



Vidya Vikas Education Trust's

# Universal College of Engineering

Gujarati Linguistic Minority Institution

Approved by AICTE, DTE, Maharashtra State Government and Affiliated to Mumbai University

Accredited with "B+" Grade by NAAC



## The Benchmark

Issue 018: January 2020 Edition

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### Department Vision

- To excel in every area of Civil Engineering, inculcate research oriented study to explore hidden talent.
- Providing Opportunity to display creativity, out of the box thinking & innovativeness, aimed at providing cutting edge technology for sustainable development.

### Department Mission

- Providing qualified, motivated faculties to deliver the content using updated teaching methodology, inviting industry experts from various areas to disseminate subject knowledge in Civil Engineering.
- Motivating students to undertake the Research Oriented studies, participate in competitions at all levels, grasping new techniques and methods which can be improved on further.
- Conducting and participating in seminars, workshops and training programs with a view to make the students industry ready and improve their employability factor for global career ahead.
- To create quality professionals capable of planning, designing and analytical skills for better infrastructural development in the field of Civil Engineering.

## Volume Village

### Editor's Desk

*We are pleased to present January 2020 Edition of Benchmark in a new outlook. This edition focus on environmental aspects as well as presents you with opportunities that makes a difference from your career perspective, other contributions of students & faculties of Department of Civil Engineering in the month of December are also highlighted.*

# Konkan Railway

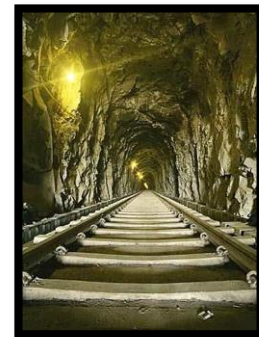
## Overview

- Konkan Railway designed and built by Indian engineers in a record time of eight years, the Konkan Railway takes you on a breathtaking journey through rugged mountains, lush valleys, sunlit paddy fields, bustling villages and glistening rivers that lead out to sea. Heralding the realization of a long-cherished dream of the people of the Konkan region, the construction of Konkan Railway effectively connected the southwestern coast of India with the rest of the country in a point-to-point straight line.
- Today, the Konkan Railway travels 738 kilometers through the states of Maharashtra, Goa and Karnataka, starting just after the Roha railway station (75 km south of Panvel in the suburbs of Mumbai) in Maharashtra and ending at the Thokur railway station near Mangalore in southern Karnataka.
- Work on the line running along the western coast of India began as early as 1964 when a line was laid between Diva and Panvel. It was further extended to Apta two years later in 1966. However, it was only in October 1984 that the Ministry of Railways decided to build the railway route, dubbed the Konkan Railway after the coastline it hugged, that would cover the west coast line from Madgaon to Roha. Two years later in 1989, work on the Konkan Railway officially began.
- Building the Konkan Railway threw up a whole range of difficulties for the engineers tasked with the job. The rocky Sahyadri range had to be bored through, viaducts had to be built through valleys and more than 1,500 rivers had to be forded.
- To reach the target speed of 160 km per hour, a near flat track with a minimum curvature of 1.25km radius was needed. The only way this could be achieved was to build the rail line straight through the undulating terrain. This meant constructing a lot of bridges, tunnels and embankments that would allow the track to maintain its level run. Satellite images were used to finalize the alignment and work started from both the ends.
- Joining the length and breadth of Konkan and touching its core like no one else does, the Konkan Railway is an Indian triumph in many areas – engineering, efficiency, innovation, and dedication. Even today, a journey on this spectacular route, with its resplendent views of the Western Ghats, is an experience that remains etched in your memory for a long, long time.

## Photos



*The bridge has been consistently ranked as one of the great engineering achievements of all time and received the 2006 "International Association for Bridge and Structural Engineering Outstanding Structure Award".*



### DID YOU KNOW?

*The Itaipu Dam, located at the Brazilian-Paraguayan border, is the largest operating hydroelectric facility in terms of annual generating capacity.*

*To know more about  
Konkan Railway,  
Scan the QR Code*



## Page 03:- COP 25 Failed to make Impact

The United Nations Framework Convention (UNFCCC) is the international response to climate change. It is a treaty that establishes the basic obligations of the 196 Parties (States) plus the European Union to combat climate change. Marathon talks by 197 countries at the United Nations Climate Change Conference (COP 25) at Madrid failed to reach consensus on issues that are crucial to keep global warming at bay, with much awaited decision on carbon markets being postponed to the next edition of the summit. The decision has also been left for the 2020 summit to be held in Glasgow.

The two week long talks defined as “disappointing” and “unfortunate” by delegates of closing session of the negotiations on 13 November 2019. The international community lost an important opportunity to show increased ambition on mitigation, adaptation and finance to tackle the climate crisis. Civil society organizations and Independent observer of negotiations said big polluters such as United States, Australia, Brazil and Saudi Arabia slowed down discussions on financial compensation for loss and damages to vulnerable countries and carbon markets covered under Article 6 of the Paris climate deal. They also didn't agree on enhancing Nationally Determined Contributions (NDCs).

Among the thorny issues at the summit at a consensus on the rules regarding international trade in carbon credits, one of the main tools to keep mean global temperature rise under  $2^{\circ}$  C by capping emissions. It allows carbon market to trade in emission reduction credits. A country that has overachieved the target can sell carbon credits to others. During the talks country like Brazil pushed for double counting to be allowed i.e a country selling carbon credit might claim underlying emissions reduction for itself, while at the same time the



country buying the credit also claim the same emission reduction. Similarly, another bone of contention was the carryover of carbon credits from the Clean Development Mechanism (CDM), demanded by India, China and Brazil but opposed by the European Union. The CDM is an emission trading scheme under the Kyoto protocol (the first agreement between the developed nations to reduce carbon dioxide emissions which came into force in 2005) that was crucial issue for India as it has backlog of millions of unsold credits from CDM. Participant at the summit also didn't reach an agreement on financial support to Developing nations, key demand of India that has also called for Developed nations to follow up their Kyoto era commitment to mobilize \$ 100 billion by 2020 for mitigation and adaptation.



“Today we are not even able to affirm the importance of climate finance. When we ratified the Paris agreement, we didn't expect this” Egypt's delegation said. Negotiators blamed US for lobbying against paying reparations to countries facing the brunt of climate crisis such as sea level rise, deadly cyclone, severe heat waves etc. The world meteorological organization on December 3 said the past ten years were the warmest on record, with Global mean temperature for period between Jan 2019 to October 2019 about  $1.1^{\circ}$  C above pre industrial level. At this level the  $1.5^{\circ}$  C threshold will be breached by 2030s.

-Mr. Rajesh Dubey  
Asst. Professor UCOE

### Scratch Your Head !!

1) A time varying magnetic field produces an electric field, this phenomenon is called as?

- ❖ Newtons Law
- ❖ Ampere Maxwell Law
- ❖ Kirchhoff Law
- ❖ Faraday's Law





# Page 04:- Top Certifications and Program for Construction

Construction management certification refers to credentialing for those who have chosen a career in construction and want to either advance in an organization or simply learn how to be better at what they do. Many non-profit professional organizations—and even government agencies—offer certifications that can help construction managers do their jobs. Additionally, some construction software companies offer their own certification programs. A certification in a popular type of software in the construction field could look good on a resume, and some firms may even require it.

## 8. TOP CONSTRUCTION CERTIFICATIONS: -

### 1. American Concrete Institute (ACI)-



ACI claims that more than 550,000 craftsmen, technicians, inspectors, and other concrete professionals have pursued ACI Certification, and that a large list of specifiers and owners require it. The organization offers 30 certification programs “designed to form a minimum qualification for personnel employed within the concrete construction industry.”

Who should get this certification: Concrete professionals.

Webpage: <https://www.concrete.org/>

### 2. American Institute of Constructors (AIC)-



The American Institute of Constructors offers a Constructor Certification Program that provides a certification of skills and knowledge in construction management. AIC's first certification program, Associate Constructor, is ideal for those in other industries who are trying to transition into construction management. For those who are already construction managers, the Certified Professional Constructor course is meant to help you advance in your career.

Who should get this certification: Professionals who are transitioning into construction management from other industries, or established constructors who are seeking career advancement.

Webpage: <https://www.professionalconstructor.org/>



### 3. Certified Construction Manager (CCM)-

The Construction Management Association of America offers the Certified Construction Manager (CCM) program, which the organization describes as the “gold standard” in construction management and claim is the only construction management certification accredited by the American National Standards Institute (ANSI). The program teaches management techniques designed to help professionals figure out how to run construction projects more efficiently in order to stay on time and on budget.

Who should get this certification: Construction managers seeking career advancement.

Webpage: <https://www.cmaanet.org/certification/certified-construction-manager/becoming-ccm>

## 4. The Institution of Engineers (India)-



The Institution of Engineers (India) is devoted to promote the efficiency and ethical practice in engineering services and committed to disseminate the information on the recent developments in engineering amongst the professionals. IEI helps engineering professionals to undertake planned and structured Training Programmes, attend Seminars, Workshops, etc. for Continual Professional Development (CPD) of the professionals as the website states.

Ever since its inception, IEI has been the forerunner in setting up national standards for promoting the country's industrial base which culminated on the formation of the Indian Standard Institution (ISI), now called as Bureau of Indian Standards (BIS). IEI, in collaboration with Springer, regularly publishes peer-reviewed international journal in five series, covering fifteen engineering disciplines.

Who should get this certification: Any engineer seeking advancement in career in Indian Scenario.

Webpage: <https://www.ieindia.org/>

## 5. National Association of Corrosion Engineers (NACE)-



The NACE International Institute is the part of the organization that deals with certifications, particularly workforce certification programs. It administers 23 certifications in many disciplines, such as coatings inspector or corrosion technologist. "Unlike other certifying organizations, NII Certifications are not solely awarded based on course completion," the website states. "All candidates must display a level of skill and competency that only comes with validation, years of experience, and continuous study in their selected corrosion field."

Who should get this certification: Corrosion professionals.

Webpage: <https://www.nace.org/>



## 6. National Centre for Construction Education and Research (NCCER)-

NCCER offers credentials and certification through its registry system, a secure database the organization maintains to track the names of those who have completed their standardized training program. The program covers more than 70 craft areas in construction. "NCCER develops standardized construction and maintenance curriculum and assessments with portable credentials," the websites states. "These credentials are tracked through NCCER's Registry System that allows organizations and companies to track the qualifications of their craft professionals and/or check the qualifications of possible new hires."

Who should get this certification: Any construction professional who wants to certification in a specific field (electrical, drywall, etc.).

Webpage: <https://www.nccer.org/>

*Scratch Your Head !!*

2) *Dicken's formula for high flood estimate, is useful only for the catchments in?*

- ❖ *Southern India*      ❖ *Western India*
- ❖ *Northern India*    ❖ *Eastern India*

## 7. National Institute for Certification in Engineering Technologies (NICET)-



If you're on the engineering side of construction, NICET has nationally recognized certification programs that can help you get the expertise you need to advance in your career. The organization trains and certifies workers in civil engineering, fire protection, security systems, and other areas. "Designed by industry experts to provide engineering technology fields with a qualified workforce, our programs are increasingly used by employers and specifiers to measure job skills and knowledge," the website states.

Who should get this certification: Construction engineering professionals.

Webpage: <https://www.nicet.org/>

## 8. Occupational Safety and Health Administration (OSHA)-



OSHA is a well-known name in construction, to say the least, and the government agency offers an Outreach Training Program on common on-the-job safety and health hazards. You can take a 10-hour or a 30-hour course, depending on your needs. The 10-hour course is meant for entry-level workers, while the 30-hour course "provide[s] workers with some safety responsibility a greater depth and variety of training," according to OSHA's website. "The Outreach Training Program provides basic safety and health information and education — it does not fulfil an employer's requirement to provide training under specific OSHA standards. The OSHA Outreach Training Program for the Construction Industry provides training for workers and employers on the recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces in the construction industry."

Who should get this certification: Entry-level workers (10-hour course) and workers with some safety responsibility (30-hour course).

Webpage: <https://www.osha.gov/>

-Mr. Shreyans Dodia  
Asst. Professor UCOE

### Civil engineering



- |           |          |            |              |
|-----------|----------|------------|--------------|
| blueprint | Geometry | hydraulics | Inclinometer |
| Lever     | license  | model      | Molding      |
| Newtonian | Optics   | Phase      | Pressure     |
| Pulley    | sector   | structure  | Survey       |
| Tension   | Torque   |            |              |

*"It is the prime responsibility of every citizen to feel that his country is free and to defend its freedom is his duty."*

*-Sardar Vallabhbhai Patel*

# ***Page 07: - STTP ON ADVANCEMENT IN CONCRETE TECHNOLOGY***

The Department of Civil Engineering organised a STTP programme for Students as well as Faculty member of Institute Affiliated to University of Mumbai, in association with IEI (The Institute of Engineers (India) and ACES for the first time in Universal College of Engineering. Speakers invited for various sessions were highly qualified and Industrial Expertise. Near about 63 students and 16 faculties from various Engineering colleges participated in this program. This program was held from 16<sup>th</sup> December 2019 to 20<sup>th</sup> December 2019 with a remarkable success in three session on daily basis and on 20<sup>th</sup> December 2019 a site visit was conducted.

## **DAY 1**

### **Session I- INAUGURATION CEREMONY (9:30 – 11:30am)**

On 16<sup>th</sup> December 2019, Inauguration ceremony commenced at 10:00 am in the presence of Campus Director of Universal College of Engineering Dr. J.B. Patil and Honourable Guests Dr. Mahesh Tendulkar and Mr. Sanjeev Raje by lightening the lamp. Dr. Mahesh Tendulkar addressed the crowd by stating a huge scope on part of Civil Engineer if they can design the high strength concrete mixes. He further stated need for high strength concrete mixes in the industry and opportunities to start their own Repair and Maintenance Consultancy.



### **Session II- INTRODUCTION AND FUTURE CHALLENGES (11:45-1:45 pm)**

Dr. Mahesh Tendulkar, Director at Concrete Research and Engineering Services Pvt. Ltd. talked about Demand of high-grade concrete, mass concrete carried out at Mumbai Metro. He shared a video of placing of chilling pipe inside the column to reduce differential temperature causing shrinkage cracks. A case study of Bridge pillar rehabilitation of Krishna river was discussed Several other videos of various concrete defects that take place overtime underwater were elaborated.

### **Session III- ADVANCED CONCRETE MATERIALS (2:30-4:30 pm)**

A session after lunch was taken by Mr. Sanjeev Raje, he explained the need of High strength & High-performance concrete which can satisfy all the demands of high strength, high durability and self-compacting nature. A project requires a specific grade of concrete based on the strength and durability to be achieved. He helped us understand that various types of concrete used for metro bridges, coastal road projects, etc. The content and different combination of cement with fly ash, rice husk, silica fumes, and other chemical admixture were also described to fulfil growing industrial demand.

## **DAY 2**

### **Session IV- PROPERTIES OF CONCRETE (9:30-11:30 am)**

Mr. Shrikant Varpe has worked for more than 10 years in Gujarat Ambuja cement, shared his experience on Quality check of materials along with the necessary test on concrete like workability, compaction factor, flow table test, aggregate shape and size. He emphasized role of each ingredient like water, w/c ratio, fine aggregate and coarse aggregate in making a good concrete mix.

## Session V-MINERAL AND CHEMICAL ADMIXTURE (11:45-1:45pm)

Dr. Ibrahim Shaikh conducted this session stating, earlier lower grades of concrete like M25, M30 was used but nowadays, due to high rise structures, we prefer using higher grades of concrete. Several admixtures are required for enhancing properties of concrete according to their use on site. Advantages and disadvantages of various admixtures like accelerators, retarders, air entraining agents, viscosity enhancers, water reducers, etc. was expounded. The current admixtures that are used in the industry, their suitability is the most important when it comes to selecting an admixture for a job. This was cleared precisely without any doubt in our mind



## Session VI- STRENGTH AND DURABILITY OF CONCRETE (2:30- 4:30 pm)

Mr. Hiren Joshi owns a lab in Vasai wherein all the apparatus and machines required for testing concrete are present. Information regarding testing procedure and calculation in determining the strength of the concrete was explained. The various equipment's like Compression Testing machine, Flexural testing machine, Split Tensile and Test like Durability, water permeability were explain showing on site images. He also gave an idea about current testing costs for strength and durability tests in Mumbai region.

### DAY 3

## Session VII- CONCRETE MIX DESIGN BY IS 10262: 2019 FOR FLY-ASH & OPC (9:30-11:30 am)

Mr. Sanjeev Raje from Navdeep RMC started the session with importance of High grade. Mr. Raje has explained the codal provisions in concrete Mix Design and carried out complete Design of grade M40 concrete which is of much importance. The procedure included Computation of Target strength, Selection of W/C ratio, Workability, Selection of zone of fine aggregate, Calculation of cement content by adding fly ash, Water content calculation.



## Session VIII- CONCRETE MIX DESIGN BY IS 10262: 2019 FOR FLY-ASH & OPC (11:45-1:45 pm)

The session was continued by Mr. Raje wherein all the participants worked out the calculations according to the worksheet data of Mix Design step by step for M40 grade of concrete. The differences in these calculations theoretically and its practical implementation with need of manipulation on site according to the site condition were discussed.



## **Session IX- CONCRETE MIX DESIGN BY IS 10262: 2019 SELF-COMPACTING CONCRETE (2:30- 4:30 pm)**

Mr. Shrikant Varpe explained the difference between High strength and Self-compacting concrete, further he also cleared self-compacting concrete does not require vibrating needles and it gets compacted on its own. ACI method was explained and Concrete mix of M 50 grade design was discussed for the learners.

### **DAY 4**

## **Session X- CONCRETE MIX DESIGN BY ACI METHOD (9:30- 11:30 am)**

Mr. Varpe further explained briefly ACI method of Concrete mix design and a concrete mix of M40 grade was designed by the learners. The results of ACI and IS code method were compared which reflected that ACI method is much more efficient in terms of cement content, w/c ratio, etc. than IS code.



## **Session XI- MIX PROPORTIONING BY DIGITAL COMPUTERS (11:45- 1:45 pm)**

This session was continued by Mr. Shrikant Varpe, the complete procedure of how concrete is produced in an RMC Plant was elaborated. The corrections required for fine and coarse aggregates depending upon the moisture corrections were expounded. The dosage of admixtures required was also cleared perfectly. Test such as Slump cone, Vee-Bee, Flow, Marsh cone were taught.

## **Session XII-VALEDICTORY FUNCTION (2:30- 4:30pm)**

A Valedictory function took place in the presence of IEI Chairperson Mr. K.K Varkhedkar and IEI Secretary Dr. Nimkar IEI Belapur local centre. They addressed the crowd and shared their experience in Technical Era. They encouraged the participants as well as IEI UCOE for future events that are to be performed. All the participants were awarded with IEI certificates on completion of STTP



### **DAY 5**

## **Session XIII -VISIT TO BUILD CORE RMC PLANT**

A Site visit was arranged at Build core RMC plant in Naigaon at 9.30 am. The Quality engineer Mr. Mahesh Naik introduced the RMC plant components like Material storage area, Conveyor belt for material hauling, RMC operator room and the mixer in detail with all its working. Learners were then introduced to the testing laboratory where they prepared a sample mix and all the test on fresh and hardened concrete were performed. Lastly, an interactive session at the plant where all the problems faced at RMC were shared.

## Page 10: - Social Activities

NSS Volunteers of Universal College of Engineering conducted a seven days Special Residential camp to serve their adopted village at Nagle Vasai from 3rd December 2019 to 9th December 2019 on a Five-year planned theme "Swatch Bharat Abhiyan". In the course of these 7 days program volunteers have served the Village by planning out various activities and organizing renowned speakers' session on social upliftment and awareness of the village. During this period a strength of 25 volunteers, 3 Faculties and non-teaching staff devoted service to the welfare of the society. We have conducted the activities,



under the guidance of NSS Director Mr. Sudhir Puranik and NSS District coordinator Mr. Jagdish Sansare, the camp was located at Nagle Samaj Hall (the center part of Nagle village). All the volunteers gathered in the college premises on 3<sup>rd</sup> December 2019 after which all the pre-requisites and luggage's were loaded in the bus for transportation to the camp site, as we arrived to camp site cleaning and setting up of all the articles were carried out. The planning session of 7 days special camp was been formulated and methods to implement them were discussed and finalized along with the daily routine activities such as Yoga session, Exercise, Cooking, Cleaning and washing of utensils. Speakers having technical profusion in specific field were invited

to inbuilt social responsibility and awareness. Mr. Allan Lopes took a session on Youth Affairs, Mr. Jagdish Sansare took a 4hrs session on Street play performance full of enthusiasm and practical demonstration, Mr. Andrew and Mr. Silvester demonstrated with case studies effects and drawback of Addiction, he played a major role in making the listeners understand the importance of family and society in their lives beyond the addiction. One of the sessions for School girls of Zilla parishad (ZP) was arranged on Good touch and bad touch topic by Women Development cell of Universal College of Engineering.

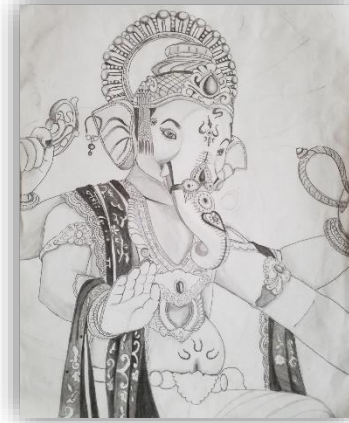
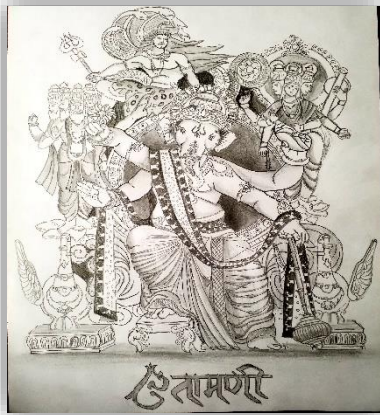


NSS UCoE volunteers constructed two Check dam as a part of water conservation program in Nagle as water scarcity in summer season is one of matter of concern for the region, one Check dam was built at river side and another at Divekar Pada. Volunteers also built up a Soak pit in the ZP school premises to encourage ground water recharge and promote its utilization. Street play on Swatch Bharat and Addiction prevention were scripted, practiced and performed at two Padas in Nagle to create awareness on their wellbeing, health and nurturing their daily habits with proficiency. A fun zone for the school kids was developed by volunteers, arranging Drawing competition at Samaj Hall and Temple and handing over prizes to the students pursuing merits.

### Scratch Your Head !!

- 3) The ratio of various ingredients in concrete of grade M 200 is?
- ❖ 1:2:4
  - ❖ 1:1.5:3
  - ❖ 1:3:6
  - ❖ None of these

# CANVAS



-Archit Binoy  
S.E. Civil

## *The Swing*

Sisters are a blessing and when you are the younger one, you have a vantage. You just know that even if you are the culprit in a situation, if you blame it on your sister then you're out of it more swiftly than you think. I was weird, immature and insane then. Obviously, I was just seven. When we were kids, I was mischievous and my sister, an introvert. My fathers' family was quite strict.

Our family decided to go on a vacation at my uncle's bungalow. The bungalow had two floors consisting of a veranda with a wooden swing situated at one of the corners. I loved swings but hadn't got a chance to feel the wind gushing through my face which made my hair fly awkwardly in all directions when the swing moved back and forth under the action of gravity.

One day, I got a chance to sit on it while my cousins were playing in the backyard. I sat on it with complete bliss and excitement. After five minutes of extreme content, my moment was crushed when my grandmother sat on the swing beside me. We sat on the two extreme corners of it. The swing was swaying at the least speed possible (It wasn't moving at all). It made me feel lethargic and I started putting in efforts to increase the speed. She was talking to me about something and I was listening with my eyes going up as the swing went up and vice versa. After a moment, she suddenly went silent in the middle of our conversation. I tried looking at her but was missing. She was down on the floor in the exact same position as she was on the swing staring at me with wide eyes with extreme silence.

The first thought that came to my mind was that how on earth did she fall without making a single sound? The second made me worry though. I became pale white as I knew that my uncle would scold me for performing such a horrible crime. I ran away without even helping her get back up. I hid behind a pillar unaware that the pillar was visible from all the corners of the house. As expected, after about five minutes, my uncle saw me and asked me about the incident. I blamed the incident on my sister without any prior thought. My grandmother wasn't present when all this was happening. Without even scrutinizing the incident properly, my sister was held guilty. I betrayed her but she didn't say anything. The thing that bothered me that day was that why didn't she speak against me? Well, she taught me a lesson without even saying a single word. I have this memory of her which makes me realize that she loves me no matter how much we fight even today.

Siblings- Your only enemy you can't live without.

Siblings- Pointing at all the ugly characters in the movie and saying "that's you" the whole movie.

-Vrushali Sawant  
B.E. Civil



काही माणसं  
हरवतात

डोळ्यासमोर दिसत  
असली तरी

आणि काही मात्रं  
दिसत राहतात

मनाची तहान....

पाण्याने भागत नाही

हे बरं की मनाची  
तहान

सगळ्यांनाच लागत  
नाही

## WELCOME 2020

2020, According to the great visionaries of India, it is supposed to be a golden year and thereby we the young budding souls should try to keep up the same with complete Zest and Enthusiasm and explore our areas of interest this year; get the wings to the talents within us and thereby fly with colours of success. Ignite the fire within yourselves and try making best out of self.

For the year 2020 let the goals be holistic along with individualistic, by use of sustainable product; reduction of waste and promote Anti-plastic. May this year be a year encompassing all the criteria towards your goal. Let the new decade fuel the passion in you and propels out towards success. The success with respect to work and academics may also be accompanied by personal growth, nurturing mind and humanity approaching the subjectivity of one self. May all of us be in true connect with self's and the core of the individual.

So, let's welcome the year 2020 with full of light, determination, care, love, passion and vision

सवय.. आहे..

तुझी वाट पहाण्याची...

तू येणार नसताना ही...

सवय...

आहे...

तुझ्याशी गप्पा मारण्याची...

तू ऐकत नसता नाही...

सवय...

आहे...

तुला पहात बसण्याची..

तू समोर नसताना ही..

सवय...

आहे...

रोज रात्री तुझ्या एका

sms ची वाट बघण्याची...

तो येणार नसताना ही...

सवय..

आहे...

मन मारून झोपण्याची...

झोप येणार नसताना ही...

सवय...

आहे...

अशा कित्येक सवयी

सोबत घेउन जगण्याची...

तुझ्याशिवाय जगणं

शक्य होत नसताना ही...

ANSWERS to "Scratch Your Head"

- 1) Faraday's Law 2) Northern India 3) 1:1.5:3

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