplies manifold when offered to others.Knowledge is the supreme form of wealth.

INDUSTRIAL VISITS

Industrial visit to Summit Engineers and Consultants Pvt. Ltd. Nashik. The purpose of this Visit is to study about Mechatronics system ,Automation and Robotics.

Students at Summit Engineers

Industrial Visit at Jadhav Casting, Ambad MIDC, Nashik.

Students of Mechanical Engineering
during Industrial Visit

"The road to success is always under construction."

- Lily Tomlin

Visit at Solid Waste Management Project, to study about the need of specific waste management solutions that are backed by innovative technological intervention and specially engineered..

Students of Mechanical Engineering

Visit at Sewerage Water Treatment Plant, Nashik

The purpose of this visit to study about how we can remove contaminants from sewage to produce an effluent that is suitable for discharge to the surrounding environment.

Students of Mechanical
Engineering

Visit at Construction Site-Super Structure

Students of Civil Engineering
at Construction site

"If you look at innovation, it doesn't just occur in the lab."

- Michael Dell

"All our dreams can come true, if we have the courage to pursue them"

- Walt Disney

Do you know ?

"If the human eye were a Digital Camera it would have 576 Mega pixels"

VISIT AT IIT POWAI 17TH DECEMBER 2022

Students of Computer Engineering

"Nothing is impossible. The word itself says 'I'm possible!"

- Audrey Hepburn

Students of Information Technology Engineering

INDUSTRIAL VISIT AT SUMAGO INFOTECH 25TH NOVEMBER 2022

The company specializes in offering Web Designing, Web Application Development, Mobile Application Development, Software Development, Digital Marketing, Software Testing, Quality Assurance services, and many more.

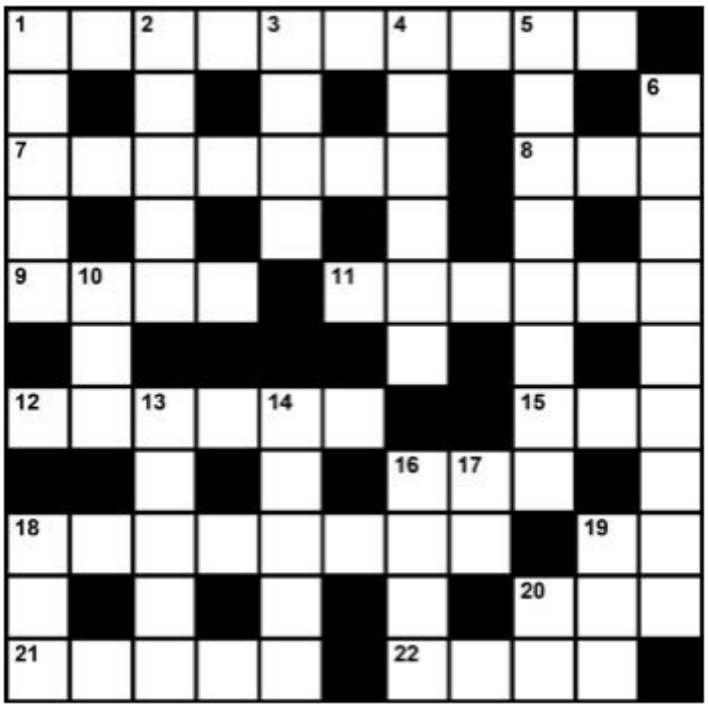
Students of Computer Engineering

"Don't sit down and wait for the opportunities to come. Get up and make them."

- Madam C.J. Walker

Engineering Crossword Puzzles

1.Gravity



ACROSS

1 Force in a forward motion
7 The subject of Newton's law
8 And others, for short
9 Oxidize
11 Specimen for testing
12 Figure out logically
15 Wave power can be extracted from this water body
16 Electrical conductor that makes a common connection between several circuits
18 Rotary engines that can be powered by the wind
19 Circle ratio
20 Medical pro
21 Battery ___: sets of identical batteries
22 Blend together

DOWN

1 Beeper rarely used now
2 Egg shapes
3 Candela and erg are examples of this
4 It was U.S.'s first space station in the 70s
5 Structure that forms a walkway above a road
6 Diagram of an electric circuit
10 Take advantage of
13 Physics Nobel prize winner who discovered new productive forms of atomic theory, Paul
14 They form the processing and memory units of a modern computer
16 Girder
17 The 50 states
18 Highest point
19 Aircraft engine container
20 Deciliter, for short

SOCIAL AWARENESS THROUGH INPLANT TRAINING

Students of Second year IT provide awareness through different sessions at different schools and public places under the guidance of Dr.Tanmay Dixit(Director of Cyber Sanskar).

Innovation is the outcome of a habit, not a random act.

- Sukant Ratnakar

2. Brainteaser: You're in a boat, and you throw out a suitcase. Does the water level increase?

STUDENTS ACHIEVEMENTS

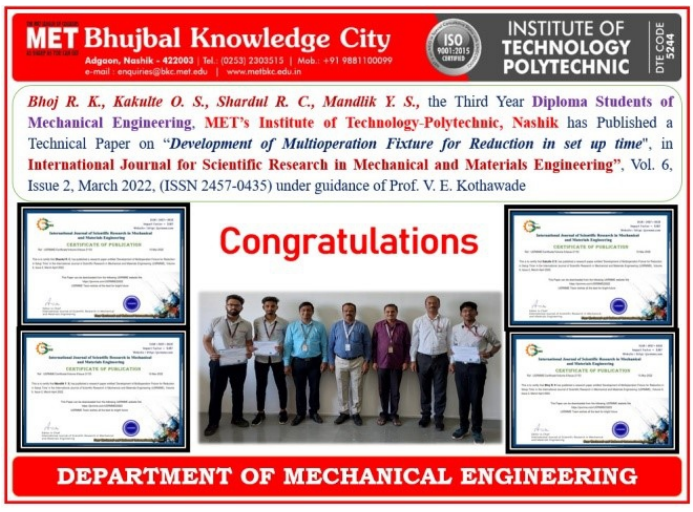
On the occasion of “National Voters Day” We had organized different competitions for the students.

Congratulations to all the Winners

Paper published at International Journal

Name of students- Bhoj R.K. Kakulte
O.S. Mandlik Y.S.

Congratulations



Do you know ?
"Ruskin Bond is the author of the book titled "A Little Book of India: Celebrating 75 years of Independence”

List of Students who have successfully completed SWAYAM NPTEL COURSES

S. No.	Name of Student	Class	Name of NPTEL Course
1	Patil Yash Sudhir	TYCO	Programming in Java
2	Ghodke Rushikesh Nandu	TYCO	Programming in Java
3	Takate Tanishka Deepak	TYCO	The Joy of Computing using Python
4	Borade Piyush Santosh	TYCO	Programming in Java
5	Chaudhari Krish Ravindr	TYCO	Introduction to Operating Systems
6	Prasad Mihir Ashok	TYCO	Introduction to Operating Systems
7	Ugale Shahu Hemant	TYCO	Introduction to Operating Systems
8	More Himanish Abhijit	TYCO	Introduction to Operating Systems
9	Wani Anmol Hemant	TYCO	Programming in Java
10	Boraste Rucha Yogesh	SYCO	Problem Solving through Programming in C
11	Kshitij Yogesh Shinde	SYCO	The Joy of Computing using Python
12	Pawar Sarthak Deepak	SYCO	The Joy of Computing using Python
13	Ghodke Prajakta Deepak	SYCO	Problem Solving through Programming in C
14	Mr.Ganesh Ashok Thorat	TYIF	Programming in Java
15	Ms.Siddhi Mahesh Belgaonkar	TYIF	Introduction to Cyber Security
16	Pratik Deep GirkarSYIF	SYIF	Programming in Java
17	Ms.Kashish Santosh Kirdat	SYIF	Programming in Java

List of Staff who have successfully completed SWAYAM NPTEL COURSES

S. No.	Name of Staff	Dept.	Name of NPTEL Course
1	Amit Pradip Bhuse	Computer	Programming, Data structures and Algorithms using Python
2	Anjusha Sudhir Patil	B.Tech-Science	Environmental Chemistry and Microbiology

Do you know ?
"Minus 40 degrees Celsius is exactly the same as minus 40 degrees Fahrenheit".

GLIMPSES OF EXPERT SESSION AND SEMINARS

Experts session on Creativity and Innovation By Mr Anand Kulkarni

Expert Session on Women's Empowerment

Objectives:

- Raising self-esteem and self-confidence of women and girls students.
- Ensuring girls' participation in all walks of life
- Women's decision-making over her work and income.

Beneficiaries: Girls students of B. Tech. and Diploma

Organized by Women's Grievances cell.

"What we learn with pleasure we never forget."

Seminar on "Basics of innovative Thinking"

Objectives:

- SCAMPER methodology for idea generation.
- Lean Techniques for resource utilization.
- I3G and 3A formula for innovation.
- Basic Principle for innovation.

Beneficiaries: Third Year Diploma Students.

Organized by Training and Placement Cell, MET BKC IOT-P, Nashik.

"We know what we are, but know not what we may be."

3 .Brainteaser: If the price of a shirt is increased by 20%, by how much percent should its consumption be reduced so that the expenditure remains the same?

TRAINING AND PLACEMENT CELL

Activities and Overview

- **Role of Training Placement Cell in B Tech Institute**
  B Tech Degree Engineering is a field that has always been synonymous with innovation. With the current wave of jobs in Engineering and entrepreneurship in India, supporting and nurturing the start-ups , entrepreneurial spirit among engineering graduates has become more important than ever. This is where training and placement cells (TPCs) come into play. Some of the Important activities we offer through Training and Placement Cell

Prof Umesh Pathak
Training and Placement Officer
MET IOTP B.Tech

- **Pre Placement Talks:** These Sessions introduce students to companies visiting the campus. Representatives discuss job roles, company culture, and expectations. It's a great opportunity for students to learn about potential employers.
- **Resume Scrutiny:** The placement cell reviews students' resumes, offering feedback on content, formatting, and presentation. A well-crafted resume is crucial for making a positive first impres-sionure, and expectations. It's a great opportunity for students to learn about potential employers.
- **Aptitude Tests:** Regular practice sessions for aptitude tests (quantitative, logical reasoning, and verbal) help students improve their problem-solving skills. These tests are common during recruitment processes.
- **Agroup Discussions (Gds):** GDs simulate real-world scenarios where students discuss specific topics. They learn to express opinions, listen actively, and collaborate effectively. GDs assess communication skills and teamwork.
- **Mock Interviews:** Conduct mock interviews to prepare students for actual job interviews. Provide constructive feedback on their responses, body language, and overall confidence.
- **Personal Interviews:** Arrange interviews with industry experts or alumni. Students gain exposure to different interview formats and receive personalized guidance.
- **Career Guidance Seminars:** Invite professionals from diverse fields to share their experiences. These sessions inspire students and provide insights into various career paths.
- **Personality Development Workshops:** Focus on soft skills like communication, time management, and leadership. A well-rounded personality enhances employability.
- **Employability Skills Training:** Cover topics such as email etiquette, professional behaviour, and workplace ethics. These skills are essential for success in any job.
- **Networking Events:** Organize interactions with alumni, industry leaders, and recruiters. Networking helps students build valuable connections.

Various Online Sessions Conducted Under

- A series of webinar for final year students on "Speaking English Effectively for Job Hunt.
  By Prof. S.G.Sharma and Prof. D.B.Aher
- A webinar for Second and Third Year students on "Career Opportunities after Diploma Engineering in Indian Defence Services-
  By Mr.Kishor Patil Retd.As a Sr.Officer-Indian Air Force
- Accelerating innovations throughArtificial Intelligence and Machine Learning.
  By Mr.Omkar Ranade,Crisil Ltd.,Pune
- Essential Strategies to Succeed in Your First Job
  By Nitin Dharmadhikari,Management Consultant
- Acquiring Industry 4.0 Skills
  By Mr.Virpaksh Mahant,Tata Motors Ltd.Pune

FACULTY AND STUDENT'S SPEAK

The Future Of IT Industry In India

The 21st century is earmarked as Infor-mation Technology driven and India is at the Centre of global attraction and considered as a knowledge powerhouse. The IT industry covers IT services, IT-enabled services (ITES), e-commerce (online business), Software and Hardware products. IT based services are indispensable for any organization to increase productivity, ease of doing business, and grow efficiently and economically in this competitive world. Information Technology not only contributed to the economic growth of the country but it has also made governance more competent and approachable. It has made access to gover-nment services and information easier and inexpensive. Information technology has also made management and delivery of government services – such as health services, Educational information, consumer rights and services etc. more meritorious with enhancing transparency. The IT industry is the backbone for our economy to prosper expon-entially and to generate millions of jobs. The exponential growth of the IT industry in India in the last two decades has changed the perception of the whole world about India's store-house of knowledge and skills and powered economic growth. The swift advancement within the IT

technologies and will play a leading role in the ongoing fourth industrial revolution globally.

The Atmanirbhar Bharat initiative of the current government is bringing big change in the IT sector. Earlier, the Hardware sector was somehow neglected. Now, focus is also on buil-ding hardware manufacturing in India. The biggest step is to start manufacturing integrated chips (IC's) in India, TATA has taken up initiative under atmanirbharbharat and the first man-ufacturing plant is being set up in Tamilnadu. India is expected to have a digital economy of $1 Trillion by 2025 .One of the largest electronics markets in the world antici-pated reaching $400 bn by 2025.

Indian Electronics Manufacturing Service (EMS) Industry is expected to grow 6.5x from $23.5 bn to reach $152 bn by 2025. The global electronics market is estimated to be over $2 tn. India's share in global electronics manuf-acturing has grown from 1.3% in 2012 to 3.6% in 2019. India's technology services industry can achieve $300-350 billion in annual revenue by 2025 if it can exploit the fast-emerging business potential in cloud, artificial intelligence (AI), cyber security and other emerging technologies,according to a report by industry body Nasscom and global consulting firm McKinsey. The report said domestic tech services could accelerate growth

industry and liberalisation policies such as reducing trade barriers and eliminating import duties on technology products by the Government of India are instrumental in the evolution of this industry. Also, various other government initiatives like setting up Software Technology Parks (STP), Export Oriented Units (EOU), Special Economic Zones (SEZ) and foreign direct investment (FDI) have helped this industry in attaining a leading position in the world IT industry.

The IT sector has increased its contribution to India's GDP from 1.2% in 1998 to almost 10% in 2019.According to NASSCOM, the sector aggregated revenues of 180 billion dollars in 2019 with export revenue standing at 99 billion dollars and domestic revenue 48 US billion dollars, growing by over 13%. As of 2020, India's IT workforce accounts for 4.36 million employees. The United States accounts for two-third of India's IT services exports. In the present time, when the COVID-19 pandemic has grappled the whole world and economies have been hard hit. The Indian IT industry is still showing positive signs and has the ability to overcome this exceptional catastrophe. It has arisen as a global economic force and a major contributor to the Indian economy in parti-cular and the world in general. In the last decade, India has emerged as an IT hub for the software companies of the

tby 2-4% over the next five years as industries worldwide continue to see rapid adoption of digitalization to make a faster recovery from the covid-induced disruptions.

Future belongs to India with a great share of work from different parts of the world and placement of Indian experts across the globe. Central government has initiated a trans-formation process in the education sector. In the next few years, the last year of a degree course will be treated as an R & D year and the syllabus is being developed based on the latest technological advancements, skills and knowledge. This will surely add value to our graduates not just as job seekers however will be job creators.

Prof. Sanjeev Patil
HOD IT Dept.

Why 'Robotics and Automation'?

'Robotics and Automation' is an immerging field of engineering. It deals with design of robots, application of robots and the use of computer for manipulation and processing of robots. Robots are used in industries to speed up the manufacturing process. Robots are also used in the field of nuclear science, sea-exploration, servicing of trans-mission electric

signals, designing of bio-medical equipments etc. Robotics requires the application of computer integrated manufacturing, electronics engineering, mechanical engineering, electrical engineering, software engineering.

Automation and Robotics Engineering is the use of control systems and information technologies to reduce the need for human work in the production of goods and services. In the scope of industrialization, automation is a step beyond mecha-nization. As the recent global career trend in robotics suggests, fields as diverse as surgery, modern warfare and nanotechn-ology have registered a remarkable increase recently in their demand for technical expert sand researches in robotics.

experimental robotics for the military, medical and automotive industries, the future of robotics engineering certainly offers a variety of opportunities for professionals entering the field. From assembling to bringing machines to life, automation and robotics engineers have been making our lives stress-free through in more ways than we think. Not only do they build, but they also maintain, repair, and develop new models of the machines we use. Pursuing a career in Automation and Robotics engineering is no small deal as you will be responsi-ble for several things that make the world a better place.

world and Indian software companies have taken prominent positions in the global IT sector. India has become the world's largest sourcing destination for the IT industry. Online retailing, cloud computing and e-commerce are all contributing to the speedy growth of the IT industry. The rate of growth in the IT sector for 2019-20 is approximately ten percent.

The Indian IT industry has grown rapidly with an exponential growth rate after the economic reform of 1991-92. Indian IT companies have set up thousands of centres within India and around 80 countries across the world. The majority of global corporations are sourcing IT-ITES from the Indian IT industry, accounting for approx-imately 55 percent of the global service sourcing market (US$ 200-250 billion) in 2019-20. The market size (especially export) of the IT industry has grown manifold from approx. 67 billion US dollars in 2008-09 to 191 billion US dollars in 2019-20. The revenue is further expected to grow in the coming years with an accelerating growth rate and expe-cted to reach 350 billion US dollars by 2025. The remarkable feature of India's IT industry is that along with its expansion in terms of market size it is also incrementally 'adding a significant share to India's gross domestic product (GDP) and consequently boosting the growth and development of the country.

India's digitally skilled pool has grown over the period and accounted for around 75 percent of global digital talent. India's four large IT companies (TCS, Infosys, Wipro, HCL Tech) have employed more than one million employees. New IT-based technologies such as telemedicine, remote monitoring, etc. are expanding and boosting the demand in the digital economy. The rollout of fifth-generation (5G) communication technology, growing adoption of artificial intelligence, Big Data analytics, cloud computing and the Internet of Things (IoT) will further expand the size of the IT industry in India. As the size of India's digital economy is increasing, IT companies are establishing their centres in tier II and tier III cities which will further enhance the growth and reduce the existing disparities. The IT industry has steadily augmented and accelerated the growth of India. This Industry absorbs a large pool of Indian skilled human resources which makes the country a global IT hub. The IT Industry has been instrumental in transforming the whole Indian economic and governance landscape. India's IT industry is gaining footsteps in new disruptive

'Robotics and Automation' course is very important in

- Artificial Intelligence
- Computer Aided Manufacturing
- Computer Integrated Manufacturing System
- Computational Geometry
- Robot Motion Planning
- Robot Manipulators

Career Prospects

Robotics engineering is one of the recognized profes-sional careers in India. There are ample opportunities in this field for robotics engineers both in India as well as in abroad countries. From manufacturing line robots to with the robotic hardware you will be working with.

3. Systems Thinking

Robots are very complicated systems. As an Automation and Robotics Engineer, you must be good at mechanics, electronics, electrics, programming, mechanics, sensing and even cognition and psychology. Systems thinking are a comprehensive approach to analysis. It focuses on the way that a system's parts int-eract, how they work overtime, and how they perform within the context of larger systems.

TECHNOLOGICAL DEVELOPMENT OF INDIA

The technological development in India is increasing rapidly, and that is why India stands third among the

Skills of an Automation and Robotics Engineer

1. Lifelong Learning

Lifelong learning and developing an interest in design, engineering, and math will be very important as they are the skills needed in becoming an Automation and Robotics Engineer.

2. Programming Mindset

C/C++, Python, Java, C#/.NET, MATLAB, Assembly, Hardware Description Languages (HDLs), LISP, Industrial Robot Languages, BASIC / Pascal.

Still, the most important thing is to find a language that feels natural for you and fits overall development of its science and technological sectors.

India As Emerging Technology in The World

India has also grown its biological sector through implementing appropriate research & resources materials. One of the examples of India's Biotechnological growth can be seen during the recent corona pandemic. The Department of Biotechnology of India has developed critical modern vaccines, therapeutic bioactive molecules, hybrid high-yielding seeds, tissue-cultured propagules of agriculture, artificial seeds, bio fertilizers, and other specialized components.

INDIA AS A LARGE HUB OF INNOVATION AND TECHNOLOGY

From time to time, India has worked on nurturing its talents through implementing various skillenhancing programs. To encourage the younger generation and use indigenous technical support, many monetary and other incentives are granted by the government.

Institutions such as Krishi Vigyan Kendras of ICAR, extension centers and poly technology centers of NRDC, and the Ministry of Human Resources has been extensively serving the required knowledge to the innovative young

In August 2021, Union Minister of State Science and Technology (Independent Charge), Dr. Jitendra Singh declared that the food storage technology - Gam-ma Radiation has been shared with the private participants. Presently, 26 gamma radiation processing manufacturers are operating in India in the private,

most lucrative investment options in technological transactions in the world. Modern India is more inclined towards science and technology. This data shows how investments in India have empowered the

minds of India. As per the PRSIndia, Rajya Sabha passed the Indian Institutes of Information Technology Laws Bill on September 22, 2020. The motive behind incorporating the bill is to provide essential knowledge in the field of Information Technology to deliver feasible solutions to the problems faced by the country.

Recent Technical Development in India

These are some of the recent developments that have been happened in India: In July 2021, ISRO announced that its geoimaging satellite named 'EOS-03', which will enable near-realtime monitoring of natural calamities like cyclones and floods is scheduled for launch in the third quarter of 2021 and Chandrayaan-3 is likely to be originated in the third quarter of 2022.

In August 2021, the Deep Ocean Mission (DOM) received central government approval, which will be incorporated by the Ministry of Earth Sciences at an estimated budget of Rs. 4,077 crore (approximately US$ 548.54 million) for five years. These Deep-Sea technologies such as manned submersibles can go as deep as 6,000-metre water depth, which enables deep-sea exploration, mining of deep-sea mineral resources, and marine biology research.

semigovernment, and government sectors for the irradiation of several products. As per the Science and Engineering Research Board, DST & GE India are likely to come into a partnership for Advanced Technology Research. Forecasting shows the fact that in the upcoming five years, the academic institutions will be provided with funding over US$ 2.68 million for research and development in the field of energy, aviation, and healthcare.

KARTIKI S. MALODE
FYIF

What is Industry 4.0—the Industrial Internet of Things

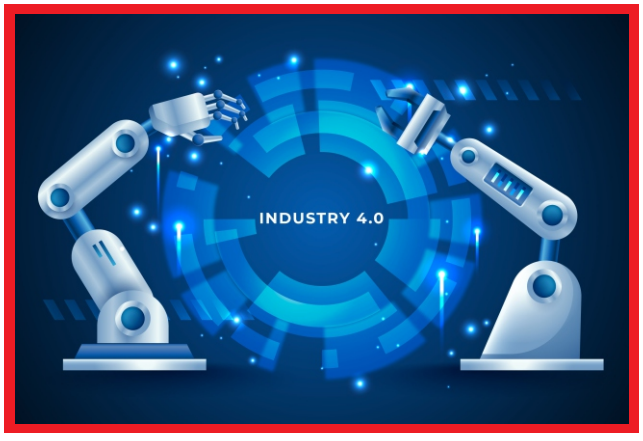
The world of manufacturing is changing. To survive and thrive now, you have to be willing to

invest in Industry 4.0.

- **The Evolution of Industry from 1.0 to 4.0**
- **Basic IIoT Concepts and Glossary of Terms**
- **Smart Manufacturing Use Cases**
- **Whom is Industry 4.0 For?**
- **Benefits of Adopting an Industry 4.0 Model**
- **How Epicor Can Help Your Business**
- **Challenges to Consider and Overcome**

Industry 4.0 refers to a new phase in the Industrial Revolution that focuses heavily on interconnectivity, automation, machine learning, and real-time data. Industry 4.0, which encompasses IIoT and smart manufacturing, marries physical production and operations with smart digital technology, machine learning, and big data to create a more holistic and better connected ecosystem for companies that focus on manufacturing and supply chain management. While every company and organization operating today is different, they all face a common challenge—the need for connectedness and access to realtime insights across processes, partners, products, and people

The world of manufacturing is changing. To survive and thrive now, you have to be willing to invest in Industry 4.0. This resource will help you get started



That's where Industry 4.0 comes into play.

Industry 4.0 isn't just about investing in new technology and tools to imp-rove manufacturing efficiency—it's about revolutionizing the way your entire business operates and grows. This resource will provide you with an in-depth overview on the topic of Industry 4.0 and IIoT, including info-rmation on the following:

Evolution of Industry from 1.0 to 4.0

Before digging too much deeper into the what, why, and how of Industry 4.0, it's beneficial to first understand how exactly manufacturing has evolved since the 800s. There are four distinct industrial revolutions that the world either has experienced or continues to experience today.

The First Industrial Revolution

The first industrial revolution happened between the late 1700s and early 1800s. During this period of time, manufacturing evolved from focusing on manual labor performed by people and aided by work animals to a more optimized form of labor performed by people through the use of water and steam-powered engines and other types of machine tools.

Industry 4.0 takes the emphasis on digital technology from recent decades to a whole new level with the help of interconnectivity through the Internet of Things (IoT),

The Second Industrial Revolution

In the early part of the 20th century, the world entered a second industrial revolution with the introduction of steel and use of electricity in factories. The introduction of electricity enabled manufacturers to increase efficiency and helped make factory machinery more mobile. It was during this phase that mass production concepts like the assembly line were introduced as a way to boost productivity.

The Third Industrial Revolution

Starting in the late 1950s, a third industrial revolution slowly began to emerge, as manufacturers began incorporating more electronic—and eventually computer—technology into their factories. During this period, manufacturers began experiencing a shift that put less emphasis on analog and mechanical technology and more on digital technology and automation software.

Rushikesh Bankar
Second Year

The Fourth Industrial Revolution, or Industry 4.0

In the past few decades, a fourth industrial revolution has emerged, known as Industry 4.0.

ARTICLE ON AZADI KA AMRIT MAHOTSAV.

access to real-time data, and the introduction of cyber-physical systems. Industry 4.0 offers a more comprehensive, interlinked, and holistic approach to manufacturing. It connects physical with digital, and allows for better collaboration and access across departments, partners, vendors, product, and people. Industry 4.0 empowers business owners to better control and understand every aspect of their operation, and allows them to leverage instant data to boost productivity, improve processes, and drive growth.

of Independence Day and this will end post a year on 15 August 2023

On 12th March 1930, Mahatma Gandhi started Dandi Yatra from Sabarmati Ashram for the awakening of self-reliance and self-respect of the country, and on this day in 2021, the symbolic Dandi Yatra was started by Prime Minister, Shri Narendra Modi which marks the revival of our journey of self-reliance and self-respect with the beginning of Azadi Ka Amrit Mahotsav.

Azadi Ka Amrit Mahotsav is dedicated to the people of India who have not only been instrumental in bringing India far evolutionary journey but also hold within them the power and potential to enable the vision of Prime Minister Modi's to activate India 2.0 which is fueled by the spirit of Atmanir-bhar Bharat.

The celebration of the Amrut Mahotsav of Independence was started of the Dandi March, the \Amrut Mahotsav of Independence was inaugurated by giving the green light to the Dandi March. March 12 was chosen because Mahatma Gandhi started the Dandi Yatra against the British 91 years ago, on March 12, 1930. There are five pillars of the nectar festival of independence:

River because all the people were joining the procession wearing white Khadi.

According to The Statesman, the official government newspaper which usually played down the size of crowds at Gandhi's functions,100,000 people crowded the road that separated Sabarmati from Ahmadabad. The first day's march of 21 km ended in the village of Aslali, where Gandhi spoke to a crowd of about 4,000. At Aslali, and the other villages that the march passed through, volunteers collected donations, registered new satyagrahis, and received resignations from village officials who chose to end co-operation with British rule.

As they entered each village, crowds greeted the marchers, beating drums and cymbals. Gandhi gave speeches attacking the salt tax as inhuman, and the salt satyagraha as a "poor man's struggle". Each night they slept in the open. The only thing that was asked of the villagers was food and water to wash with. Gandhi felt that this woud bring the poor into the struggle for sovereignty and self-rule, necessary for eventual victory.

Chaitanya S. Marathe
FYIF

4. Brainteaser: If 12 workers can build a wall in 9 days, how many days will it take for 8 workers to build the same wall?

Do you know ?
"Earth is not a perfect sphere, has a squishy interior, and its magnetic pole is moving west. The driest place on Earth is Atacama, and Antarctica has the largest ice sheet. Coral reefs are the largest living structure on Earth".

Azadi Ka Amrit Mahotsav is an initiative of the Government of India to celebrate and commemorate 75 year of progressive Independent India. Through Azadi Ka Amrit Mahotsav India is celebrating the glorious history of it's people, cuture and achi-evements. It is an embodiment of all that is progressive about India's sociocultural, political and economic identity.

The official journey of "Azadi ka Amrit Mahotsav" was started on 12th March 2021 from Sabarmati Ashram when Prime Minister, Shri Narendra Modi flagged off a 75-week long festival to com-memorate 75 years of India's Independence.This started a 75-week countdown to our 75th anniversary

- The struggle for independence - New ideas for the progress of the nation on the occasion of the 75th anniversary of independence.
- The steps to be taken on the 75th anniversary of independence and
- The resolutions made by the citizens of the country on the 75th anniversary.

March to Dandi

On 12 March 1930, Gandhi and 78 satyagrahis, among whom were men belonging to almost every region, caste, creed, and religion of India, set out on foot for the coastal village of Dandi, Gujarat, 385 km from their starting point at Sabarmati Ashram. The Salt March was also called the White Flowing

"THE FUTURE OF AUTOMATION AND AI"

Automation & Artificial intelligence (AI) are transforming Busine-sses & Will contribute to economic growth via contributions to productivity. They will also help address "Moonshot" societal challenges in areas from health to climate change.

At the same time, these technologies will transform the nature of work and the workplace itself. Machines will be able to carry out more of the tasks done by humans, complement the work that humans do, and even perform some tasks that go beyond what humans can do. As a result, some occupations will decline, others will grow, and many more will change.

Acceleration Progress in AI & Automation Is Creating Opportunities For Businesses, The Economy & Society-

Automation & AI are not new, but recent technological progress is pushing the frontier of what machines can do. Our research suggests that society needs these improvements to provide value for businesses, contribute to economic growth, and make once unimaginable progress on some of our most difficult societal challenges.

Rapid Technological Progress-

Beyond traditional industrial automation and advanced robots, New generations of more

advanced deep learning techniques deploying artificial neural networks could account for as much as $3.5 trillion to $5.8 trillion in annual value, or 40 percent of the value created by all analytics techniques.

capable Autonomous System are appearing in environments ranging from autonomous vehicles on roads to automated check-outs in grocery stores. Much of this progress has been driven by improve-ments in systems and components, including mechanics, sensors and software. AI has made especially large strides in recent years, as machine-learning algorithms have become more sop-histicated and made use of huge increases in computing power and of the exponential growth in data available to train them. Spectacular breakthroughs are making headlines, many involving beyond-human cap-abilities in computer vision, natural language processing, and complex games such as Go.

Potential to transform Businesses & Contribute to

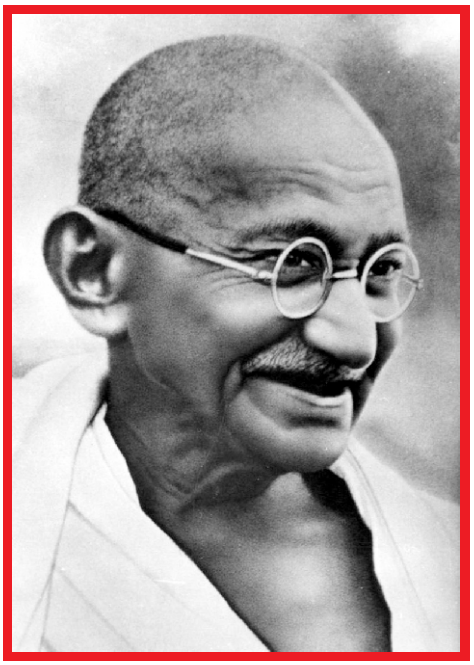
Economic Growth-

These technologies are already generating value in various products and services, and companies across sectors use them in an array of processes to personalize product recommendations, find anomalies in production, identify fraudulent transactions, and more. The latest generation of AI advances, including techniques that address classification, estimation, and clustering problems, promises significantly more value still. An analysis we conducted of several hundred AI use cases found that the most

Nakul chandrakant zete

B-tech in automation & robotics

“AAZADI KA AMRUT MAHOTSAV”
MAHATMA GANDHI



Mahatma Gandhi is my favourite leader. His full name was Mohandas Karamchand Gandhi. He was born at porbandar , Gujarat on 2nd octomber 1869.His father was karmachand and mother was Putalabai.He was married with Kasturba Makhanji Kapadia in May 1883 . He took his primary education at porbandar .He took his High school education at Alfre

High school,Rajkot. He became graduate from samaldas collage. He became Barrister in England and started his law practice in Africa In Africa he started movement for black minorities. He began freedom movements against British to quit india.He was our great freedom fighter.

Better known as the Mahatma, or great soul, Gandhi was an Indian lawyer who led his country to freedom from British colonial rule in 1947. He was assassinated months later at age 78. Gandhi is most famous for his philosophy of nonviolence that has inspired civil rights leaders around the world.

Gandhiji was a very simple man. He was also called “Bapu” He is called “Father Of Nation” today. He believed in truth and non violence . He was dead in January 30, 1948, Delhi.

Martyr's Day is observed in India on several dates. On 30 January, Martyrs' Day is commemorated to honour Mahatma Gandhi. The day is also known as Shaheed Diwas.

Gandhi identified his overall method of non-violent action as Satyagraha. Gandhiji's Satyagraha influenced eminent personalities such as Nelson Mandela and Martin Luther in their struggle for freedom, equality, and social justice. Mahatma Gandhi's Satyagraha was based on true principles and non-violence.

"Live as if you were to die tomorrow. Learn as if you were to live forever."

- Mahatma Gandhi

Rutuja Devidas Rasal
TY-IF

growth. India is among the topmost countries in the world in the field of scientific research, positioned as one of the top five nations in the field for space exploration. The country has regularly undertaken space missions, including missions to the moon and the famed Polar Satellite Launch Vehicle (PSLV).

India is likely to take a leading role in launching satellites for the SAARC nations, generating revenue by offering its space facilities for use to other countries.

As of November 2021, the number of universities in India stood at 1,019.

DEVELOPMENTS / INVESTMENTS:

With support from the Government, considerable investment and development has incurred in different sectors such as agriculture, healthcare, space research, and nuclear power through scientific research. For instance, India is gradually becoming self-reliant in nuclear technology.

Science and Technology Industry

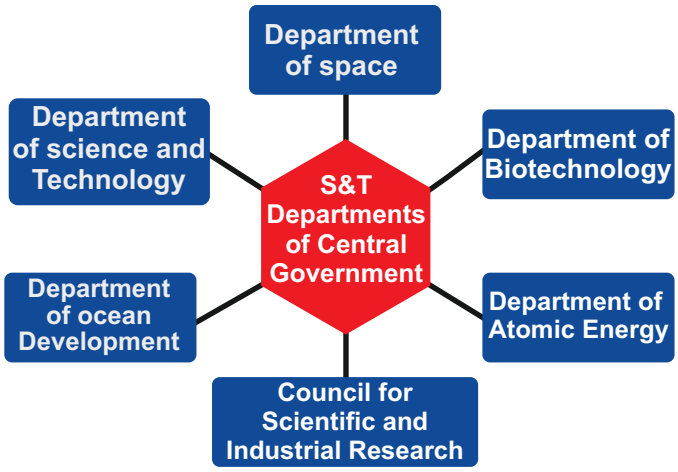
5. Brainteaser: Find the average of cubes of first 7 consecutive natural numbers.

Do you know ?
Kerala state has released India’s first citizen-driven state-level Bird Atlas.

At rank 48, India stands among the top 50 countries in the Global

INTRODUCTON

India ranks third among the most attractive investment destinations for technology transactions in the world. Modern India has had a strong focus on science and technology, realising that it is a key element for economic



India now ranks 46 among 50 countries in the Global Innovation Index (GII); this is an improvement from the 48th position in 2020. The Government is extensively promoting research parks technology business incubators (TBIs) and (RPs), which would promote the innovative ideas till they become commercial ventures.

IT spending in India is estimated to reach US$ 93 billion in 2021 (7.3% YoY growth) and further increase to US$ 98.5 billion in 2022.

India's National Artificial Intelligence Strategy prepared by NITI Aayog outlined a way forward to harness the potential of Artificial Intelligence (AI) in different fields. Accenture offers a frame work for assessing the economic effect of AI for selected G20 countries in its latest AI research studies and forecast that AI will raise India's annual growth rate by 1.3% points by 2035.

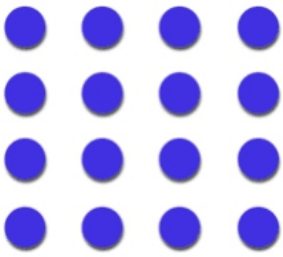
India ranked 46th in the Global Innovation Index for 2021. In the Bloomberg Innovation Index, 2021, India ranked 50th in terms of innovations. In South Asia, India is the only country to be represented on the index.

India ranks 10th in the Global Cybersecurity Index 2020 that was launched by the International Telecommunication Union.

Patel Archie

Engineering Crossword Puzzles

6. CIRCLES: Without taking your pencil off of the paper, use six continuous, straight lines to connect all of the sixteen circles shown below.



7. Brainteaser: There are 50 bikes, each with a tank that holds enough gas to go 100 km. Using these 50 bikes, what is the maximum distance you can go?

Do you know ?
India has announced to form 150 'Villages of Excellence', with the technical assistance of Israel.

Do you know ?
"Karnataka state has launched the Brain Health Initiative, for the first time in India".

ग्रंथालया मार्फत घेण्यात आलेले उपक्रम 2022

1.14 जानेवारी ते 28 जानेवारी 2022 या कालावधीत "मराठी भाषा संवर्धन पंधरवडा" साजरा.

मराठी साहित्याचे "ग्रंथ प्रदर्शन" मा. प्राचार्य डॉ.राजेंद्र नारखेडे सर व प्रमुख पाहुणे मा.श्री.दिपक परदेशी सर यांच्या हस्ते ग्रंथालय शास्त्राचे जनक डॉ .एस.आर. रंगनाथन यांच्या प्रतिमेचे पूजन करुन उद्घाटन संपन्न झाले.या वेळी मराठी भाषेत निबंध / कविता लेखन स्पर्धा घेण्यात आली. सर्व विभाग प्रमुख ,प्राध्यापक वर्ग व ग्रंथालय कर्मचारी उपस्थित होते.

2. 26 फेब्रुवारी रोजी मराठी कवी व ज्ञानपीठ पुरस्कार विजेते ज्येष्ट मराठी साहित्यिक "कुसुमाग्रज" उर्फ श्री वि.वा.शिरवाडकर यांच्या जन्मदिवस "मराठी भाषा गौरव दिन" म्हणून साजरा केला.

सर्व प्राध्यापक वर्गासाठी महिला दिनाचे औचीत्त्य साधून "नेत्र तपासणी" डॉ .अर्पित शहा यांच्या सहकार्याने अभियान राबविण्यात आले व महाविद्यालयीन विद्यार्थ्यानी व महिला प्राध्यापक वर्ग मध्ये कर्करोग जागरुकता या विषयावर सुप्रसिद्ध वैद्यकीय कर्करोग तज्ञ डॉ. शैलेश अर्जुन बोंदार्डे यांचे व्याख्यान आयोजित करण्यात आले होते.

महाविद्यालयीन विद्यार्थ्यानमध्ये मराठी भाषा व सांस्कृतिक विविधता जोपासणे आणि त्या बाबत जागरुकता निर्माण करणे हा या मागचा उद्देश आहे या निमित्ताने, वाचकांमध्ये आकलन व तर्क शक्ती वाढावी, सकारात्मक विचार व दृष्टी निर्माण व्हावी.वाचनाची सवय लागणे या मुख्य उद्देश्याने मराठी साहित्यिकांचे व्याख्खान आयोजित केले होते. श्री.विनायक रानडे (संस्थापक - ग्रंथ तुमच्या दारी) व श्री.स्वानंद बेदरकर (नामवंत लेखक /कवी) यांचे मार्गदर्शन लाभले.

3.दि.8 मार्च 2022 रोजी
"जागतिक महिला दिन"म्हणून साजरा

Congratulations

"Academic Achievements"

Meritorious students of winter 2022 Exam

S.No.	Name of Student	Branch	Class	Percentage	Rank
1	SHETKE SIMRAN SACHIN	CE	TYCE-A	90.50%	1
2	ROKADE TEJAS JALINDAR			89.30%	2
3	AHIRE SANSKRUTI SANJAY			86.00%	3
4	MAHALE HARSH JITENDRA	CE	TYCE-B	78.20%	1
5	BHAITA MANASI PINTU			75.50%	2
6	BORADE ASTHA PRAMOD			75.30%	3
7	MIHIR ASHOK PRASAD	CO	TYCO	92%	1
8	GHODKE RUSHIKESH NANDU			91.56%	2
9	JEJURKAR SHREYA PUNDLIK			91.22%	3
10	THORAT GANESH ASHOK	IF	TYIF	90.12%	1
11	DEVKAR RUTUJA DHANAJI			88.94%	2
12	JADHAV DATTATRAY N			88.59%	3
13	KHARATE MONALI BALU	EE	TYEE	76.25%	1
14	MOHAMMAD BILAL RASHIDEE			71.25%	2
15	ROY ROODRESH SUBRATA			68.13%	3
16	KULKARNI AAYUSHI VAIBHAV	ME	TYME	85.14%	1
17	MORE SUYASH SANJAY			84.86%	2
18	NIKAM SAKSHI SANJAY			83.24%	3

Congratulations

Meritorious students of summer 2023 Exam

S.No.	Name of Student	Branch	Class	Percentage	Rank
1	SIMRAN SHETKE	CE	TYCE-A	89.95%	1
2	TEJAS ROKADE			88.37%	2
3	VISHAKHA PAWAR			85.37%	3
4	HARSH MAHALE	CE	TYCE-B	80.16%	1
5	ASTHA BORADE			78%	2
6	MANSI BHAITA			77.68%	3
7	MIHIR ASHOK PRASAD	CO	TYCO	92.23%	1
8	GHODKE RUSHIKESH NANDU			91.77%	2
9	PATIL YASH SUDHIR			90.4%	3
10	JEJURKAR SHREYA PUNDLIK			90.4%	3
11	DEVKAR RUTUJA DHANAJI	IF	TYIF	88.53%	1
12	JADHAV DATTATRAY N			86.27%	2
13	WANKHEDE JANHAVI SHRIKAN			84.8%	3
14	BHANDARE KRUSHNA VIKAS	EE	TYEE	85.33%	1
15	ZADE UMESH SHRAVAN			83.38%	2
16	PATEL KRISHN PARESHBHAI			81.83%	3
17	MORE SUYASH SANJAY	ME	TYME	88.11%	1
18	KULKARNI AAYUSHI VAIBHAV			86.44%	2
18	KULKARNI AAYUSHI VAIBHAV			86.33%	3

VARIOUS ACTIVITIES IN MET

At a Glance.....

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शारवानिहाय प्रवेश क्षमता

क्र.	अभ्यासक्रमाचे नाव	प्रवेश क्षमता
1	सिव्हील इंजिनिअरींग (Civil)	१२०
2	मेकॅनिकल इंजिनिअरींग (Mechanical)	९०
3	इलेक्ट्रिकल इंजिनिअरींग (Electrical)	६०
4	कॉम्प्युटर इंजिनिअरींग (Computer)	६०
5	इन्फॉर्मेशन टेक्नोलॉजी इंजिनिअरींग (Information Technology)	६०

प्रवेशा संबधीत अधिक माहितीसाठी संपर्क

डॉ. राजेंद्र नारखेडे, प्राचार्य. (+९१ ९८५०८४५३५१)

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मागासवर्गीय विद्यार्थ्यांकरिता शिष्यवृत्ती योजना

(SC/ST/OBC/VJ/NT/SBC)

* खुला प्रवर्ग (EBC) विद्यार्थ्यांसाठी राजर्षी छत्रपती शाहू महाराज शिष्यवृत्ती योजना

* डॉ. पंजाबराव देशमुख वसतीगृह निर्वाह भत्ता योजना

Our Recruiters

Dhoot Transmission, Cognizant, VIP, RDC Concrete, Godrej, Infosys, GKN Aerospace, Mahindra, L&T, Epiroc, Force Motors, Persistent, Winjit, Kirloskar, D-MAL, ThyssenKrupp, John Deere, ITC, Bosch, Hyundai, Bajaj, Tata Motors, Jindal Saw Ltd. Total Pipe Solutions, Omkar Systems

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Sr.No.	Course Code	Name of Course	Department Rating
1	CE	Civil Engineering	Excellent
2	ME	Mechanical Engineering	Excellent
3	EE	Electrical Engineering	Excellent
4	IF	Information Technology	Excellent
5	CO	Computer Engineering	Excellent

For Admission Enquries, Contact

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Prof Amol Vadnere 9423927650	**Prof Bhagyashree Dhande** 9011025007	**Prof Umesh Pathak** 9850274436