



**Maratha Vidya Prasarak Samaj's**

**Rajarshi Shahu Maharaj Polytechnic, Nashik**

**Udoji Maratha Boarding Campus, Near Pumping Station, Gangapur Road, Nashik-13.**

**RSM POLY**

**Affiliated to MSBTE Mumbai, Approved by AICTE New Delhi, DTE Mumbai & Govt. of Maharashtra, Mumbai.**

**Newsletter Published Monthly**

**Vol: III, Issue: 8**

## **RSM POLY NEWSLETTER – AUG 2021**

### **ABOUT MVP SAMAJ**

The **Maratha Vidya Prasarak Samaj** is one of the most prestigious centers of learning in the State of Maharashtra. It manages 486 educational units and is one of the premier educational hub in the Nashik district.

At present, more than 2 lakhs of students are pursuing education. Over past 107 years, the institute has stood the test of time to become legend of unparalleled stature. History says that the credit for the birth of M.V.P. Samaj goes to the young, enthusiastic & devoted team of social workers and educationists who were inspired by the lives of Mahatma Jyotiba Phule, Savitribai Phule and Rajarshi Shahu Maharaj of Kolhapur. These young leading lights include Karmaveer Raosaheb Thorat, Bhausaheb Hire, Kakasaheb Wagh, Annasaheb Murkute, Ganpat Dada More, D. R. Bhonsale, Kirtiwanrao Nimbalkar and Vithoba Patil Khandalaskar, who laid the foundation of the Samaj. They were the men who envisioned the culture and knowledge centric society. The great visionaries of MVP Samaj rightly laid the "Well being and happiness of masses" as the motto for the Samaj.

### **ABOUT RSM POLYTECHNIC**

The **Rajarshi Shahu Maharaj Polytechnic** has been established in the year 2008, at the central place in Nashik. It is affiliated to MSBTE, Mumbai and approved by Government of Maharashtra, DTE Mumbai and the AICTE, New Delhi. The Polytechnic is in the process of Accreditation and Gradation. The Polytechnic has well-equipped and well-furnished laboratories, workshop and hostel facilities. Every department has separate computational facilities along with LAN, Wi-Fi and necessary software. At present the RSM Polytechnic provides three-year courses leading to Diploma in Engineering of MSBTE, Mumbai in the five disciplines: Mechanical Engineering, Computer Technology, Electronics and Telecommunication Engineering, Information Technology and Electrical Engineering.

### **VISION AND MISSION**

#### **VISION:**

- To Empower the Common Masses by providing Quality Technical Education.

#### **MISSION:**

- To create and implement innovative best practices to achieve academic excellence.
- To enhance the overall development of students by imparting essential skills.
- To inculcate principles of professional activities by promoting industry institute interaction and entrepreneurial skills.
- To create an environment awareness for sustainable development.

**Admissions Open for First Year and Direct Second Year Diploma Engineering**



मराठा विद्या प्रसारक समाजाचे  
**राजर्षी शाहू महाराज पॉलिटेक्निक, नाशिक**  
उदोजी मराठा बोर्डिंग कॅम्पस, गंगापूर रोड, नाशिक-१३  
फोन नं. ०२५३-२३११०१८, २३११०१९

**प्रथम वर्ष व थेट  
द्वितीय वर्ष प्रवेश**

शाखा	कोड	क्षमता
मेकॅनिकल इंजिनिअरींग	524761210	60
कॉम्प्युटर टेक्नोलॉजी	524725110	60
इलेक्ट्रॉनिक्स अँड टेलीकम्युनिकेशन इंजिनिअरींग	524737210	60
इन्फॉर्मेशन टेक्नोलॉजी	524724610	60
इलेक्ट्रीकल इंजिनिअरींग	524729310	60

**प्रवेशासाठी पात्रता**

**प्रथम वर्ष**

\* इयत्ता १० वी पास

**थेट द्वितीय वर्ष**

\* इ. १२ वी सायन्स, एम.सी.व्ही.सी., व्होकेशनल, टेक्निकल  
\* आय.टी.आय. (कमीत कमी दोन वर्षांचा कालावधी)

वैशिष्ट्ये : \* उच्च शिक्षित व अनुभवी प्राध्यापक वर्ग \* सर्व प्रकारच्या शासकिय स्कॉलरशिप योजना लागू \* नाशिक शहराच्या मध्यवर्ती ठिकाणी  
\* सुसज्ज प्रयोगशाळा व सुसज्ज ग्रंथालय \* कॅम्पस इंटरव्ह्यूद्वारा नोकरी भिळविण्याची संधी.

**MVP RSM Polytechnic FC**

- MVPS's RSM Polytechnic has authorised Facilitation Center for First Year and Direct Second Year Diploma Engineering Admission for AY 2021-22



FC takes all precautions to avoid spread of Covid-19 with social distancing guided by DTE.



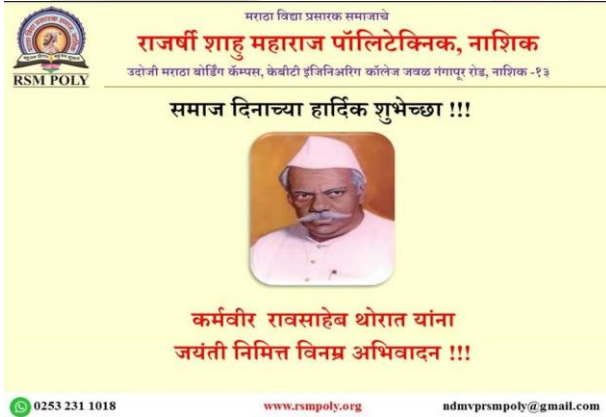
### **MVP RSM Polytechnic**

- MVPS's RSM Polytechnic celebrated Independence Day (15<sup>th</sup> Aug 2021)




MVPS's RSM Polytechnic was celebrated independence day. Er. Ashok Gaikwad, LMC Member was chief guest for program and hosted flag on this occasion.

- MVPS's RSM Polytechnic Celebrated Samajdin (19<sup>th</sup> Aug 2021)



मराठा विद्या प्रसारक समाजाचे  
**राजर्षी शाहु महाराज पॉलिटेक्निक, नाशिक**  
उदोजी मराठा बोर्डिंग कॅम्पस, केबीटी इन्जिनिअरिंग कॉलेज जवळ गंगापूर रोड, नाशिक - १३

**समाज दिनाच्या हार्दिक शुभेच्छा !!!**



**कर्मवीर रावसाहेब थोरात यांना  
जयंती निमित्त विनम्र अभिवादन !!!**

0253 231 1018      www.rsmpoly.org      admvprsmpoly@gmail.com



MVPS's RSM Polytechnic was Celebrated Samajdin on Birth Anniversary of Karmveer Raosaheb Thorat. Mr. Damodar Gawale, Er. Ashok Gaikwad, Mr. Krushnamurti More (LMC Members) was hosted flag on this occasion.

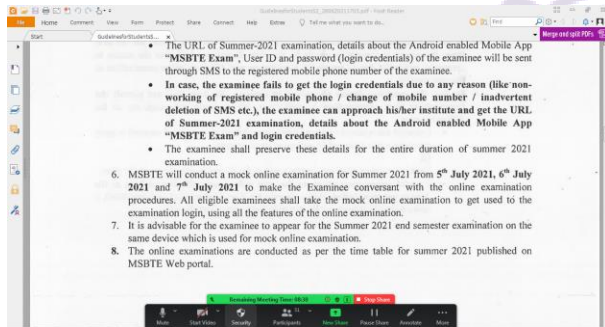
## NEWSLETTER: AUG 2021

Mechanical Engineering Department			Computer Technology Department		
Sr #	Activities	Date(s)	Sr #	Activities	Date(s)
1.	Conducted Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation	5 <sup>th</sup> Aug 2021	1.	Conducted Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation	2 <sup>nd</sup> Aug 2021
3.	Conducted Guest Lecture on Why to Join ISHRAE	27 <sup>th</sup> Aug 2021			
Electronics & Telecomm. Department			Information Technology Department		
1.	Conducted Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation	3 <sup>rd</sup> Aug 2021	1.	Conducted Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation	2 <sup>nd</sup> Aug 2021
2.	Online Carrier Guidance for E & TC Engg. by E & TC Engg. Dept.	7 <sup>th</sup> Aug 2021			
Electrical Engineering Department			Science and Humanity Department		
1.	Conducted Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation	5 <sup>th</sup> Aug 2021	1.	Attended Online Workshop on Incorporating Universal Human Value in Education.	16 <sup>th</sup> Aug to 20 <sup>th</sup> Aug 2021

# RSM POLY

## Mechanical Engg. Department

- Conducted Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation (5<sup>th</sup> Aug 2021)



Online Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation was organized for SYME Students. The session was conducted by Prof. B. S. Deshmukh, HOD-ME. The event was coordinated by Prof. Y. R. Kodhilkar.

- Conducted Guest Lecture on Why to Join ISHRAE (27<sup>th</sup> Aug 2021)



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**Mechanical Department Organizing Webinar on "Why to Join ISHRAE"**

**CORDIALLY WELCOME OUR SPEAKER**



**Prof. K. V. Kulkarni**  
CO-ORDINATOR



**Prof. B. S. Deshmukh**  
HOD-ME



**Dr. D. B. Uphade**  
PRINCIPAL

**Friday 27<sup>th</sup> Aug 2021**  
10:00 am To 11:30 am

**For Diploma Third Year**  
Students of ME, E&TC & EE

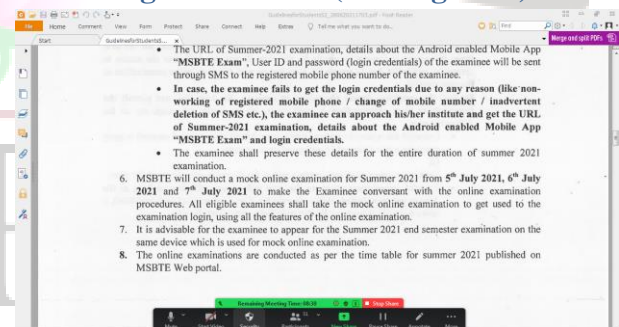
**Microsoft Team:**  
<https://bit.ly/2Wv0kgw>



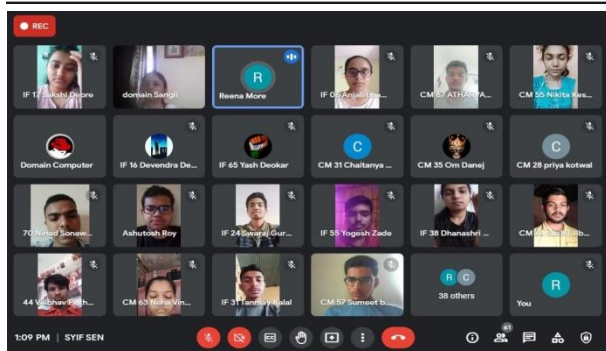
Online Guest Lecture on Why to Join ISHRAE was organized for ME, EE and EJ Students and Staff. It was delivered by Mr. Vilas Ashtekar, President of ISHRAE Nashik Student Chapter, Mr. Mihir Sanghavi, Regional Director ISHRAE West Zone, Mr. Rauf Sheikh, Past-President ISHRAE Nashik Student Chapter was the speaker for the program. The event was coordinated by Prof. B. S. Deshmukh, HOD-ME.

## Computer Department

- Conducted Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation (2<sup>nd</sup> Aug 2021)







Online Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation was organized for SYCM Students. The session was conducted by Prof. P. D. Boraste, HOD-CM. The event was coordinated by Prof. P. D. Boraste.

### E & TC Engineering Department

- Conducted Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation (3<sup>rd</sup> Aug 2021)



Online Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation was organized for SYME Students. The session was conducted by Prof. S. N. Shelke, HOD-EJ. The event was coordinated by Prof. S. A. Suryawanshi.

- Online Carrier Guidance for E & TC Engg. by E & TC Engg. Dept. (7<sup>th</sup> Aug 2021)

मराठा विद्या प्रसारक समाजाचे  
राजर्षी शाहु महाराज पॉलिटेक्निक नाशिक  
RSM POLY उदोजी मराठा बोर्डिंग कॅम्पस, केपीटी कॉलेज व वाघ पुर्णजी शाळेजवळ, गंगपूर रोड, नाशिक

**इलेक्ट्रॉनिक्स अँड टेलिकम्युनिकेशन  
इंजिनिअरिंग  
करिअरबाबत मार्गदर्शन शिबीर**

12 वी नंतर  
थेट द्वितीय वर्ष  
डिप्लोमा इंजिनिअरिंगला प्रवेशासाठी  
**मविप्र पॉलिटेक्निक**  
यांचेमार्फत करिअरबाबत व ऑनलाइन फॉर्म भरण्यासाठी  
**मार्गदर्शन शिबीर**  
शनिवार दि. ७ ऑगस्ट २०२१ रोजी सकाळी १०:४५ वा  
ऑनलाइन पध्दतीने आयोजित केले आहे,  
अर्ज भरण्यासाठी व संबधीत सर्व प्रक्रिया पुर्ण करण्यासाठी  
विद्यार्थी व पालकांनी शिबीराचा लाभ घ्यावा.

**Google Meet Link**  
meet.google.com/tiy-rrus-dgs

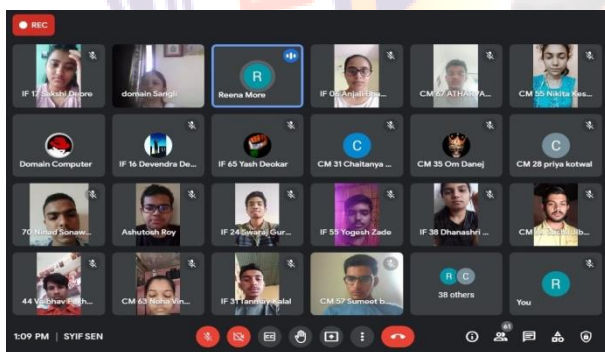
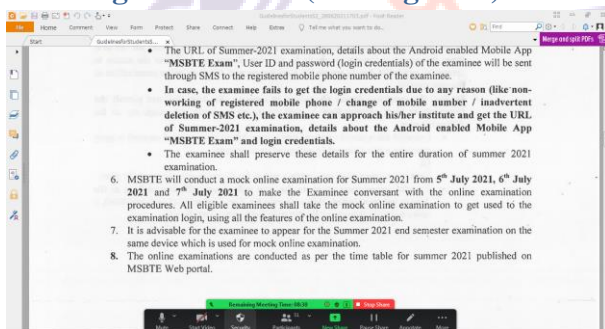
**अधिक माहितीसाठी**  
99702 73067 9881 981 004  
उदोजी मराठा बोर्डिंग कॅम्पस, केपीटी कॉलेज व वाघ पुर्णजी शाळेजवळ, गंगपूर रोड, नाशिक  
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Prof. S. N. Shelke and faculty were conducted online Carrier Guidance for E & TC Engg. for 10<sup>th</sup> and 12<sup>th</sup> or ITI Passout student through online mode under guidance of Principal Dr. D. B. Uphade.

### Information Technology Department

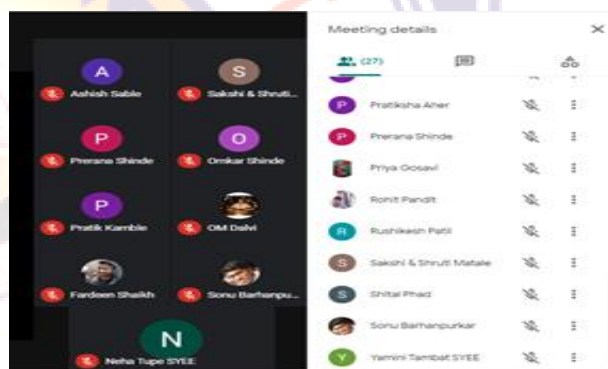
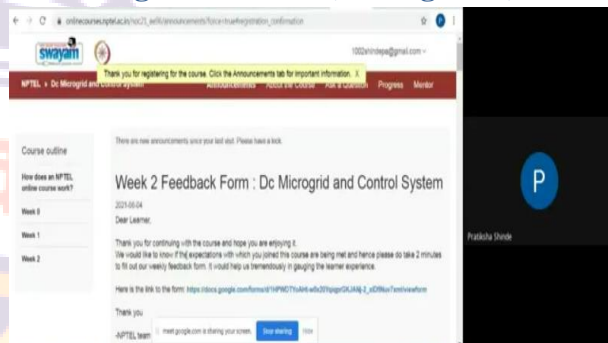
- Conducted Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation (2<sup>nd</sup> Aug 2021)



Online Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation was organized for SYIF Students. The session was conducted by Prof. A. P. Patil, HOD-IF. The event was coordinated by Prof. R. S. More and Prof. A. P. Patil.

### Electrical Engineering Department

- Conducted Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation (5<sup>th</sup> Aug 2021)

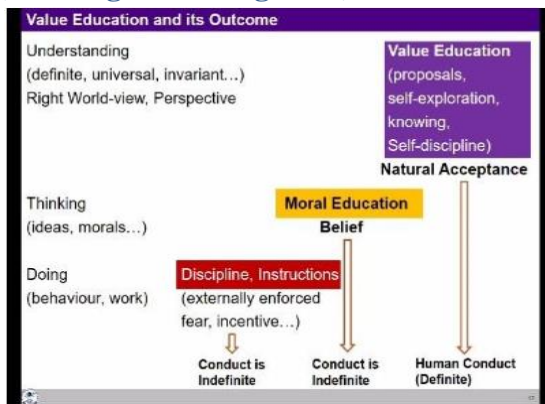


Online Guest Lecture on Upcoming MSBTE S-2021 Curriculum Inplant Training Orientation was organized for SYME Students. The session was conducted by Prof. P. R. Gangurde, HOD-EE. The event was coordinated by Prof. P. A. Shinde.



## Science and Humanity Department

- **Attended Online FDP on SI by AICTE**  
(16<sup>th</sup> Aug – 20<sup>th</sup> Aug 2021)



**Attended Online Workshop on Incorporating Universal Human Value in Education. It was organized by AICTE. The session was attended by Prof. V. R. Patil, LSH.**

## Trending Technology:

### Ocean Cooling Technology



The world is going through intensive changes due to global warming. It is well known that the reduction in ice cover in the Arctic Ocean further contributes to increasing the atmospheric Arctic temperature due to the reduction of the albedo effect and increase in heat absorbed by the ocean's surface. The Arctic ice cover also works like an insulation sheet, keeping the heat in the ocean from dissipating into the cold Arctic atmosphere. Increasing the salinity of the Arctic Ocean surface would allow the warmer and less salty North Atlantic Ocean current to flow on the surface of the Arctic Ocean considerably increasing the temperature of the Arctic atmosphere and release the ocean heat trapped under the ice. This paper argues that if the North Atlantic Ocean current could maintain the Arctic Ocean ice-free during the winter, the long wave radiation heat loss into space would be larger than the increase in heat absorption due to the albedo effect.

Many advances in reducing CO<sub>2</sub> emissions have been made over the previous decades with the viability increase in wind and solar energy, and recently with the dissemination of electric cars, it continues to be difficult to achieve the negative emissions required to maintain

the world average temperature increase below 1.5 °C as proposed by the Paris Agreement of UNFCCC.

### What actions do you propose?

1. The cooling of the ocean surface using the cold stored in the ocean depths will have immediate positive effects on the oceans and atmosphere.

a. Phytoplankton proliferation will increase oxygen production and carbon sequestering, and with Zooplankton proliferation, will increase the food source of the oceans allowing them to become more productive.

b. The contact point of the ocean surface layer and the atmosphere will help cool the atmosphere.

2. These machines should be placed in the warm water currents leading to Antarctica, the Arctic, and Greenland, to cool the water as much as possible before it reaches this glacier covered areas.

a. The warmer water is presently undercutting the glaciers, and must be stopped as the melting of the glaciers is causing this weight of water to be shifted into the oceans, which push harder on the ocean plates, while the land where the water came from becomes lighter.

1. This re-distribution of this water weight is causing seismic unrest, which is resulting in an increase in earthquakes and volcanic activity across the globe, and will progressively increase and become worse as this process continues. This process will become self-sustaining due to volcanic activity at some point in the near future, and thus must be stopped before reaching this point.

3. These ocean cooling machines should also be placed in the entry points to the Gulf of Mexico, the Philippine islands, the Mediterranean Sea, and the great barrier reef in Australia, as these shallow coastal and estuary areas are quick to heat up, and support large populations of marine life that would be better served by providing them with colder waters.

### What are other key benefits?

1. These ocean cooling machines could be placed in oceans, along the equatorial desert regions where no life grows as water is too warm.

2. These machines could be used to cool 100 mile x 100 mile areas, facilitating the growth of Phytoplankton, then Zooplankton, then shrimp, then squid, and finally small and larger fish. Creating fish farms in these 10,000 miles sq. fish pens.

**Prof. M. S. Aware**  
**LME**



### Space based Solar Power



Space based solar power station (SPS) is a notion in which solar power station revolves along the earth in the geosynchronous orbit. The system consist of satellite over which sun pointed solar cells are fixed to generate electricity due to illumination of sunlight over it and the respective energy is transmitted to earth's surface by using earth pointed wireless power transmitter(WPT) technology, such system could provide constant access to almost unlimited power to earth and the average power per unit is 5-10 times more than on the ground. In 1968, this concept was proposed and developed for the future to resolve the future global environmental issues for instance the major problem exceeding of greenhouse gases in the atmosphere. By using space based solar power station technology the efficiency of generating electricity will escalates compare to ground based solar system because space based solar power station will be generating electricity day, night and there will be no weather effects on the plant as well. In research it is proved that the effects of atmosphere on microwave energy transmission is very less the solar power station should be portable and light in weight hence for that it must have light weight solar cell technology with high voltage power generation and also the following conditions has to be fulfill those are high efficiency, huge phased array and economical rockets. By this, the possibility of using this technology for large-scale power generation on earth will be increases. In addition, space based solar power station technology can be used in many various application such as 'power beaming to a Lunar or Mars outpost from and orbital power plant', 'propulsion for Earth moon and interplanetary transportation', 'Robotics in-space for maintenance and servicing'. "Based on this technology principles the Japan Aerospace Exploration Agency(JAXA) has planned to launch solar power station in space by year 2030".

Satellites and Orbit Basically, Satellite is define as an object which revolve around the earth, therefore moon is also known a satellite and it is called as a natural satellite. On the other hand, human made satellites are called artificial satellites, These are used for many application, for instance weather forecasting, navigation, earth observation. Generally, artificial

satellites are classified based on task and orbit on which it will be put on, hence it is classified into four types. a. Low Earth orbit (180-2000 km) b. Medium Earth orbit (2000-35785 km) c. Geosynchronous orbit (35786 km) d. High Earth orbit (> 35786 km) [4] Among all these orbits geosynchronous is the ideal orbit to put on satellite for collecting solar energy because satellite receive 96% of light beams from sun which has maximum efficiency compare to other orbits. In addition, whereas 4% losses due to equinox period earth pass through shadow. Satellites are further segregated in two labels, those are 1) Concentrator and 2) Non-concentrator types, in the following figure 3 it is clearly depicted. In addition, as per the descriptions of the SPS types examined by the International Academy of Astronautics (IAA) study, mainly three types of SPS Architecture have been considered. They are classified as: Type-I, Type-II and, Type-III. It gives a brief description about different types of satellites in the following paragraphs; in the end it is easy to choose a proper satellite for space based solar power satellite station.

**Karishma Mhaske**  
**Student-ME**

### Contactless Payments



Contactless payments as the name indicates is the mode of payment where the buyer does not need to meet currency notes, devices or even the smartphone. Acknowledging the need for such payment methods, today, it is undoubtedly, one of the fastest growing payment methods across the globe. The Covid-19 pandemic along with social distancing measures; health and hygiene concerns have played a huge role in its growth recently and will further push its use. It has turned out to be the most convenient form of payment modes as well.



### How does Contactless Payment Works?

Near field communication commonly, known as NFC is the technology based on which contactless payments

work. It is an upgraded version of the existing technology known as RFID - Radio Frequency Identification. RFID has been in use for a long time for different applications like shopping malls, warehouses, bags etc which can be scanned. It is only recently that RFID started to be used for contactless payments. The two components - reader or POS terminal and the consumer's payment device have to be in close proximity for it to work successfully. The radio waves from NFC chip establishes a connection and exchanges encrypted data making the transactions fast and secure. A card or smartphone enabled with NFC can be used near the reader, usually 10 cm or less to make the payment or conduct transaction. This leads to the next section, which is about contactless payment cards.

1. When you tap your contactless card or bring it near the merchant's point-of-sale terminal, it generates a unique cryptographic code to initiate the transaction.

2. The card reader then transmits the data to a card processing network such as American Express, Mastercard or VISA. The network checks the data for any possible fraud. If everything is verified, it forwards the request to the card issuer.

3. The card issuer flags a stolen card, a purchase from an unusual location or a large amount transactional amount. It also checks the available balance before authenticating the transaction.

4. Once all validations are complete, the card issuer approves the transaction and sends the approval message to the merchant's point-of-sale machine. This whole process takes just a few seconds to complete.

A contactless payment system uses radio frequency identification (RFID) technology. The card contains a chip and a radio antenna. This antenna picks up the signal when it is close to a card reader and allows the transmission of information to the point-of-sale terminal.

Contactless mobile payments are also as easy to use as cards.

1. You need to unlock your phone, open the payment app, which has your credit or debit card linked to it.
2. Next, you tap on the screen of your smartphone near the near field communication (NFC) terminal.
3. Occasionally, you may have to confirm your identity by entering your PIN or scanning your fingerprint.

**Prof. P. D. Boraste**  
**LCM**

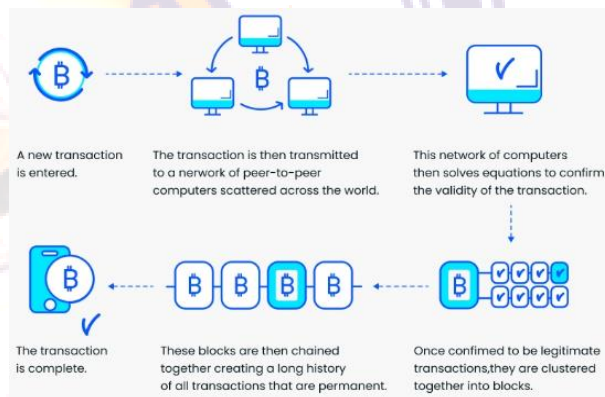
## Blockchain Technology



Blockchain is the backbone Technology of Digital CryptoCurrency BitCoin. The blockchain is a distributed database of records of all transactions or digital event that have been executed and shared among participating parties.

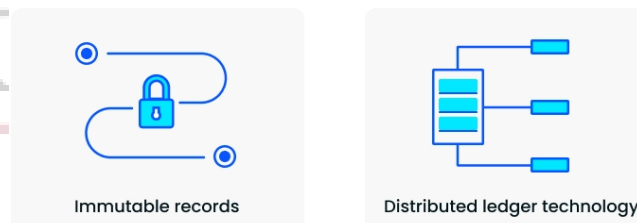
Each transaction verified by the majority of participants of the system. It contains every single record of each transaction "A peer to peer electronic cash system" in 2008. Blockchain Technology Records Transaction in Digital Ledger, which is distributed over the Network thus making it incorruptible. Anything of value like Land Assets, Cars, etc. can be recorded on Blockchain as a Transaction.

## ROLE & CONTRIBUTION OF BLOCKCHAIN TECHNOLOGY



Blockchain technology has evolved greatly since the introduction of Bitcoin in 2008, the first decentralized peer-to-peer electronic cash system. Today, innovators in various fields are realizing the benefits of the technology behind Bitcoin. From medicine to finance, many sectors are looking for ways to integrate blockchain into their infrastructures. With its decentralized and trustless nature, Blockchain technology can lead to new opportunities and benefit businesses through greater transparency, enhanced security, and easier traceability.

## Immutable & Distributed





Immutable and distributed are two fundamental blockchain properties. The immutability of the ledger means you can always trust it to be accurate. Being distributed protects the blockchain from network attacks. Each transaction or record on the ledger is stored in a "block." For example, blocks on the Bitcoin blockchain consist of an average of more than 500 Bitcoin transactions. The information contained in a block is dependent on and linked to the information in a previous block and, over time, forms a chain of transactions. Hence the word blockchain.

### **Types of Blockchains**

There are four types of blockchains:

#### **1. Public Blockchains**

Public blockchains are open, decentralized networks of computers accessible to anyone wanting to request or validate a transaction (check for accuracy). Those (miners) who validate transactions receive rewards.

#### **2. Private Blockchains**

Private blockchains are not open, they have access restrictions. People who want to join require permission from the system administrator. They are typically governed by one entity, meaning they're centralized. For example, Hyperledger is a private, permissioned blockchain.

#### **3. Hybrid Blockchains or Consortiums**

Consortiums are a combination of public and private blockchains and contain centralized and decentralized features. For example, Energy Web Foundation, Dragonchain, and R3.

#### **4. Sidechains**

A sidechain is a blockchain running parallel to the main chain. It allows users to move digital assets between two different blockchains and improves scalability and efficiency.

**Mast. Akshay Pethkar**  
**Student, TYCM**

### **Digital Scent Technology**



Digital smell is one of the concepts of virtual reality. The virtual reality has provided very good features to the computer systems. The digital smell is generally a hardware software combination. The role of hardware is to produce the smell, the software part will evaluate the smell equation and generate distinct signals for distinct smell, and lastly the device will produce that smell. With the digital scent technology one can sense, transmit, reproduce and recapture smell, flavors and fragrances digitally through the internet and smell things using a USB powered device that is supposed to emit

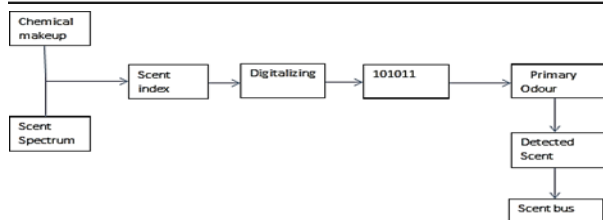
appropriate smell at exact time. Regardless of the business, digital scent technology could help its users in an effective and intellectual way by intensifying the health and emotional happiness of its users. This technology aids to design characters and to give an emotional intelligence of existence. This amazing technology provides huge area of applications in communication which includes websites with scent, in scent-entertainment, games, movies and music. It is also relevant to E-commerce which makes online shopping fascinating and fun. In the new future, one cannot only just see but also can smell things on the internet

### **Physiological Aspects of Smell:**

The act of smelling is defined as Olfaction and the olfactory nerves are meant to receive the scent of something. Odorants are substances whose characteristics can be determined by chemical analysis. The olfactory system of a person operates in the vein of other sensing activities in the body. The smell organ, olfactory epithelium covers an area of 4-10 cm<sup>2</sup> and consists of 6-10 million olfactory hairs called cilia which detect different types of smell. Excited receptors direct pulses to the olfactory bulbs. Olfactory bulbs are the part of cortex with a pattern of receptors action denoting a particular scent.

### **Methodology:**

This technology works in combination with Olfactometer and Electronic nose. An olfactometer is an instrument that is used to detect and measure odor dilution. They are used to gauge the odor detection threshold of substances. Olfactometers introduce an odorous gas to measure intensity, as a baseline against which other odors are compared. An electronic nose (e-nose) is a device that recognizes the specific components of an odor and for this reorganization the email to the recipient's computer. At the receiving end, when the user activates the file by opening it, the personal scent synthesizer will recreate small aroma and the air canon will direct the smell into the user's nose. The digitally encoded file, which is transmitted, contains the data's about the smell. The smell emitted will be in the form of vapor.



**Fig: Transmission Model of Digital Scent Technology**

#### Hardware devices:

Synthesizers in which the game producers need to mix and incorporate scents into their latest offerings create both the software and hardware. Reminiscent is a database of standard smells. These odors will be licensed to developers for integrating it into games, websites, and advertisements and so on.

#### Applications:

Digital scent technology has a wide variety of applications such as:

1. To send scented email
2. To watch scented DVD's
3. To play scented video games
4. To sample a perfume from a beauty product's website
5. To smell the assortment of freshly brewed coffees for sale in their online store.

**This technology plays its important role in the following fields.**

**A. Medical:** Aromatherapy is a kind of curing certain disease by using different types of smell. It helps in discriminating brain disorders.

**B. Education:** Scent is an effective teaching tool for subjects such as Geography, History and Science.

**C. E-Commerce:** This technology provides live shopping experiences. This enables to buy perfumes, flowers and food beverages from exotic places.

**Prof. P. G. Deshmukh**

**LEJ**

#### Intelligent Apps



**Context:** In this digitized world, everything is enclosed with awing technologies or innovations, which intends to polishing the perks of present and faith of futurity. Spotting out the most vital and awful technology, among all available technologies stand out for artificial intelligence. Due to the advent of smart-phones, we saw a plethora of apps, which was developed to seek information and assists with day-to-day activities. Now-a-days, technological

innovation in cloud infrastructure and machine learning laid we w foundation for tomorrow's intelligent Apps. Intelligent Apps are the innovative invention or artificial intelligence, which acts as supportive leaders for entrepreneurs.

#### What are Intelligent Apps?

Intelligent Apps are the application, which acquires real-time and historical data from user interactions and other sources in order to provide suggestions and make predictions. It offers personalized and adaptive user experiences; data analytics and machine learning are the core components of Intelligent Apps. IA for forbade the users' behavior to make information available easily.

#### Intelligent Apps at work:

Those days have gone when employees were gratified with simple mobile-enabled access to key business applications and data. Today's digital natives demand much more than this, they anticipate intelligent user experience and highly usable as offered by consumer apps. And intelligent Apps assure to provide the same. In addition, Intelligent Apps side employees to accomplish their working different manner. Since past decades, managers ate focusing to charter their digital information initiatives and for this purpose, they need to add IA ensures new growth areas, real-time acquisition, internal and external data sources, putting the best technology to use, processing and analysis.

#### Best Intelligent Apps for Android and iOS:

1. Cortana
2. Hound
3. Recent News

Undoubtedly, Intelligent Apps are paving the way for speedier business decision making, improve the efficiency of the workforce, obtaining better business results and ensure long term gains; all this needs to be utilized in the right manner. Business organizations, which are diving in Intelligent Apps, now will surely have a competitive edge in future.

**Ms. Darshana Jadhav**  
**Student, SYEJ**

#### Intelligence Apps: The Next Generation's Applications



The advancement of technology has a great impact on human life, it has made our life easy and everything we wish can be completed on clicks of button. We shop, order food, or play games on our



smartphones, this device has also cut our social life. These are mobile apps that we are talking about, but the next generation of mobile apps has evolved and is called “Intelligent Apps (I-apps). The next generation of mobile applications will be the result of multiple worlds colliding: when application development meets artificial intelligence, the Internet of Things and big data analytics, intelligent apps are the outcome. Put simply, these apps continually learn from user interactions and other data sources to become even more relevant and useful. The intelligent apps are the apps that deliver an adaptive, rich, and personalized user experience. They are AI-enabled applications, which study the users’ behavior and decisions and thereby make contextual predictions and differentiate between relevant and irrelevant information. Intelligent applications are built with AI and analytic technologies. The AI part is a combination of Machine Learning (ML), Natural Language Processing (NLP), and deep learning. In addition, it is powered by data analytics, robotics, expert systems, and much more. Altogether the app acts intelligently with the feedback gained from the user or the surrounding environment.

#### **Important features:**

It can easily read and store a vast array of data and human interactions which makes it very feasible to use. It is very adaptive in nature and it provides higher returns on investment. This adaptability helps it to quickly blend into the new environment and inherent the behaviour, which ultimately helps the app in meeting new demands. The smart applications and the AI ingested into it helps these apps to actually produce results very effectively just by reading gestures, motions, and speech inputs. Chatbots, virtual assistants and recommendation engines on e-commerce sites are just some examples of intelligent applications. While it’s difficult to formulate a catch-all definition of smart apps, they have a number of typical features:

##### **1. Data-driven**

Intelligent apps combine and process multiple data sources – such as IoT sensors, beacons or user interactions – and turn an enormous quantity of numbers into valuable insights.

##### **2. Contextual and relevant:**

Intelligent apps make much smarter use of a device’s features to proactively deliver highly relevant

information and suggestions. Users will no longer have to go to their apps. Instead, the apps will come to them.

##### **3. Continuously adapting**

Thanks to machine learning, intelligent apps continuously adapt and improve their output.

##### **4. Action-oriented**

By anticipating user behaviors with predictive analytics, smart applications deliver personalized and actionable suggestions.

##### **5. Omni channel**

Progressive web applications (PWAs) are increasingly blurring the lines between native apps and mobile web applications.

#### **Uses:**

1. The highly personalized information it provides enables users especially employees of an organization to produce work that is more quality driven.
2. It actually works along with other existing apps to produce more effective and relevant information. Like the company can sync these apps with emails to notify employees about emails which require quick and immediate response.

#### **Top 5 intelligent apps to make your smart phone smarter:**

##### **1. Cortana:**

It is created by Microsoft which was available earlier only to the Windows users but now is also open for Android users. It is a personal assistant app, which can do various tasks, starting from keeping a track of your files to setting reminders and even some other great tasks.

##### **2. Hound:**

Similar to Google Voice search, this i-app takes commands from the voice of the users and performs various different activities like find television shows to binge watch, find your nearest restaurant, listen to your favourite music track, listen to weather forecasts, listen to audio books, set multiple alarms and reminders, and so on.

**Prof. M. B. Patil**  
**LIF**

#### **Internet of Behavior (IoB)**



IoB (Internet of Behaviors): It is an extension of IoT (Internet of Things). IoT works with data, information, and connectivity of different devices with each other. IoB works with these same parameters, adding user behaviors, to understand

patterns and impressions that determine the user experience. IoB links technology and a person's actions to interpret the interaction. It also has the power to generate patterns to influence people's behavior. Companies using the IoT to get us to change our behaviors aren't really about the "things" at all. As the IoT links people with their actions, we've verged into the Internet of Behavior. Consider the IoB a combination of three fields:

- Technology
- Data analytics
- Behavioral science

We can break behavioral science into four areas we consider when we use technology: emotions, decisions, augmentations, and companionship. As companies learn more about us (the IoT), they can affect our behaviors (the IoB). Consider a health app on your smartphone that tracks your diet, sleep patterns, heart rate, or blood sugar levels. The app can alert you to adverse situations and suggest behavior modifications towards a more positive or desired outcome. For now, companies mostly use the IoT and IoB to observe and attempt to change our behavior to achieve their desired goal—to purchase, typically.

Marketers and behavior scientists tend to agree that this personalization is key to a service's effectiveness. The more effective a service, the more a customer will continue to engage with it, and even alter their behavior *because of* it. Understanding that this personalization provides value to us, customers might still avoid it because it feels creepy. This psychological discomfort can cause us to avoid it, a tendency known as the ostrich effect.

#### **IoT and IoB privacy & security concerns:**

The IoT itself isn't inherently problematic; a lot of people like having their devices synced and get benefits and convenience from this setup. Instead, the concern is how we gather, navigate, and use the data, particularly at scale. And we're starting to understand this problem. The security and privacy consequences are complicated, and data security is a growing concern. More Americans admit that considering the security ramifications might slow their adoption and use of certain IoT devices. To many experts, the IoT is problematic because of its lack of structure or legality. The IoB approach, interconnecting our data with our decision-making, demands change of our cultural and legal norms, which were established before the Internet and Big Data Ages. The IoT does not gather data solely from your relationship with a single company. For instance, a car insurance company can look at a summary of your driving history. As a society, we've decided this is fair.

But the insurers might also scour your social media profiles and interactions to "predict" whether you're a safe driver—a questionable and extralegal move. Importantly, it's not just the devices themselves. Behind the scenes, many companies share (sell) data across company lines or with other subsidiaries. Google, Facebook, and Amazon continue to acquire software that potentially brings a user of a single app into their entire online ecosystem—frequently without our permission. This presents significant security and legal risks, and there is little legal protection in place for these concerns.

**Dhanshree Gavankar  
Student, TYIF**

#### **3 Ways Technology has Changed Healthcare**



Technology is considered the driving force behind improvements in healthcare and, when you look at the rate of change and recent innovations, many find it hard not to agree with that

observation.

Graduates of health informatics will no doubt agree that technology is impacting many aspects of our lives as breakthroughs in data collection, research and treatments allow medical providers to use new tools and find fresh and innovative ways to practice medicine into the future.

##### **Better and More Accessible Treatment**

A number of industry analysts have observed that increased accessibility of treatment is one of the most tangible ways that technology has changed healthcare. Health IT opens up many more avenues of exploration and research, which allows experts to make healthcare more driven and effective than it has ever been.

##### **Improved Care and Efficiency**

Another key area that has grown and continues to do so is patient care. The use of information technology has made patient care safer and more reliable in most applications.

The fact that nurses and doctors who are working on the frontline are now routinely using hand-held computers to record important real-time patient data and then sharing it instantly within their updated medical history is an excellent illustration of the benefits of health IT.

Being able to accumulate lab results, records of vital signs and other critical patient data into one centralized area has transformed the level of care and efficiency a



patient can expect to receive when they enter the healthcare system.

An increased level of efficiency in data collection means that a vast online resource of patient history is available to scientists.

**Software Improves Healthcare and Disease Control**

The development of specific software programs means that, for example, the World Health Organization has been able to classify illnesses, their causes and symptoms into a massive database that encompasses more than 14,000 individual codes.

This resource allows medical professionals and researchers to track, retrieve and utilize valuable data in the fight to control disease and provide better healthcare outcomes in general. Software also plays a pivotal role in tracking procedures and using billing methods that not only reduce paperwork levels, but also allow practitioners to use this data to improve quality of care and all around efficiency. Doctors report that they are deriving enormous benefits from the drive toward a total system of electronic medical records; patients enjoy the fact that software has created a greater degree of transparency in the healthcare system. We have seen many positive changes in health IT and expect to continue witnessing more exciting developments in the future!

**Prof. P. V. Patil**  
**LSH**

### Rain Water Harvesting



Rainwater harvesting is the collection of raindrops. In most cases, a roof is used for this purpose. The rainwater then flows through the gutters, into a collection tank. The collected water can

be used for small-scale irrigation (of vegetable gardens etc.), clothes washing, bathing and after treatment for drinking and food preparation.

### Why harvest rainwater?

Bangalore gets most of its drinking water from a distance of 95 kms. and a depth of 500 Mts. A total of 858 million liters of water is being pumped every day to the city through the four Cauvery Stages.

The T G Halli Reservoir, the second source, responsible for 20percent of city's requirement (western parts of the city) has been dried up Every drop of water supplied to city is through pumping done in three stages, which consumes 60 Percent of BWSSB's total revenue towards power charges every month.

It makes ecological and financial sense not to waste a pure natural resource available in large quantity on one's roof.

Systems are ideally sized to meet the water demand throughout the dry season since it must be big enough to support daily water consumption. Specifically, the rainfall capturing area such as a building roof must be large enough to maintain an adequate flow of water. The water storage tank size should be large enough to contain the captured water. For low-tech systems, many low-tech methods are used to capture rainwater: rooftop systems, surface water capture, and pumping the rainwater that has already soaked into the ground or captured in reservoirs and storing it in tanks

Rainwater harvesting provides the independent water supply during regional water restrictions, and in developed countries, it is often used to supplement the main supply. It provides water when a drought occurs, can help mitigate flooding of low-lying areas, and reduces demand on wells, which may enable groundwater levels to be sustained.

Try to determine your storage system at the planning stage itself.

- Roof level storage tank
- Ground level drum or masonry tank
- Below the ground sump

Partially below ground and partially above ground tank

**Mast. Shreejay Patil**  
**Student, FYME**

### RSM in News:



Punya Nagari Dt. 02.08.2021 Page No.04

**थोडक्यात**

**मविप्र पॉलिटेक्निकच्या ४१ विद्यार्थ्यांना नोकरी**

नाशिक : मराठा विद्या प्रसारक समाज संचालित राजर्षी शाहू महाराज पॉलिटेक्निकच्या अंतिम वर्षाच्या मेकॅनिकल इंजिनिअरिंग, कॉम्प्युटर टेक्नॉलॉजी, इलेक्ट्रॉनिक्स अँड टेलिकम्युनिकेशन इंजिनिअरिंग, इन्फॉर्मेशन टेक्नॉलॉजी व इलेक्ट्रिकल इंजिनिअरिंग या शाखेच्या तब्बल ४१ विद्यार्थ्यांची गेल्या वर्षभरात विविध नामांकित बहुराष्ट्रीय कंपन्यांमध्ये निवड करण्यात आल्याची माहिती प्राचार्य डॉ. डी. बी. उफाडे यांनी दिली. ऑटोमोबाईल क्षेत्रातील आघाडीची कंपनी बजाज ऑटो लिमिटेड चाकण, औरंगाबाद, वाळूज यांनी २ विद्यार्थ्यांची निवड केली. मेकॅनिकल इंजिनिअरिंगचे विद्यार्थी अंबड येथील कोसो इंडिया लिमिटेड मध्ये १८ विद्यार्थ्यांची निवड करण्यात आली. सातपूर येथील व्हीआयपी कंपनीसाठी ५ विद्यार्थ्यांची निवड करण्यात आली. गोंदी येथील थायसीन ग्रुप कंपनीसाठी ७ विद्यार्थ्यांची निवड करण्यात आली. इन्फॉर्मेशन टेक्नॉलॉजी विभागाचे २ विद्यार्थी पुणे स्थित इन्फोसिस कंपनीमध्ये निवडण्यात आले. नाशिक येथील सेवन स्टार कंपनीसाठी २ विद्यार्थ्यांची निवड करण्यात आली. कॉम्प्युटर टेक्नॉलॉजी विभागाचे ३ विद्यार्थी कॅलिबर इन्फोटेक कंपनीमध्ये निवड करण्यात आली. इलेक्ट्रिकल इंजिनिअरिंग विभागाचे २ विद्यार्थ्यांची नाशिक स्थित कंपनीमध्ये निवड करण्यात आली.

Nashik Edition  
Aug 2, 2021 Page No.  
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Apal Mahanagar Dt. 02.08.2021 Page No. 02

**पॉलिटेक्निकच्या ४१ विद्यार्थ्यांना बहुराष्ट्रीय कंपन्यांमध्ये प्लेसमेंट**

**मविप्र'च्या तंत्रनिकेतनच्या विद्यार्थ्यांचा सहभाग**

लोकनामा प्रतिनिधी

नाशिक : 'मविप्र'च्या राजर्षी शाहू महाराज पॉलिटेक्निकच्या अंतिम वर्षाच्या मेकॅनिकल इंजिनिअरिंग, कॉम्प्युटर टेक्नॉलॉजी, इलेक्ट्रॉनिक्स अँड टेलिकम्युनिकेशन इंजिनिअरिंग, इन्फॉर्मेशन टेक्नॉलॉजी व इलेक्ट्रिकल इंजिनिअरिंग या शाखेच्या ४१ विद्यार्थ्यांची गेल्या वर्षभरात विविध नामांकित बहुराष्ट्रीय कंपन्यांमध्ये निवड करण्यात आली, अशी माहिती प्राचार्य डॉ. डी. बी. उफाडे यांनी दिली. कोरोना महामारीच्या काळात विविध नामांकित कंपन्यांनी ऑनलाइन चाचणी व मुलाखतीचे संयोजन करून उत्तम गुणवत्तेचे विद्यार्थी निवडले. यात ऑटोमोबाईल क्षेत्रातील आघाडीची कंपनी बजाज ऑटो लि. चाकण, वाळूज यांनी दोन विद्यार्थ्यांची निवड केली. अंबड येथील कोसो इंडिया लि. मध्ये मेकॅनिकल इंजिनिअरिंगचे विद्यार्थी निवडले जाणार आहेत, अशी अपेक्षा आहे.

REDMI NOTE 9 PRO

Loknama Dt. 03.08.2021 Page No. 02

**४१ विद्यार्थ्यांना नोकरीच्या संधी**

म. टा. प्रतिनिधी, नाशिक

मविप्र समाज संस्थेच्या राजर्षी शाहू महाराज पॉलिटेक्निकच्या अंतिम वर्षाच्या ४१ विद्यार्थ्यांना गेल्या वर्षभरात नोकरीच्या संधी उपलब्ध झाल्या आहेत. मेकॅनिकल इंजिनिअरिंग, कॉम्प्युटर टेक्नॉलॉजी, इलेक्ट्रॉनिक्स अँड टेलिकम्युनिकेशन इंजिनिअरिंग, इन्फॉर्मेशन टेक्नॉलॉजी व इलेक्ट्रिकल इंजिनिअरिंग या शाखेतील विद्यार्थ्यांचा यामध्ये समावेश आहे. ऑनलाइन चाचणी व मुलाखतीच्या माध्यमातून या विद्यार्थ्यांची निवड करण्यात आली आहे.

Maharashtra Times Dt. 03.08.2021 Page 6

**Lokmat Times**

**Online campus interviews at RSMP**

**Pandemic situation was not a barrier for students to excel at their campus placement interviews**

Polytechnic (RSMP). Students from various streams of diploma participated in the drive. In all, 41 students got selected in various companies. Reputed companies selected the best quality students by conducting online tests and interviews. The companies included Bajaj Auto, Koso India, VIP, Thyssenkrupp, Infosys, Seven Star, Caliber Infotech, and others. They selected students from various branches. An online interview was conducted on the basis of which students were selected. Pandemic situation was not a barrier for them to provide students with an opportunity to fly high in life, as their students managed to clear the placement interviews with top companies. MVP general secretary Nilimatai Pawar, president Dr Tushar Shewale, MVP's Rajarshi Shahu Maharaj Polytechnic college local management committee chairman Manikrao Boraste, principal Dr D Uphade, and other teachers congratulated the selected students.

LOKMAT NEWS NETWORK  
NASHIK, AUG 2

Campus drive was successfully organised at the Rajarshi Shahu Maharaj

Lokmat Times Dt. 03.08.2021 Page No.02



## सकाळ

### ४१ विद्यार्थ्यांची वर्षभरात निवड

नाशिक, ता. ३ : मराठा विद्याप्रसारक समाज संस्थेच्या राजर्षी शाहू महाराज पॉलिटेक्निकच्या अंतिम वर्षातील ४१ विद्यार्थ्यांची गेल्या वर्षभरात विविध नामांकित बहुराष्ट्रीय कंपन्यांमध्ये निवड झाली. मॅकेनिकल इंजिनियरिंग, कॉम्प्युटर टेक्नॉलॉजी, इलेक्ट्रॉनिक्स अँड टेलिकम्युनिकेशन इंजिनियरिंग, इन्फॉर्मेशन टेक्नॉलॉजी व इलेक्ट्रिकल इंजिनियरिंग या शाखांतील विद्यार्थ्यांची निवड झाल्याची माहिती प्राचार्य डॉ. डी. बी. उफाडे यांनी दिली.

कोरोना महामारीत विविध नामांकित कंपन्यांनी ऑनलाइन चाचण्या व मुलाखती घेतल्या. ऑटोमोबाईल क्षेत्रातून बजाज ऑटो लिमिटेड चाकण, औरंगाबाद, वाळूज यांनी दोन विद्यार्थ्यांची निवड केली. अंबड येथील कोसो इंडिया लिमिटेडमध्ये १८ विद्यार्थ्यांची निवड झाली. सातपूरच्या व्हीआयपी कंपनीत पाच विद्यार्थ्यांची निवड झाली. गोंदे येथील थायसन कूप कंपनीसाठी सात विद्यार्थ्यांची निवड झाली.

Nashik, Nashik-Today  
04/08/2021 Page No. 2

Sakal Dt.04.08.2021 Page No. 02

#### Editor in Chief

- Dr. D. B. Uphade

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### Happy

**Raksha Bandhan, Friendship Day,  
Krushna Janmashtami,  
International Youth Day,  
Independence Day, National Sports  
Day to  
All Readers on the behalf of  
Principal, Faculty, Supporting Staff  
and Students.**

**Dr. D. B. Uphade  
Principal**

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