



THE TIMES OF INDIA

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TOP 4 NEWS

WHAT'S A FIRST

Capt Tania Shergill to become first woman parade adjutant for R Day

Capt Tania Shergill, an officer with Army's Corps of Signals, will be the first woman parade adjutant for the Republic Day parade, sources said. A parade adjutant is responsible for the parade.

Commissioned in March 2017 from the Officer Training Academy, Chennai, Shergill is an electronics and communications graduate, they said.

Her father, grandfather and great-grandfather have also served in the Army.

The Republic Day parade will witness Infantry Combat Vehicle BMP-2K of the 18 Mechanised Infantry, Dhanush Gun System and the Army Air Defence on the Rajpath. Contingents of the Corps of Signals, Sikh Light Infantry, Kumaon Regiment, the Grenadiers, the Parachute Regiment will also take part.



In last year's Republic Day parade, Captain Bhavna Kasturi was the first woman officer to lead an all-men contingent

WHAT'S MAKING BUSINESS

Sensex touches record high of 42,000 for the first time

India's benchmark equity index, Sensex, on Thursday touched a record high of 42,000. This came after the US and China signed the first phase of the trade deal.

However, Sensex turned flat after hitting 42,000 mark. At 11.54 a.m., the Sensex was down 29.75 points to 41,842.98. The Nifty traded at 12,329.30, lower by 14 points.



US-CHINA TRADE IMPACT

US President Donald Trump and Chinese Vice Premier Liu He on Wednesday signed a deal that will roll back some tariffs and see China boost purchases of US goods and services by \$200 billion by 2021

WHAT'S MAKING NEWS

Team India superfan Charulata Patel no more: BCCI's moving tribute



and her passion for the game will keep motivating us. May her soul rest in peace," The BCCI tweeted.

Indian cricket team's superfan Charulata Patel, who was seen cheering for the team during World Cup 2019, passed away. The Board of Control for Cricket in India (BCCI) took to Twitter to share the news. "#TeamIndia's Superfan Charulata Patel ji will always remain in our hearts

WHAT'S TRENDING

BEZOS FLIES KITE WITH KIDS



E-commerce major Amazon's global CEO Jeff Bezos, who is on a visit to India, showed off his kite-flying skills on Wednesday.

Bezos released a video of him dressed in a kurta, flying kites with kids. "Any day is a good day when you get to fly a kite. #ThankYouIndia," he captioned the video released on Instagram. Bezos also shared one of his childhood memories with the children. It all started when a girl asked Bezos, "Have you flown a kite in your life?"

"I have flown kites when I was a kid," Bezos replied. "Haven't flown a kite in a long time, it brings back memories..." Another child asked whether he was missing it. "I am," Bezos replied. At the end of the video, Bezos could be seen high-fiving each child, saying: "Alright! Whoo! My kite-flying instructors. Thank you, you are excellent teachers."

MAKING STUDENTS SKILL-BASED

Through the Alexa Student Influencer (ASI) programme, e-commerce major Amazon has educated over 2,200 student developers through 40 plus workshops across 20 campuses in India. These students have published around 1,500 skills on the 'Alexa Skills' store in the country, according to a new report on Wednesday.

WHAT IS A SINKHOLE that swallowed PEOPLE IN



CHINA?

Six people were killed and 10 are believed to be missing after a bus and some pedestrians were swallowed by a sinkhole in China's Xining city, the capital of Qinghai province, recently.

The footage of the incident shared by the state media shows people disappearing as the sinkhole spread, followed by an explosion inside the hole.

Sinkholes — depressions that open up on the ground — are not uncommon in China. In November 2019, Xinhua Net reported the discovery of a giant cluster of sinkholes in south China's Guangxi Zhuang Autonomous Region. Before this, in 2016, scientists discovered the world's largest cluster of sinkholes in Shaanxi province in Northwest China.

■ **WHY SO COMMON?** Sinkholes in China are often blamed on construction work and the country's rapid pace of development.

HOW ARE THEY FORMED?

■ Sinkholes are depressions formed in the ground when layers of the Earth's surface start collapsing into caverns. They can occur suddenly and without warning, because the land under the surface of the Earth can stay intact for a period of time until the spaces get too big.

■ Their formation can be caused due to natural or human activity. Sinkholes form in areas of "karst" terrains, where rock below the surface is dissolved by groundwater.

BUILDING LIVING BRICKS

These are 'ALIVE', they can breathe and regenerate!

Scientists have used bacteria to create a sustainable concrete that is alive, and can even reproduce, an advance that may help reduce the environmental impact of the construction industry.

Minerals in the new material are deposited by cyanobacteria, a common class of microbes that capture energy from sunlight through photosynthesis, according to the study published in the journal Matter. "We already use biological materials in our buildings, like wood, but those materials are no longer alive," said Wil Strubar, an assistant professor at the University of Colorado Boulder in the US.

Such structures could, one day, heal their own cracks, suck up dangerous toxins from the air or even glow on command, he said.

HOW THEY MADE LIVING BRICKS

1 The team experimented with cyanobacteria belonging to the genus *Synechococcus*. Under the right conditions, these microbes absorb carbon dioxide gas to help them grow and



make calcium carbonate — the main ingredient in limestone and cement.

2 They inoculated colonies of cyanobacteria into a solution of sand and gelatin.
3 Then, the calcium carbonate churned out by the microbes mineralise the gelatin which binds together the sand and the brick.

HOW IT WOULD PURIFY

The bricks would remove carbon dioxide from the air, not pump it back out, the researchers said.

HOW WOULD IT MULTIPLY:

The researchers also discovered that they could make their material reproduce. "Chop one of these bricks in half, and each of half is capable of growing into a new brick," they said.

According to the group's calculations, roughly 9-14 per cent of the bacterial colonies in their materials were still alive after 30 days, and three different generations in brick form.

DECODING THE NIA ACT

The Act makes the National Investigation Agency the only truly federal agency in the country, along the lines of the FBI in the United States, more powerful than the CBI. It gives the NIA powers to take suo motu cognisance of terror activities in any part of India and register a case, to enter any state without permission from the state government, and to investigate and arrest people.

■ **WHY IS IT IN NEWS?** The Chhattisgarh government on Wednesday moved the Supreme Court seeking to declare the National Investigation Agency Act, 2008 as unconstitutional, the first state government to challenge the Act. The move came a day after Kerala became the first state to challenge the Citizenship (Amendment) Act in the apex court.

■ **THE REASON:** The Chhattisgarh government says the NIA Act takes away the investigation,



This is the second time in the last 60 years that state governments have moved the apex court resisting implementation of a Parliament-enacted law.

What is Article 131?

It vests the Supreme Court with original jurisdiction over any dispute arising between the states or between the Centre and state. It gives SC the power to take up such cases straight instead of going through a lower court or reviewing a lower court's judgment

search and seizure powers of the police, which exclusively belong to state governments while giving "unfettered, discretionary and arbitrary powers" to the Centre. The NIA has powers to supersede state police during the investigation and trial of terror-related offences.

■ **THE LAW:** The states have challenged the two laws under Article 131 of the Constitution, which gives the SC the exclusive jurisdiction to decide suits relating to Centre-state and state-state disputes.

RailTel: Making journey

The Indian Railways has launched a content app to make train travel exciting and to generate more revenue. Initially, 4 selected trains will get this service in the next 45 days



app-solute fun

1 Passengers can download the app on any smartphone, tablet or laptop. RailTel will provide various preloaded multilingual content (movies, music videos, general entertainment, lifestyle, etc) in moving trains. Passengers can watch content during their travel and even after their journey has finished.



2 Content Servers along with Wi-Fi access points will be installed in train coaches and the content will be managed centrally through the central server installed at RailTel Data Centres at Gurgaon and Secunderabad. "The content will be available to the passenger at extremely high speed," claim officials.

3 RailTel will opt for a 'freemium' model for the app. The content will be provided free of cost to passengers which would be monetised through advertisements by garnering the optimum views for content and ad viewership. Further, there will be a subscription model where users can pay for premium content.

4 The content app will be made available in all premium, mail and express trains. Also, all suburban trains and all Wi-Fi enabled railway stations of Indian Railways across will get this service. This includes all 17 zones of Indian Railways, covering over 5,573 stations.

5 The app will later have the option to facilitate cab, bus booking services. This project is planned in a phase-wise manner. In the initial launch, four selected trains will be launched. The services will be rolled out in all trains in phases within the next two years or by 2022.

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Want to make a plan for 2020? Here's a planner of events unfolding through the year



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While you might want to rough it out and be that champion, it is always wise to understand the repercussions of contact sports. A special feature