



THE TIMES OF INDIA

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STUDENT EDITION



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WEB EDITION

I RECOMMEND

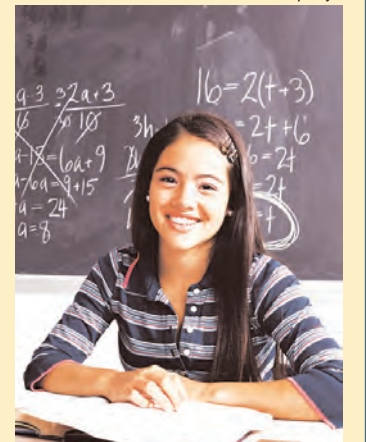
MAKING MATHS EASY

SUSHI MONSTER FREE

Aimed at improving the kids' math fluency and speed in addition and multiplication, the Sushi Monster has levels (seven for addition, five for multiplication), which includes 14 problems. Students can dedicate 10 minutes a day to improve their math fluency. Numbers appear on sushi plates, and are fed to a "sushi monster." Players are given a series of products and sums.

MONSTER MATH FREE ANDROID

Customise this fun math app to learn anything— from grade one math to grade five, including multiplication and division.



PRODIGY KIDS: MATH GAMES FREE + MEMBERSHIP UPGRADES

For kids aged 9 and up, this gamified, adaptive math app, lets kids earn points, have battles, go on quests, and learn maths. Two big selling points are that you can work at your level, and play with friends!

SPLASH MATH 3RD GRADE FREE

The Splash Math apps always provide great games for each math concept. If you get something wrong, they tell you the correct answer. That way you're not doing it incorrectly over and over again.

MATH NINJA TIMES TABLE FREE

Become a ninja and work your way through the times tables, fighting and learning from mistakes.

MATHTANGO FREE

Starting with addition and continuing through multiplication and division, this gives kids missions and games, so that they can build an island or a star base, filled with (cute) monsters and robots

VIEWPOINT

Photo: Getty Images

AI will be SMARTER THAN HUMANS within 5 years: MUSK



Tesla CEO Elon Musk has claimed that Artificial Intelligence (AI) will be 'smarter' than any human, and would overtake us by 2025. "We are headed towards a situation, where AI will be smarter than humans, he said, adding that the time frame is less than five years from now. However, it doesn't mean that everything goes to hell in five years. It just means that things get unstable, the Space X CEO said.

WHY MUSK FEARS AI

➤ He described AI as an 'existential threat' to humanity. "I think we should be very careful about AI. If I were to guess like what our biggest existential threat is, it's probably that," he said.

➤ In 2016, Musk had said that humans risk being treated like house pets by AI, unless a technology is developed that can connect brains to computers

MUSK IS NOT ALONE IN SOUNDING THE ALARM

➤ AI scientists at the Oxford, the UC Berkeley, luminaries, like Stephen Hawking, and many other researchers, agree with Musk that AI could be very dangerous. They are concerned that we're eagerly working towards deploying powerful AI systems, which we might do so under conditions that are ripe for dangerous mistakes

➤ Nick Bostrom, in his book, 'Superintelligence' has said that a badly-designed AI system will be impossible to correct, once deployed. "Once unfriendly superintelligence exists, it would prevent us from replacing it or changing its preferences. Our fate will be sealed," he warns

➤ AI systems could rapidly develop unexpected capabilities – for example, an AI system that is as good as a human at inventing new machine-learning algorithms, or automating the process of machine-learning work could quickly become much better than a human, he adds



LET'S DEBATE

Q IS AI AN 'EXISTENTIAL THREAT' TO HUMANITY? Share your views at toinie175@gmail.com / timesnie175@gmail.com

NEP a major step to enhance access to quality education: Vice President



Vice President M Venkaiah Naidu has expressed happiness over the New Education Policy (NEP) 2020, and called it a major step forward to enhance access to quality education for children and the youth. Welcoming the emphasis on a holistic, learner-centric, flexible system that seeks to transform India into a vibrant knowledge society, the VP said, it balances the rootedness and pride in India as well as acceptance of the best ideas and practices in the world of learning from across the globe.

➤ The VP expressed happiness over the importance given to the mother tongue at the primary level in the policy

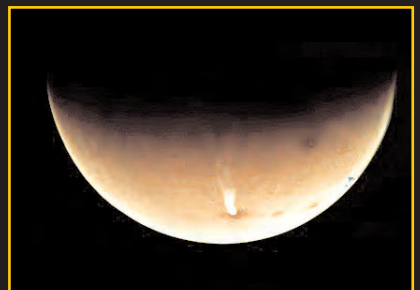
➤ "Diversity and respect for the local context as well as a recognition of the importance of India's classical languages will undoubtedly give learners a holistic world view. The focus of NEP-2020 on ethics and human and Constitutional values would go a long way in the creation of an enlightened citizenship essential for deepening our democratic roots," Naidu said

➤ Calling the NEP-2020's vision as "truly global and essentially Indian", Naidu said that it exemplifies India's timeless quest for welcoming noble thoughts from all over the world

SPACE

Mysterious cloud reappears on Mars

Scientists have claimed that a mysterious giant cloud hanging over the surface of Mars, which was first spotted in 2018, has recently reappeared on the Red Planet. Made of water ice, the elongated cloud sits 19.956 km above the volcano Arsia Mons, and stretches some 1786.372 km in length.



➤ Scientists say it seems to appear around Mars's southern summer solstice – when the southern hemisphere is hit with a large amount of daylight

➤ However, experts are not clear why it has formed, how long it will stay, or when it will disappear from the Martian atmosphere ➤ According to Daily Mail, the summer solstice on Mars is similar to the event that occurs on December 21 on the Earth – when the sun is in the southernmost position in the sky ➤ Researchers have observed that the mysterious Mars cloud expands for three hours in the early morning, and disappears a few hours later

MADE IN INDIA

AT 18-FOOT, 8-INCH, AUSTRALIA ZOO'S 'FOREST' IS THE WORLD'S TALLEST GIRAFFE

A 12-year-old giraffe at the Australian Zoo in Queensland has set a Guinness World Record as the world's tallest, standing at 18-foot, 8-inches. Named, 'Forest', the giraffe was born at the Auckland Zoo in New Zealand in 2007, and was moved to his new home, just two years later. Forest is so tall that he stands head and shoulders over two other giraffes at the Australian Zoo. He is the only male in the herd.



IN THE RECORD BOOK

According to the Guinness World Records, the process of measuring Forest's precise height was not straightforward. Their website mentions that the staff at the zoo had to create a 'specially-marked measuring pole', and rig it close to a hay dispenser close to the giraffe's house



LEONARDO DICAPRIO TO DEVELOP UTOPIAN SERIES 'ISLAND'

Actor Leonardo DiCaprio's production house, Appian Way and In Good Company Films are all set to develop a utopian series, 'Island', which is based on Aldous Huxley's novel of the same name.

ENTERTAINMENT

NEWS IN BRIEF

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GUINNESS WORLD RECORDS AWARDS CERTIFICATE TO SHAKUNTALA DEVI FOR 'FASTEST HUMAN COMPUTATION'

The Guinness World Records has honoured math genius Shakuntala Devi with the long overdue record title for the 'fastest human computation', four decades after she achieved the feat. The certification was received by Anupama Banerji, the daughter of the late mathematician. The honour came a day before 'Shakuntala Devi', a biopic on Banerji's mother, started streaming on Amazon Prime Video. The film was released on July 31. Directed by Anu Menon, the film stars Vidya Balan in the title role.



The fastest human computation is 28 seconds, and was achieved by Shakuntala Devi by successfully multiplying two randomly selected 13-digit numbers at the Imperial College London, UK, on June 18, 1980

facebook

FACEBOOK IS SET TO FINALLY GET THE RIGHTS TO SHOW MUSIC VIDEOS

Facebook Inc has completed a series of deals for the right to show music videos, according to sources, vaulting the social network into a medium dominated by YouTube. Partnerships with the three largest music companies — Universal Music Group, Sony Music Entertainment and Warner Music Group—are expected to be announced soon, revealed the sources.

TECH BUZZ

➤ Facebook has been looking for ways to increase the video consumption on its service, tapping into a promising market.

➤ Video advertising is often more lucrative than other types of ads, and video-based rival TikTok, owned by China's ByteDance Ltd., has been gaining users at a rapid clip. At the same time, music video consumption has soared on YouTube during the coronavirus pandemic

Last month, Microsoft Corp had announced that it would shutter Mixer, its streaming service for gamers, and moved existing partners on to the Facebook's service, instead

FACTOID 6.7 MN

The number of children under the age of five across the world, who could suffer from wasting this year due to the socio-economic impact of the Covid-19 pandemic, the UNICEF has warned. According to the UNICEF, in India, there are still around 20 million children, under five years of age, who are suffering from wasting. According to the Global Hunger Index 2019, wasting among children in India rose from 16.5 per cent in 2008-2012 to 20.8 per cent in 2014-2018

WASTING IS A LIFE-THREATENING FORM OF MALNUTRITION, WHICH MAKES CHILDREN TOO THIN AND WEAK, AND PUTS THEM AT GREATER RISK OF DYING, POOR GROWTH, DEVELOPMENT AND LEARNING

Music COULD BE THE SECRET TO EATING LESS

Listening to slow and steady music while eating, slows down the food intake, a new study suggests. According to researchers, the presence of a downbeat tempo influences how much people scoff their food, because humans have a tendency to subconsciously eat to the beat of the music. When the music played is slow and legato (smooth, flowing), this amplifies the effect, and further reduces the food consumption. Scientists say the findings could be used by the schools or the restaurants as a way to control the amount people consume.

For the study, the food scientists recruited more than 200 volunteers, and secretly recorded them eating chocolate. They timed how long it took for the participants to get through five



THE TEMPO OF MUSIC HAS LONG BEEN LINKED TO THE LEVELS OF EXCITEMENT – A QUICKER BEAT RAISES THE HEART RATE, WHILE A SLOWER RHYTHM INDUCES RELAXATION

➤ The results from these experiments confirm that music could be employed as a contextual cue to modulate eating speed, contributing to healthier eating behaviours, such as eating more slowly, and consuming less food'

➤ A longer eating duration could be due to an entertainment effect, where subjects (either consciously or not) align their own chewing rhythm to the beat of the music, thus resulting in chewing slower, when listening to slower music and vice-versa

pieces of chocolate. When eating in silence, the average amount of time it took was 24 seconds. When upbeat music of 180 beats per minute was played, the people took 10 seconds longer to eat all the snacks. However, when played slow

music, at just 45 bpm, the eating speed went down again, this time taking a further four seconds to devour all the chocolates.



Photo: Getty Images

'Be focussed on your goal'

Times NIE in association with Vidyalankar, Mumbai conducted its first Webinar for winners of 'Student of the Year' award 2020-21 on July 31. Prof Hitesh Moghe, IITian and Dr Meeran Chadha Borwankar, (IPS) former head of crime branch, Mumbai addressed over 500 students from across the city

JATIN YASHROY, FORMER STAR CORRESPONDENT, SINGAPORE INTERNATIONAL SCHOOL, MUMBAI

Pics: Deepshika Rangraj

Be unconventional and daring in both your thinking and your actions." This was the common theme running through the Times NIE webinar on career guidance in science and mathematics which took place on July 31st. The panelists included Hitesh Moghe, HOD of mathematics in the prestigious Vidyalankar institute, Mumbai and Dr Meeran Chadha Borwankar, IPS officer and former commissioner of police, Pune.

This webinar was conducted in collaboration with the Student Of The Year initiative hosted by Times NIE along with Vidyalankar institute. What set this apart was that there was an interactive session towards the end, where students could ask questions to the panelists. With over 500 students joining us on Facebook live from all over Mumbai, the stage was set for an enthralling talk.

Moghe who has been teaching at Vidyalankar for 16 years, opened the web session talking about his personal experience and nuances of the varied competitive exams. Having completed his B. Tech from IIT Bombay in material science and Metallurgy, he articulated the sheer rigour and determination it takes to pass exams such as JEE. Through a brilliant analogy, he cleared the doubts of the scope that one particular degree can have, "Just because you like to fly, doesn't mean you have to be a pilot, one can want to be an aerospace engineer also. These nuances can only be solved after the exploration of different avenues."

While reassuring students that nothing is impossible with hard work and determination, he also laid down key statistics so that students could set a goal in their mind. For example, of



Prof Hitesh Moghe, HOD mathematics, Vidyalankar institute Mumbai and Dr Meeran Chadha Borwankar, retired IPS officer and former head of crime branch, Mumbai

the 23 IITs (Indian Institute of Technology) in India, there are only 12,000 seats. The process to qualify is to be in the top 2 lakh students out of nearly 12 lakhs in JEE to qualify for JEE advanced, an exam prepared internally by the IIT professors which serve as an entrance exam for IIT.

The top 12,000 students from the JEE advanced exam earn a seat in IIT. Further, in the medical sector, there are nearly 8-10 lakh aspirants for biology but only 70-80 students are admitted yearly for MBBS in AIIMS Delhi, the top institute in Asia for many years running. These statistics show the importance of getting good ranks in competitive exams as by doing so, you can get admission into the elite colleges of India and you can get your



preferred branch and choice of course.

IPS and former head of Crime Branch, Mumbai, Dr. Meeran Chadha Borwankar in the next session shared an anecdote with students. When she was posted in Kolhapur as the officer in charge in the late 1980s, there was news about a huge gambling den operating from Chandgad, a district nearly 100 kilometres away. It involved high-level in-

dustrialists, so the police could not intervene due to powerful individuals. Borwankar, still relatively new to the scene decided it was time to act as the citizens were losing faith in the police. So, she planned a raid along with only 7-8 other officers in order to avoid drawing attention. Furthermore, she instructed her officers to wear civilian clothes and rent a private van to be discreet. They took all these precautionary measures as all her predecessors who planned to intervene failed as the locals saw a police van incoming and alerted the owners of the gambling den.

Late one evening, as her team approached a thick forest shrouded in darkness, they found the door of the den and knocked. The man who opened it instantly realized their

ploy and charged at them with a broken glass bottle in hand. Being in peak physical form, she easily sidestepped the danger and walked on. Inside, she saw 18 people with huge bundles of cash on the tables. She instantly arrested them all and justice prevailed along with the resurgence of faith in the police.

The key lessons to be learned from this she stated was that i) Hard work pays off and extra effort such as analyzing past mistakes does too. ii) Teamwork and treating even your juniors as equal results in success. iii) Physical fitness is important for any profession as it increases productivity.

All in all, the session was enriching in terms of career guidance and in the broader sense, on how to approach life.

'FITNESS, SELF DISCIPLINE, BALANCE AND DETERMINATION IS THE KEY TO SUCCESS'

(Retd) Dr Meeran Chadha Borwankar, IPS

Q: What qualities make a good leader?

I believe a true leader should follow the 4 "S's":

- Sehat (fitness)- A leader should be physically, emotionally, mentally, and spiritually sound.
- Sanyam (Self-discipline)- A leader should be able to practice restraint.
- Santulan (Balance)- A leader must be balanced in all aspects.
- Sankalp (Determination)- A leader must be determined to achieve their goals.

Q: What is your opinion on politicians?

I feel most politicians are not true leaders as they are too self-centered even though they may display all the aforementioned attributes. However, one notable exception I must point out is the former home minister of Maharashtra RR Patil. In all my interactions with him, he was very earnest and humble and more importantly gender-neutral and looked past my gender and saw only a uniformed officer.

Q: How do you feel gender discrimination has evolved since the first time you took office? I feel progress has been made in the urban/middle-class segment with people being more forthcoming in that bracket. However, in the middle class/rural segment, I feel progress is lacking. About 20-30% of the population is progressive but it's a pity that nearly 20% of the population feels that having a



daughter is a curse, it's an ongoing battle.

Q: Having served as the Chief of Maharashtra Prison department, what can you tell us about some high-profile hangings such as Ajmal Kasab and Yakub Memon?

(Laughs) some police matters are sensitive and kept confidential from the public. Sadly, I cannot delve into the subject of Kasab. Yakub's case however was highly publicized and open to the public and the main takeaway from his case is that he was convicted of crimes committed in 1993 but hung in 2015. More than 20 years passed before he was brought to justice and this is an issue we have to address by streamlining the process from the arrest to conviction. There is an urgent need for more police officers and judges. I want to make it clear though that each citizen has adequate opportunities to appeal and defend themselves in the court of law.

PROF HITESH MOGHE

Q: Do you feel some boards (CBSE, ICSE, etc.) have an advantage over others in competitive exams? There is no specific advantage as such in studying from a particular board if one wants to pursue competitive exams. The syllabus for Grade XI and XII, for the HSC, CBSE and ISC Board is more or less similar. So, as such it does not matter if a student selects any one of the three boards, it's the amount of dedication and hard work

one puts in.

Q: How can we determine our strengths and weaknesses? The best you can do is take aptitude tests and see what interests you. After that, you should erase all forms of doubt from your mind and aim high, to be the top student.

Q: Can aeronautical engineering help you become an astronaut? Not really because aeronautical engineering deals with parts and design of the craft meant to send the astronauts

'TEACHING SHOULD BE A FUN AND ENGAGING EXPERIENCE FOR STUDENTS'

Namrata Deshpande
(Director, Vidyalankar Classes and Publications)

Q: What made you take control of Vidyalankar and make it into what it is today?

Vidyalankar was started by my father-in-law, CS Deshpande, in the year 1960. C S Deshpande had always been a brilliant student himself, and after having stood first at the Indian Engineering Services exam, he started working as a class one officer, with the railways. But he did not enjoy that and decided to make his passion for teaching Physics and Mathematics, his profession. That's how he started the Vidyalankar Institute.

Q: How did the partnership with Times NIE come about? Our association with Times NIE goes back a long way. Vidyalankar believes in nurturing and motivating young students through initiatives such as the Scholarships Programs, Quiz Contests, Webinars, etc., and NIE is a wonderful platform for such student-centric activities, hence our association with NIE.

Q: What are the different avenues students can enter into science and mathematics? There are several avenues open to students interested in Science and Mathematics. But the most sought-after career options are pursuing Engineering, Medical and Pure Sciences from top-notch institutes like the IITs, AIIMS, IISER, IISc.

Q: What advice do you have for



students who feel discouraged after not performing well in one test?

There is no need to feel discouraged if you don't do well in a particular test. What is important is that you learn from your mistakes and never repeat them.

Q: What is your philosophy toward teaching?

Teaching should be a fun and engaging experience for the students because only then do they truly learn. So, as teachers, we have to constantly innovate and reinvent teaching techniques, which don't just impart knowledge to the students, but also make the learning process enjoyable.

Q: What values do you strive to inculcate within students? Students should form good habits, as habits always guide our actions. As individuals, we must strive to be compassionate, truthful, hardworking and humble

'I LOVE TEACHING AND SEEING STUDENTS ACHIEVE THEIR DREAMS'

Prof Hitesh Moghe, B Tech IIT Bombay

Q: What motivated you to teach in India and not go abroad after graduating from IIT?

I have always had an interest in mathematics and even while I was doing my B Tech in material science, I knew math was my calling. When I first started teaching IIT aspirants, it was a new experience and I was instantly hooked. It's been 16 years now and until today I find challenging questions that I love solving.

Q: You are known to be very popular with students; what techniques do you use to strike a chord with them?

It is no secret that IIT level mathematics is particularly difficult and hard to grasp most of the time. The real challenge lies in making it easy and learnable. I usually try to incorporate tricks that I have learnt over the years and shortcuts to make the work less tedious. I aim firstly to clear the misconceptions rather than the concepts themselves because I feel no progress can be made without a strong foundation. That's why my first few lectures go in revising basic concepts.

Q: What advice would you give to a student in the preparation of an exam?

- Have a goal- Aim high and put in the effort accordingly
- Have a plan
- Understand the enormity of the task



■ Identify the resources available around you (books, coaching institutes, websites, etc.)

- Work hard- There is no substitute for hard work
- Persevere- Keep working hard regularly
- Have self-motivation- Believe in yourself

Q: What gives you the most happiness in your profession?

I feel I gain the most happiness from the respect that I receive. When the students and parents come to me after the exam and thank me for getting them the results, I feel elated. I feel equally ecstatic when students remember me even after 10 years and still respect me.

Q: When do you advise students to enter coaching institutes?

Up until the 10th grade, once a week foundation courses are enough. From 11th grade onwards, hard work of six days a week for two years is required.

WORDS OF WISDOM

in space. It can help but to an extent.

Q: Due to the recent successes of ISRO on the global stage, a lot of the youth is growing interested in astrophysics. What are the top colleges you recommend for pursuing astrophysics? Indian Institute of Space Science & Technology, Trivandrum and Indian Institute of Science, Bangalore are renowned institutes.

DR MEERAN CHADHA BORWANKAR

Q: What kept you motivated throughout all your years of service? I feel the real-time touch I had with the people is what kept me going. When citizens accused the police force of being corrupt, this further motivated me to raid big industrialists to show to the people we are with them. Even during the time where I returned 20

gold chains to their rightful owners in Mumbai, what kept me going is seeing the smile on people's faces.

Q: What can one do to strike a balance between academics and work environment?

You can do so by doing an internship and volunteering to work outside your school to get a dose of reality and be ready for life outside your comfort zone.

Q: What message or advice do you have to the young women in society

and students in general?

I feel for young women, you shouldn't have mental barriers, and don't let society stop you. You shouldn't feel guilty for being ambitious. To the larger audience, I say that in this stage in life, you should broaden your horizons and your vision to not be confined by "streams." By doing so, by the time you're an adult, you are aware of the joy of developing the responsibility to help others. You must think beyond the ordinary and think beyond yourself.