

G H PATEL COLLEGE OF ENGG. & TECH.



VALLABH VIDHYANAGAR

Dr. C. C. Patel and Mrs. Sushilaben Patel
Department of Civil Engineering



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- Vibrant Gujarat Global Summit 2017
- Sports World
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FOR
CIVIL ENGINEERING STUDENTS



Dr. C. C. Patel & Mrs. Sushilaben Patel Department of Civil Engineering, G H Patel College of Engineering & Technology, Vallabh Vidyanagar.

G H Patel College of Engineering & Technology, Vallabh Vidyanagar started Civil Engineering branch in the academic year 2014-15 under the guidance of Charutar Vidyamandal in view of the high demand for trained and employable Civil engineers. AICTE has approved an intake of 60 and the course is affiliated to Gujarat Technological University (GTU), Ahmedabad. The revised syllabus from the academic year 2013-14 of GTU is followed throughout the semesters.

A separate building has been constructed and is named as “Dr. C C Patel & Mrs. Sushilaben Patel Department of Civil Engineering, GCET”. The new building has four class rooms, six laboratories, staff rooms, department library and tutorial room as per AICTE criteria. All the basic labs for first year, Mechanics of Solids lab and Concrete lab are located in GCET main building. All other laboratories have been developed for this branch as per the syllabus of GTU. A separate computer lab has been developed in the new building with 40 computers with advanced software installations.

Highly qualified faculty members having good teaching experience are available in the Department. More faculty members and other supporting staff members will be recruited as per future requirements. Various technical events, non-technical events, educational visits, GATE classes, General Aptitude sessions etc. have been organized by the department.



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Current Affairs



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CURRENT AFFAIRS

Donald Trump elected 45th president of the United States of America



Republican Donald Trump elected the new US President, defeating forecasters who had predicted a Hillary Clinton win in one of the most bitterly fought Presidential battles.

Election results showed Trump's come-from-behind victories across a swath of contested states, including his must-wins in Ohio, Florida and North Carolina.

The 70-year-old will be the 45th President of the US

Reasons Why Donald Trump Will Make the Best President, Ever

- Trump seems to be the only candidate talking about how important it is that foreign governments and lobbyists don't have any power over US elections.
- He'll Save Billions on UN Climate Change Programs
- He'll impose a Hiring Freeze on the Federal Workforce
- He'll Impose Term Limits on Members of Congress
- He'll keep nuclear weapons out of the wrong hands. Trump said it himself—he will single-handedly stop Iran from getting nuclear weapons.
- He loves all races—well; as a president who respects most races, he will hopefully alleviate the recent tensions between police officials and the African American community.

What India may gain?

- He labeled Pakistan as semi-stable and a safe haven for terrorists.
- Trump's hard stance on terrorism could also result into deeper Indo-US defense and strategic ties. And finally, closer defense ties might give a further push to Indo-US business ties as well.

BUDGET 2017

The Indian economy ended the last fiscal on a high with growth for the full year touching 7.6% inspite of a struggling global economy and worsened investment climate.

The digital infrastructure in rural India in strengthened by allocating Rs 10,000 crore for Bharat Net Project.

The **Bhim** app which was launched recently will unleash the power of mobile phones for digital payments and financial enclosures..

Banks have targeted to introduce additional 10 lakh new POS terminals by March 2017. They will be encouraged to introduce 20 lakh Aadhar based POS by September 2017.

TAX EXEMPTIONS

TAX SLABS

A taxpayer with taxable income of Rs 5 lakh will pay Rs 2,575 as tax against the earlier Rs 5,150.

A taxpayer with taxable income of Rs 15 lakh will pay Rs 2,24,025 in tax against the earlier Rs 2,36,900.

The annual income tax outlay for those earning up to Rs 60 lakh has gone up. Now, people falling under this category will pay Rs 17,75,977 in tax against the Rs 16,27,400 earlier.

A taxpayer with taxable income of Rs 1.2 crore will pay Rs 39,88,803 in tax against the Rs 40,03,610 earlier.

Taxpayers will not be allowed to make any transactions above Rs 3 lakh in cash. The decision was taken based on the recommendations of the Special Investigation Team (SIT) on black money set up by the Supreme Court.

SURCHARGE

Individuals earning between Rs 50 lakh and Rs 1 crore will have to pay a surcharge of 10% on the total income tax payable by them.

TAX RETURNS

The time period for revising an income tax return has been slashed to 12 months from the completion of the financial year from the existing two-year window

FOR START-UPS

The period of profit-linked deductions available to the start-ups has been increased to seven years from the current five years but the tax breaks are still available only for the profits made by start-ups in the first three.

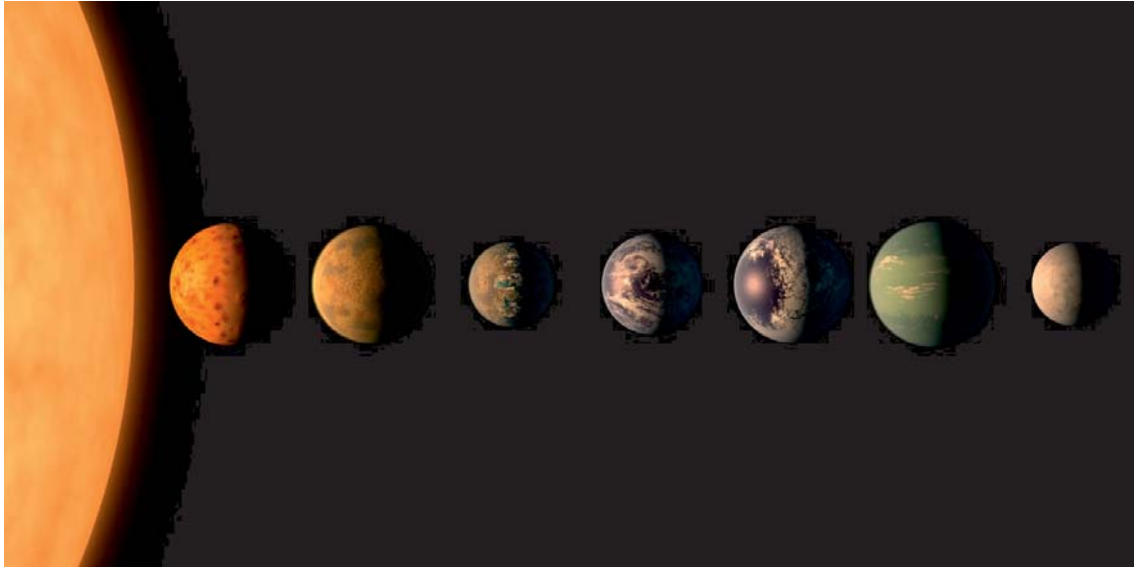
NATIONAL PENSION

It is proposed that the partial withdrawal from NPS should not exceed 25% of the contribution made by the employee under Pension Fund Regulatory and Development Authority Act 2013. This amendment will come to effect from April 1, 2018.

SCRUTINY TIME

The time to complete the scrutiny assessments has been reduced to 18 months from the existing 21 months for the Assessment Year 2018-19, and to 12 months for the Assessment Year 2019-20 and thereafter.

TRAPPIST-1: NASA announces discovery of seven Exoplanets that could hold life



"The seven wonders of TRAPPIST-1 are the first Earth-size planets that have been found orbiting this kind of star"

NASA's Spitzer Space Telescope has revealed the first known system of seven Earth-size planets around a single star. Three of these planets are firmly located in the habitable zone, the area around the parent star where a rocky planet is most likely to have liquid water.

Based on their densities, all of the TRAPPIST-1 planets are likely to be rocky. Further observations will help determining whether they are rich in water too or not.

The planets may also be tidally locked to their star, which means the same side of the planet is always facing the star, therefore each side is either perpetual day or night.

Using Spitzer data, the team precisely measured the sizes of the seven planets and developed first estimates of the masses of six of them, allowing their density to be estimated.

ISRO set the record for India with the launch of 104 satellites with one rocket.



India scripted a new chapter in the history of space exploration on Wednesday with the successful launch of a record 104 satellites by Isro's Polar Satellite Launch Vehicle (PSLV) in a single mission.

PSLV-C37 carrying the 104 satellites lifted off from the first launch pad at Satish Dhawan Space Centre in Sriharikota at 9.28am. It was PSLV's 39th flight.

Out of the total 104 satellites placed in orbit, 101 satellites belonged to six foreign countries. They included 96 from the US and one each from Israel, the UAE, the Netherlands, Switzerland and Kazakhstan.

Russian Space Agency held a record of launching 37 satellites in one go during its mission in June 2014. India previously launched 23 satellites in a single mission in June 2015.

ELECTION 2017

UPELECTIONS

Yogi Adityanath has been named as the chief minister of UP. He has been in the news for all variety of reasons. As a young chief minister, he has gone quite far in taking almost 50 decisions within a week of assuming charge beginning with asking his ministers to declare their assets within 15 days. Some of the major decisions have created ripples in the political community and society at large.

Some of those are:

1. Ban on slaughterhouses
2. Anti-Romeo Squad
3. Focus on sanitation
4. Crackdown on bureaucrats
5. Crackdown on food mafia



Other states newly appointed Chief Ministers

Captain Amarinder Singh appointed as Punjab Chief Minister.

N Biren Singh appointed as Manipur chief minister.

Former Defence Minister Manohar Parrikar appointed as Goa chief minister.



VIBRANT GUJARAT



SHARE SHOWCASE SHINE

Experience ideas and learn
From experts

Exhibit your brand to a large and
relevant market

Make your mark
on world stage



The Vibrant Gujarat Global Summit, which started in 2003 to rekindle the pace of investments in the state, has since established itself as one of the most important international business events in the country. Vibrant Gujarat Global Summit is an example of the visionary approach of the Government of Gujarat towards inclusive and sustainable development by ensuring policy coherence and effective investment promotion. Far from the regional investment fair that characterized the first Summit in 2003, the biennial Summit has today become a unique forum for exchanging ideas, sharing knowledge, networking, exploring business opportunities and signing cooperation agreements and partnerships, while setting the policy agenda for meeting some of the current global challenges.

Having successfully organized seven constructive summits, Government of Gujarat, as part of its journey towards sustainable long-term growth and inclusive development is organizing **the 8th edition of the Vibrant Gujarat Global Summit from the 10th to 13th of January 2017 at Mahatma Mandir, Gandhinagar. The central focus of the Summit is “Sustainable Economic and Social Development”**. It will bring together heads of states and governments, ministers, leaders from the corporate world, senior policy makers, heads of international institutions and academia from around the world to further the cause of development and to promote cooperation.

Vibrant Gujarat - Value Proposition

- Opportunity to interact with key policy makers, industry leaders, global thought leaders, regulators and renowned academicians from all over the world
- Opportunity to witness coherent deliberations between sector experts and global luminaries in an array of knowledge seminars during the Summit to comprehend evolving global sectoral trends
- Platform for SMEs to connect globally with potential partners to explore opportunities of collaboration and partnership
- Networking forums to foster interaction between stakeholders through B2B and B2G meetings
- An exhibition spread over 1,25,000 sq.mts with exclusive demo sessions showcasing the latest trends and technology, products and services across sectors



Objectives of Vibrant Gujarat:-

- Strengthen the foundation for Gujarat to become economically and socially the most developed state in India by 2030, at par with the best in the developing world
- Leveraging Gujarat's manufacturing leadership in the country and its economic strength, to connect the global investor with India and the state
- Attract the brightest minds from across the world to ideate, showcase innovation and best practices, and discuss their application to the state and the nation
- Empower India to Provide a platform for global business economies
- Provide a platform for global business networking

HIGHLIGHTS OF THE EVENT

- GST : The Game Changer of Indian Economy
- Smart and Livable Cities : Opportunities and Challenges
- Enhancing Agricultural Growth through Food Processing
- Innovation, Startups & Entrepreneurship
- Smart Villages : Empowering Rural India
- Business Potential of IFSC in India
- Health for Inclusive Development
- Make in Gujarat – Engineering, Heavy Engineering & Automotive – Opportunities in the Era of Technological Transformation
- Inclusive Growth (Agriculture & Rural Economy)
- MSME Clusters - Basis of Innovation, Inclusion and Competitiveness
- Water Challenges Seminar
- Make in Gujarat Aerospace and Defense

•India's 1st international stock exchange

- PM Modi inaugurated India's first international exchange 'India INX' at International Financial Services Centre in GIFT in Gandhinagar.
- INX, the wholly-owned subsidiary of the BSE will trade in equity derivatives, currency derivatives, commodity derivatives including Index and Stocks.
- The exchange will create new standards in quality of service and speed of transactions in different time zones

•PM Inaugurates India international Exchange

- PM Modi has formally inaugurated the India International exchange (IIE) at GIFT city near Gandhinagar in Gujarat.
- GIFT city & IIE — the International Center of BSE were the dream projects of Modi.
- Currently, Indian companies have to Contact foreign exchanges to raise funds in foreign currency.

•Gujarat Signs MoU for Bullet Train Project

- Gujarat government has signed a MoU worth Rs 77000 cr with the Ministry of Railways for the Mumbai—Ahmedabad bullet train project
- The project is expected to cover 508km between Mumbai & Ahmedabad in about 2 hours, running at a max speed of 350 kmph & operating speed of 320kmph.
- The project is expected to complete by the 2023.
- The train will have a 21 km tunnel under the sea.

SMART AND LIVABLE CITIES:

OPPORTUNITIES & CHALLENGES

- Rapid growth of urban population is one of the key challenges that India will have to address in future.
- Indian cities are facing increasing Immigration from rural areas because people are searching better economic opportunities.
- Indian smart cities initiative aims to construct good conventional and digital infrastructure by urban planning and effective governance, public-private partnership, and formulation and implementation of appropriate proactive polices.
- It must have concurrent attributes such as adequate water and waste water services, reliable energy supply, solid waste management ,robust IT activity combined with good and implementable polices and governances practices.

ABOUT THE SEMINAR

- The seminar will address potentials, prospects and complexities in terms of urban population, water supply and waste water treatment, solid waste management, affordable housing, reduction of green house gases and provision of nutrition, health and educational services and generating employment.
- The seminar will also discuss key plans, design, development and implementation strategies.
- The seminar will further address important issues like financing of smart and livable cities and how to best partner with private sector to achieve the larger societal goals of efficient, equitable and livable urban centers.

THE SMART SOLUTIONS ARE DISCUSSED BELOW

Smart solutions for urban development

E-Governance and Citizen Services	Energy Management	Waste Management	Urban Mobility	Water management	Others
• Public information, Grievance Redresser	• Smart meters & Management	• Waste to Energy fuel & compost	• Smart Parking	• Smart Meters Leakage identification	• Tele-Education
• Citizen engagement	• Renewable Sources of Energy	• Waste water to be treated	• Intelligent traffic management	• Water Quality monitoring	• Incubation and trade facilitation centre
	• Energy efficient & Green Buildings	• Recycling and	• Integrated Multi-Model Transport		• Skill development centre
		• Reduction of C&D waste			

GLOBAL TRADE SHOW:-



- PM Modi formally inaugurated the Vibrant Gujarat Global Trade show at Gandhinagar.
- More than 1500 representatives of about 80 countries in the world have participated in the trade show.
- The trade show will be covering 25 of various sectors like automotive, pharmaceutical, agro, bio-technology, Health care, Aerospace and defense, energy and petrochemical and among others
- This year special emphasis has been on start ups, women entrepreneurs & MSME.
- Some of the major companies participating in the trade show are Maruti Suzuki India Ltd, Reliance Industries Ltd, L&T, State Bank of India, Apollo Hospital, Axis Bank, Suzlon, Essar, Shell Hazira LNG Pvt Ltd, UNICEF, Aditya Birla and Bombay Stock Exchange among others.

SPORT WORLD

•Indian tennis ace Sania Mirza picked up her title of the season, combining with American Bethanie Mattek-Sands to lift the Brisbane women's doubles title. The top seeded duo triumphed 6-2 6-3 against the russian team of Ekaterina Makarova and Elena Vesnina. The trophy, however, ended sania's 91 week reign as the world no. 1 doubles player.that position was taken over by Bethanie.



Indian pair of Rohan Bopanna and Jeevan Nedunchezhiyan captured Chennai open men's doubles title. They defeated India's Divij Sharan and Purav Raja 6-3, 6-4. This was for the first time, an ATP 250 event witnessed two indian teams contesting a final. It is the first time that an Indian team has clinched the Chennai open trophy since the Leander Paes and Mahesh Bhupati took the title in 2011.



•Cristiano Ronaldo won FIFA's player of the year award for the fourth time, beating his old rival Lionel Messi. Ronaldo was rewarded for his performance in 2016 when he won the champions league with his club Real Madrid and then Euro 2016 with Portugal.



Gujarat won their first ever Ranji trophy title beating Mumbai in the final at the holkar stadium in Indore. Parthiv Patel's 143 and Munprit Juneja's 54 runs helped Gujarat to chase down the highest successful chase in the final at the historic Holkar stadium. Parthiv Patel was named as the 'man of the match'. Mumbai has won the Ranji title for record 41 times in the past.



The Gujarat Cricket Association (GCA) will construct the world's largest cricket stadium at Motera at a cost of 700 crore rupees. The foundation stone for the mammoth stadium was laid by parimal Nathwani, Vice president of GCA. The new stadium will have a seating capacity of 1.10 lakh spectators. Currently, the Melbourne cricket ground, Australia, is the world's largest cricket stadium.



•Federer won his men's singles final match at the Australian open, Melbourne, against Spain's Rafael Nadal and grabs 18th Grand Slam title. As the Fed and Rafa met up on Sunday in Melbourne for 35th time in a glorious rivalry which has seen 9 grand slam final now, the Swiss belied his past record against his Spaniard nemesis and bagged his 18th grand slam title and 5th Australian open trophy.



India beat Pakistan by 9-wickets to win T20 Blind World cup at Bengaluru's M Chinnaswamy stadium. Successfully defending their title in the T20 blind world cup, Indi achieved the victory target of 198 runs in the 18th over in the final of the tournament. India has beaten Sri Lanka by 10 wickets in the semifinal, while Pakistan defeated England by 147 runs.



Indian off spinner Ravichandran Ashwin created the record of claiming 250 test wickets in the least number of matches in his 45th test. He broke the record of legendary Australian fast bowler Sennis Lillee who reached 250 test wickets in his 48th test. He is the sixth Indian bowler after Anil kumble, KapilDev, Harbhajan Singh, Zaheer Khan and Bishan Singh Bedi to reach 250 test wickets.



India will be hosting FIFA under17 Football world cup 2017 in India in October this year. The government has viewed this as an opportunity to popularize football in the country. In collaboration with FIFA, the government has launched an outreach program named mission 11 million whereby various programs are to be held in 30 cities in the country in the run up to the event.



•Mahindra Singh Dhoni has announced to step down as captain of team India's limited over matches. He will, however, be available for the selection for the ODI and T20 England series starting this month. He had earlier stepped down as captain of India's Test team. Dhoni relinquishes captaincy in all formats of the game after having played 60 tests, 199 ODIs and 72 T-20 matches.



•Virat Kohli was officially appointed captain for all three formats of the game. He took over leadership for the upcoming limited overs against England. Mahendra Singh Dhoni, after more than nine years at the helm, will play only as keeper batsman. Virat Kohli will lead a 15-member squad in both ODIs and T20 against England.

Civil Engineering: Milestones, Making, Career

HAPPENINGS

NEW RIVER-LINKING PROJECT

• Highly advanced LIDAR (Light Detection and Ranging) Survey will be taken up by Water and Power Consultancy Services Limited to prepare a Detailed Project Report for supplying Godavari water directly to Rayalaseema.

• After successful linkage between the Godavari and Krishna rivers through the Pattiseema project, now the Andhra government is embarking on linking the Godavari with the Penna.

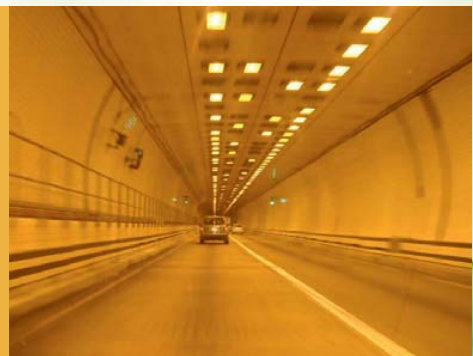


CHINA LAUNCHES LONGEST BULLET TRAIN

- China has launched its longest bullet train named "Shangri-la of the world".
- It runs between Kunming, capital of southwest China's Yunnan province to Beijing.
- The train starts from Kunming on a 2,760-km trip to Beijing, which takes about 13 hours.
- The name of the train reflects the world famous resort in Shangri-la of Yunnan.
- China has built more than 20,000 km of high-speed rail lines.

INDIA'S LONGEST TUNNEL

- India's longest road tunnel, built on the Jammu-Srinagar National Highway, will open to traffic very soon following the success of the train run.
- The work on the 9.2-km tube tunnel, which is part of a 286-km, four-lane project, started on May 23, 2011 in the lower Himalayan mountain range and cost RS. 3,720 crore.
- The tunnel, which is located at an elevation of 1,200 metre.



INDIA'S LARGEST FLOATING SOLAR PV PLANT



- State run NTPC said it has installed India's largest floating solar photovoltaic (PV) plant at Rajiv Gandhi Combined Cycle Power Plant (RGCCPP) at Kayamkulam in Kerala.

- A 100 kWp (kilowatt peak) floating solar PV plant, the largest of its kind in India as on date, indigenously developed as a part of 'Make In India' initiative, was inaugurated by NTPC.

DMRC UNVEILS PARK MADE OF WASTE



- The Delhi Metro Rail Corporation unveiled a one of a kind park, designed using waste materials generated from the Delhi Metro's construction sites.

- It is located in east Delhi's Shastri Park, the Prakriti Metro Park.

- Lake with a fountain Spread over 10 acres, the park boasts a host of facilities, including an auditorium, amphitheatre, meditation alcove, a playground for children & a gym.

MEGHALAYA ROOT BRIDGE NOMINATED FOR NIF

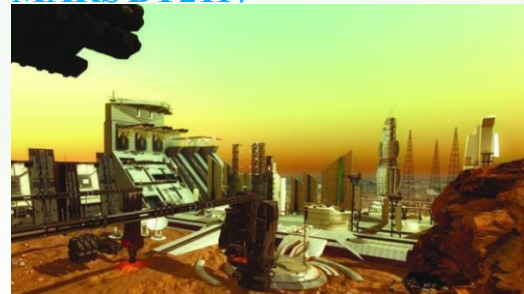


- Meghalaya root bridge has been nominated for the prestigious National Innovation Foundation award for grassroots innovations and outstanding traditional knowledge.

- It is a community driven innovation by forest dwellers in the southern slopes of the state.

- The recognition is not for any single Community for all communities who are engaged in growing living root bridges.

UAE TO BUILD FIRST CITY ON MARS BY 2117



- The UAE has unveiled plans to build the first city on Mars by 2117 as the energy Rich Country looks to transport people to the Red Planet over the next few decades.

- UAE will set a plan to prepare national cadres that can achieve scientific breakthroughs to facilitate the transport of people to the Red Planet over the next decades.

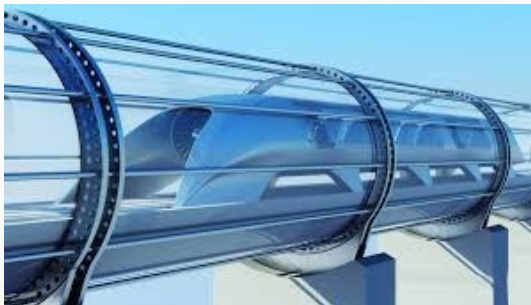
- The '100-year plan will involve scientific research programmes

GUJARAT GOVERNMENT SIGNS RS 77,000 CRORE MOU WITH RAILWAYS FOR BULLET TRAIN



- Gujarat govt has signed a MOU worth Rs 77000 cr with the Ministry of Railways for the Mumbai-Ahmedabad bullet train project .
- The project is expected to cover 5089km between Mumbai & Ahmedabad in about 2 hours, running at a max speed of 350kmph & operating speed of 320kmph.
- The project is expected to complete by the 2023.
- The train will have a 21km tunnel under the sea.

Hyperloop Transportation System Referred to Niti Aayog



- The government has referred the proposal to set up a "hyperloop transportation" system in the country to Niti Aayog, according to road transport and highways minister, Nitin Gadkari . "Hyperloop had made a presentation to me which we have forwarded to Niti Aayog.

•Now they will call for a trial run for the technology at some small stretch after which we'll be able to take a call on the matter," Gadkari said. He said a committee under Niti Aayog member VK Sarawat is looking into the feasibility of having a hyperloop transportation system in the country where a pod like vehicle is propelled through a near- vacuum tube connecting cities at speeds matching that of an aircraft.

•US-based Hyperloop Transport Technology (HTT). during a recent meeting with Gadkari, had suggested such services to connect major Indian cities and had also sought land for a pilot project. Gadkari had shown interest in the project, given the leapfrog technology it offers. The hyperloop concept is a brainchild of Tesla founder Elon Musk.

3D Paintings as Virtual Speed-Breakers likely in India



•A" in a bid to curtail rash driving and make Indian roads safer, the Indian government is toying with the idea to use 3D paintings as virtual speed breakers on major highways and roads.

•"We are trying out 3D paintings used as virtual speed breakers to avoid unnecessary requirements of speed breakers," India's transport minister Nitin Gadkari has said.

•The optical illusions are supposed to encourage drivers to slow down automatically. The government ordered removal of all speed breakers from highways, which are considered to be a safety hazard for high-speed vehicles.

•India has the highest number of road accident deaths in the world. According to the World Health Organisation, over 1.5 lakh people are killed by road accidents due to poor implementation of road safety laws. This is considerably higher than its official figures of 141,526 for 2014.

•The use of optical illusions as speed breakers was first pioneered in the American city of Philadelphia in 2008, as part of a campaign against speeding motorists. The technique has also been tried out in China to create floating 3D crossings

Metro Man: E SREEDHARAN



Elattuvalapil Sreedharan, popularly known as the “Metro Man”, is an Indian engineer who played a key role in the building of the Konkan Railway and the Delhi Metro. In India millions of people are dependent on the public transport and the credit for changing the very face of Indian public transport goes to this enterprising engineer. He first proved his ability as an engineer when he was put in-charge of restoring a bridge that had been damaged by a cyclone. He executed the complete work within 46 days as against the six months allotted to this task. Recognized by the government for his brilliance, he was made the in-charge for planning and designing the Kolkata metro, the very first metro in India. Several national and international honors have been bestowed upon him for his pioneering works.

Career:

- After completing his education he was appointed as a lecturer in Civil engineering at the Government Polytechnic, Kozhikode. He worked there only for a short while before joining the Bombay Port Trust as an apprentice.
- In 1953, he appeared for the Engineering Services Examination (ESE) conducted by the Union Public Service Commission (UPSC) and cleared it. He joined the Indian Engineering Service (IES) and was posted as a Probationary Assistant Engineer in the Southern Railway in December 1954.
- He faced the first big challenge of his career in December 1964 when a cyclone damaged the Pamban Bridge in Tamil Nadu. The Railways allotted a period of six months for the repair works while Sreedharan’s boss wanted the work done within three. Sreedharan, who was made incharge of the restoration, executed the work in just 46 days.
- He became the general manager, Western Railway in July 1987. A couple of year later he was elevated to the post of Member Engineering, Railway Board and ex-officio Secretary to the Government of India. The Konkan Railway project, which had 93 tunnels with a total tunnel length of 82 km and involved tunneling through soft soil, was very different from the typical Indian railway projects. The total project covered 760 km and had over 150 bridges. Under his leadership, the work was completed in seven years.
- He was later made the managing director of Delhi Metro Rail Corporation (DMRC). Again he proved to be an extraordinary leader and all the scheduled sections were completed within their respective budgets, and by their target time.
- The phenomenal success of the Delhi Metro made him a national celebrity and the government honored him with many awards for his relentless hard work and dedication. He retired from service in December 2011.

Awards & Achievements:

- The Government of India honored him with the Padma Shri, the fourth highest civilian award in the Republic of India, in 2001.
- The Government of France bestowed upon him The Order of Légion d’Honneur, the highest decoration in France, in 2005.
- In 2008 he received the Padma Vibhushan, the second highest civilian award in the Republic of India, in recognition of his work with the Delhi Metro.
- Recently he has been appointed to serve the United Nations’ High Level Advisory Group on Sustainable Transport (HLAG-ST)

CAREER AFTER BE CIVIL ENGINEERING



Field Job



Research



Management



Self Employment



Software Job

	Career	How To Apply
F	Field Job;	Appear for GATE examination (Many PSUs recruit through GATE).
	. Private Sector	Appear for IES (Indian Engineering Services, conducted by UPSC).
	. Public Sector . Govt. Sector	
R	Research;	
	. M.Tech/ PhD	Appear for GATE.
	. Scientist ; ISRO . BARC, DRDO	Appear For GRE.
M	Management;	
	. MBA in IIM. . PGDBM in NITIE	
	. Training in institute like NICMAR.	Appear for CAT, GMAT, MAT
C	Civil Services;	Start preparing throughout graduation.
	. IAS, IPS, ICS, IFS	Appear for UPSC.
	IRS.	

QUANTITATIVE APTITUDE AND NUMERICAL REASONING

1. A takes 5 days more than B to do a certain job and 9 days more than C. A and B together can do the job in the same time as C. How many days A would take to do it?
 - a. 16
 - b. 10
 - c. 15
 - d. 20
2. One square is selected from an 8*8 chess board. What is the probability that it is a square of size 3*3
 - a. 3/17
 - b. 1/9
 - c. 2/17
 - d. 5/34
3. A mixture of 70liters of alcohol and water contains 10% of water. how much water must be added to the above mixture to make the water 12.5% of the resulting mixture?
 - a. 1 liter
 - b. 1.5 liter
 - c. 2 liter
 - d. 2.5 liter
4. Raju lent Rs. 400 to ajay for 2 years, and Rs. 100 to manoj for 4 years and received together from both rs.60 as interest. find the rate of interest.
 - a. 6%
 - b. 9%
 - c. 5%
 - d. 10%
5. 40% of a number is equal to three-fourth of another number. What is the ratio between first and second number?
 - a. 15:8
 - b. 12:19
 - c. 14:17
 - d. None of these
6. In a kilometre race , A beats B by 100m or 15 seconds. How long does A take to complete the race?
 - a. 270s
 - b. 125s
 - c. 135s
 - d. 250s
7. A basket contain 3 blue, 2 green ,5 red balls .if three balls are picked at random, what is the probability that at least one is red??
 - a. $\frac{1}{2}$
 - b. 7/12
 - c. 11/12
 - d. 1/5
 - e. None of these

8. Find wrong number in series
7 8 17 56 209 1046
- 8
 - 56
 - 1046
 - NOT
9. Find number at (?).
95, ?,762,656,557,465
- 845
 - 875
 - 865
 - 885
 - NOT
10. The calendar for the year 2001 is the same as that of which following year??
- 2005
 - 2006
 - 2007
 - 2008
11. Two clocks are showing correct time at 4:00 p.m. one clock loses 3.5 minute in a hour, while the other gains 2.5 minute in one hour. at 10:00 p.m. on the same day, by how much time will the two clocks differ?
- 12 min
 - 36 min
 - 24 min
 - 30min
12. A woman introduces a man as the son of the brother of her mother. How is the man related to the woman?
- Nephew
 - Son
 - Cousin
 - Uncle
 - Grandson
13. Synonyms of dire is
- Enough
 - Pleasant
 - Formidable
 - Extreme
14. Antonyms of earthy is
- Refined
 - Water
 - Liquid
 - Melodious

15. Give similar relationship. **Spear: dart**

- a. Knife: sward
- b. Cannon :gun
- c. blunt : sharp
- d. historian : past

16. mark the choice closest in meaning to the word **Fiasco**

- a. festival
- b. failure
- c. pabulum
- d. lucky stroke

17. the rank of matrix $\begin{pmatrix} 1 & 1 & 1 \\ 1 & -1 & 0 \\ 1 & 1 & 1 \end{pmatrix}$ is

- a. 1
- b. 0
- c. 2
- d. 3

18. The solution of $dy/dx=y^2$ with initial value $y(0) = 1$ bounded the interval

- a. $-\infty \leq x \leq \infty$
- b. $-\infty \leq x \leq 0$
- c. $x < 1, x > 1$ ans
- d. $-2 \leq x \leq 2$

19. The minimum number of equal length subintervals needed to approximate $\int_1^2 xe^x dx$ to an accuracy of the least $1/3 \times 10^{-6}$ using trapezoidal rule is

- a. 1000e
- b. 100e
- c. 1000
- d. 100

20. If $s = \int_1^{100} x^{-3} dx$ then s has value

- a. -1/3
- b. $1/4$
- c. $1/2$
- d. 1

21. The area enclosed between the curve $y^2 = 4x$ and $x^2 = 4y$ is

- a. 16/3
- b. 8
- c. 32/3
- d. 16

22. The solid angles are measured in

- a. Grades
- b. Radians
- c. Ste radians
- d. Degree

23. In jack arch floor , the rise is kept
- 1/6 th of the span
 - 1/8 th of the span
 - 1/10 th of the span
 - 1/12 th of the span
24. For given water content, workability decreases if the concrete aggregates contain an excess of
- Flaky particles
 - Elongated particle
 - Flat particle
 - All
25. The angle between the plan of the equator and the plane of the ecliptic, is known as obliquity of the ecliptic and its value is
- 22°30'
 - 23°30'
 - 23°27'
 - 24°
26. The 'fix' of a plane table station with three known points , is bad if the plane table station lies
- In the great triangle
 - On the circumference of the circumscribing circle
 - Outside the great triangle
 - NOT
27. Accurate determination of water content, is made by
- Oven drying method
 - Alcohol method
 - Sand bath method
 - Calcium carbide method
28. The ratio of the moment of inertia of a circular plate and that of a square plate for equal depth is
- Less than one
 - Equal to $3\pi/16$
 - Equal to 1
 - More than one
29. In a tilted aerial photograph, if the swing is 230°, then the rotation angle is equal to
- 140°
 - 50°
 - 25°
 - 130°
30. The treatment that should be given to the water from a deep tube well is:
- Disinfection only
 - Pre-settling only
 - Filtration only
 - Coagulation and flocculation only

Answer Key

1. (c) 15
2. (a) 3/17
3. (c) 2 liter
4. (c) 5%
5. (a) 15:8
6. (c) 135s
7. (c) 11/12
8. (d) NOT
9. (b) 875
10. (c) 2007
11. (b) 36 min
12. (c) Cousin
13. (d) Extreme
14. (a) Refined
15. (d) historian : past
16. (b) failure
17. (c) 2
18. (c) $x < 1, x > 1$
19. (a) 1000e
20. (c) $\frac{1}{2}$
21. (a) 16/3
22. (c) Ste radians
23. (d) $\frac{1}{12}^{\text{th}}$ of the span
24. (d) All
25. (c) $23^{\circ}27'$
26. (b) On the circumference of the circumscribing circle
27. (a) Oven drying method
28. (b) Equal to $\frac{3\pi}{16}$
29. (d) 130°
30. (a) Disinfection only

Departmental Corner



Department Laboratories



EVENTS ORGANIZED BY THE DEPARTMENT

SITE VISIT TO SARDAR SAROVAR DAM

20th January 2017

Sardar Sarovar Dam is located near Navagam, and constructed on the Narmada River, by the Sardar Sarovar Project (SSP). The students of third year civil engineering department visited the dam on 20th January, 2017. The visit started with observing the construction of Statue of Unity, which is to be at a height of 182 m after finished construction. At that time, Pile Driven Works were going on.

Moving ahead, the students visited the River Bed Power House, which was astonishingly 200m long, 23m wide, and 53m high. The power house consists of six turbines having power generating capacity of 200MW each! These turbines were supplied from a company in Japan named M/S Sumitomo Corporation. These turbines require a minimum head of water at 128.68m. The power generation cost is 30paise/unit, in which the power is supplied to three states; Gujarat (16%), Madhya Pradesh (57%), and Maharashtra (27%).

Then, the students visited the actual site of the dam, in which they found the dimensions to be 146.5m high and 1.2km long. It includes 30 gates each having a capacity of 1 lakh cusecs.

Then, students visited the Canal Bed, in which their power house consists of 5 Kaplan turbines, having 50 MW capacities each! 67000 km of canal network is present from starting point of the dam, making it the longest lined canal network of the world. So many villages and cities are benefitted from this project. It was an enjoyable experience for all!



CELEBRATION OF “ROAD SAFETY WEEK”

11th to 17th January 2017

We all know the famous phrase, "Prevention is better than cure". That is exactly what "Road Safety Week" intends to do. Road safety week is celebrated in India in January, for which it was celebrated on 11th to 17th January this year. Throughout India, the message of taking precautions while driving is spread. This is achieved by various means, which may include skits and plays, distribution of treats, and enthusiastic celebrations to encourage professional driving.

Our department of Civil Engineering celebrated Road Safety Week by organizing two activities. One of the activities took place in the morning at Dakshina Murthi Primary and Secondary School. Our enthusiastic third year students performed skits on 'Drinking and Driving', 'Girls without helmets', 'Spitting', and many more. 300 students attended the event, followed by another event at the college in the evening.

The second activity which we celebrated was a presentation on "Road Safety Awareness", which was given by third year students Prachi Pinara and Nihar Shah. This enjoyable presentation consisted of some facts about accidents in India, videos of some cases, as well as the measures which we should be taking every day to prevent accidents.

The celebration of Road Safety Week was enjoyable for all the students as well as the faculty, and we should be taking precaution as well as spreading awareness as much as possible.



EXPERT LECTURE BY JK CEMENT

3rd February 2017

On 3rd February, 2017, J K White Cement Ltd. organized a seminar on properties, composition and applications of white cement. The speaker of the seminar was Mr. S. P. Arora who has 25 years of experience in this field.



He started the seminar by describing the composition of the white cement. White cement comprises of compounds of calcium, silicon, aluminum and iron. The oxides of iron are responsible for the color of cement. The amount of iron oxide in grey cement is about 4-5% and in white cement it is 0.12%. Then he threw some light on clinker chemistry and its composition. He also explained the manufacturing process of white cement. He mentioned use of efficient fuel for combustion in the manufacturing process for which Pet Coke (by product of fuel industry) is proved to be a very good fuel.

Then he informed about the applications of white cement for various purposes. He also gave explanation about blended cement, the addition of pozzolonic materials in the cement to increase its strength and also decrease pollution. Compound such as titanium dioxide is added to white cement which eliminates dangerous organic/inorganic pollutants, and due to this the white cement possesses photo catalytic properties.

Overall, the lecture was a very good source of information regarding the cement.

SITE VISIT TO SEWAGE TREATMENT PLANT & WATER TREATMENT PLANT, VADODARA

10th February 2017

A visit to Nimeta Water Treatment Plant was organized by the staff of Civil Engineering Department, GCET on 10th February, 2017. Students were explained about the source of the water (i.e. Ajwa Sarovar) and then the flow diagram of the entire treatment plant was shown and explained in brief. Then treatment plant was explained by the supervisor in detail.



The first unit for the treatment process was the sedimentation tank and the flocculator. Addition of Alum to the tank was only done during monsoon season otherwise the flocculator works as a sedimentation tank. After

the flocculation tank the water reaches to the rapid sand filter tank. After the filtration process, Chlorination is done. The maintenance work of this treatment plant is done yearly before monsoon and the treatment plant shuts down for 10-15 days for maintenance.

The Atladara STP treats 43 MLD Sewage and then releases the treated water in Vishwamitri River. The sewage from the main pumping station comes into the inlet chamber where the screen removes all the floating matter like paper, plastic bottles, wood pieces, braches of trees etc. which are then disposed directly through a belt conveyor. Then the sewage is entered into the Grit Chamber which consists of pedals moving with low rpm (i.e. slow stirring). Then, the sewage is taken to the grit classifier and it rotates such that all the grit is collected at one side. Then the sewage is distributed evenly in 3 other division boxes for further treatment.

UASB (Up-flow Anaerobic Sludge Blanket) technology is used for the Secondary treatment process of sewage. Various tests like BOD test, COD test, DO test, MLSS, MLSV, etc. are performed before and after the treatment of sewage.

The visit of both treatment plants was very beneficial to the students as they could practically see the treatment process which helped them understand the concepts better.

REPORT ON EXPERT TALK ON REVERSE ENGINEERING & DESIGN CONCEPTS FOR DESIGN ENGINEERING

10th February 2017

The civil engineering department of G. H. Patel College of Engineering & Technology organized a seminar on “Reverse Engineering & Design Concepts For Design Engineering” on 10, February 2017.

The seminar was organized in association with Indian Society for Technical Education (ISTE) with Prof. Ajaysinh Vaghela, Assistant Professor, Civil Engineering Department, GCET as the speaker. The seminar mainly focused on Reverse Engineering & Design Concepts For Design Engineering

The speaker discussed about the Reverse Engineering in the following manner “Legally sanctioned method of copying a technology which (as opposed to starting from scratch) begins with an existing product and works backward to figure out how it does what it does. When the product's basic principle or core concept is determined, the next step is to reproduce the same results by employing different mechanisms to avoid any (legally forbidden) patent infringement.

The lecture was very much fruitful for the audience and helped a lot to enhance their knowledge.



Students Achievement

Academic Achievements:

Semester: 1			
No.	Name	Max. SPI	Max. CPI
1	Andhariya Priyam	9.27	9.27
Semester: 3			
1	Donga Tushar	9.33	
2	Rutvi Patel	9.18	9.23
Semester: 5			
1	Pitroda Jalpesh	9.16	9.51

Other achievements:-

- 1. Shejad Pathan** (3rd year, Civil Engineering) and his team represented GTU in Soft Ball competition at Mahatma Gandhi University, Kottayam, Kerala.
- 2. Abitha Joppan** (1st year, Civil) represented GTU in Archery competition at Krishna University, Andhra Pradesh on 15th Feb, 2017.
- 3. Brijesh Wala** (3rd year, Civil) secured 2nd position in Elocution/Oral presentation at the National Science Day Commemoration -2017 on “Science and Technology for specially abled persons” under IIChe, Gcet on 28th February, 2017.

Our Faculties



Faculties Achievement

No.	FacultyName	Title	Publication	Month, Year
1.	Prof. Riddhi Vashi & Prof Krunali Patel	Aparametric study on behaviour of Geogrid Reinforced earth Retaining wall	Presented in International conference on Research and Innovation in Science, engineering and Technology held at BVM And Published in Indian Journal of Technical Education	FEB,2017
2.	Prof. Snehal Popli	Mechanistic Aspects of Enhanced Electrochemical Reduction of Reactive Black 5 dye in a divided cell in the presence of Silver Nano-Particles	Separation and Purification Technology, Elsevier	FEB,2017
3.	Dr.Khadeeja Priyan & Prof. Ratansharan Panchal	Micro-Irrigation: An Efficient Technology for India's Sustainable Agricultural Growth	Presented in International conference held at BVM And Published Indian Journal of Technical Education(IJTE)	FEB,2017

“Some Eloquent Thoughts”

Life

From the sands he emerged,
To a world where his life got divulged.

Just a wanderer to the world, isolated from the feelings,
No matter how harsh the pain, always followed by the healings.

No worries of the world,
His presence is more expensive than gold.

Then he grows, he learns, and his life starts to transform,
The point where his psyche commences to form.

This gives him either love or hatred,
That paints his character either black or red.

He runs on his pursuit of happiness,
Only the adamant will survive all its dizziness.

And the rest remains wanderer to the course of their life,
Feeling regret for their life full of gaffe.

And then he chooses either to sleep or to survive,
And fights till the victory thrive.

And then he waits to rest on noble lands,
Where his soul and the sand completely blends.

-Brijesh A. Wala

Don't pass me by

He walked with eyes lowered, head to the ground.
When he saw me, he spoke, and I took in his sight.
He was scruffy and raggedy in his eyes was no light.
He said, "Ma'am, I'm hungry."
He was very polite.
I said to him softly, "No money have I,
But I'll buy you some food
With these food stamps of mine."
We walked on in silence, this homeless old man,
And he said, "Give me your number
I'll pay you back when I can."
I looked in his eyes, where hopelessness lay,
And I said, "Never mind. I don't want you to pay."
As we walked down the aisles of the grocery store,
Like a child he picked something, then asked for some more.
I gladly told him to fill all his needs,
Because in my lifetime, I've done some bad deeds.
I'll never forget him, as he went on his way,
Because he gave me something I can never repay.
He gave me a chance to give what I could,
A chance to show love to the misunderstood...
A chance to feed someone when no one else would...
A chance to be special, a chance to be good.
I'll ever be grateful to the stranger in rags,
For showing me Love in a few grocery bags,
For letting me be the one who had more,
For letting me answer his knock at my door.
You see, I'm no angel, though I've wanted to be.
I've hurt many people by just being me,
And this man, this stranger, who did not pass me by,
Set free for an instant, an angel to fly.

-Pratik Kabra

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G H PATEL COLLEGE OF ENGG. & TECH.

VALLABH VIDHYANAGAR

(A Charutar Vidhya Mandal Institution)

Bakrol Road, Vallabh Vidhyanagar - 388120, Gujarat, India

Phone: +91 2692 231651, 652981, Telefax: 236896

principal@gcet.ac.in

www.gcet.ac.in

Editorial Board:

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Student Contributors:

MD Sarfaraz	Rutvi Patel
Pratik Kabra	Aditi Patel
Lunagariya Yash	Jenus Mehta
Faiz Shaikh	Avinash Yadav
Jasmin Radadiya	Sagar Akbari
Shivani Khetani	Janak Kathiriya
Waseem Raja	

