



# THE TIMES OF INDIA

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**TODAY'S EDITION**

► Do you know who the Lascars were? Don't limit your knowledge to textbooks. Explore more in Concepts to Classrooms  
**PAGE 2**



► Amid Covid 19 curbs relaxing in some states and panel report to PM on a likely 3rd wave, should schools reopen?  
**PAGE 3**



► India aim to stamp authority over hosts England in the third Test  
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**STUDENT EDITION**

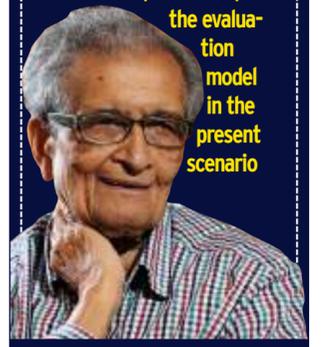


WEDNESDAY, AUGUST 25, 2021

## Quote unquote

Even if we put emphasis on the evaluation system in the exam pattern in the Indian education system, we must remember that it is not the last thing. Acquiring and sharing knowledge comes first. There are reasons to believe that the issue should be seen from different sides and perspectives. When we learn something for the first time, when we first comprehend the matter...is that linked with evaluation? We have to see. Evaluation will be certainly of use, but how much and in what way? We have to see if there is a link between evaluation and real education

**Amartya Sen, economist, on the evaluation model in the present scenario**



**CLICK HERE: PAGE 1 AND 2**

## After Olympics sparkle, India cheers for Paralympics stars

India finished 48th on the medal tally in Tokyo Olympics, its highest ranking in over four decades. Now, the Paralympic athletes are gearing up for another fortnight of promise. Let the Games begin...



**1** India's contingent for Tokyo Paralympics (54 athletes) is nearly thrice as large as Rio 2016's (19). Its largest-ever Paralympics contingent will be competing across nine disciplines – archery, athletics, badminton, canoeing, shooting, swimming, powerlifting, table tennis and taekwondo. In Rio 2016, India took part in five sports. The athlete count at London 2012 was 10, with one medal.

**2** India's campaign begins with para table tennis players Bhavina Patel and Sonal Patel in action.

**3** Watch out for: Both high jumper Tamil Nadu's Mariyappan Thangavelu (India's flagbearer at the opening ceremony) and Rajasthan's Devendra Jhajharia (eyeing his third successive Olympic gold in the F-46 javelin event) will be defending their Rio 2016 gold medals. Sumit Antil, the World No.1 in the F-64 javelin, is also primed for a podium finish.

**4** As badminton makes its Paralympics debut this edition, Odisha's Pramod Bhagat will be looking to leave his mark. Also, keep an eye out for 19-year-old Manish Narwal in the men's 10 m air pistol event and Aruna Tanwar, India's first para-taekwondo player.



### INDIA AT THE PARALYMPICS

Rio 2016 had given India more moments to celebrate from the Paralympics than the Olympics after managing its best-ever result – two golds, a silver and a bronze each. Chances of a repeat in Tokyo are high with Gursharan Singh, India's Chef de Mission for the Paralympics, expecting at least 15 medals, including five golds. In all, India have won 12 medals at the Paralympic Games – four golds and as many silver and bronze medals in 11 edition appearances

## 4.7 GIGATONS



**FACTOID**

The amount of carbon dioxide released from wildfires raging across the planet this year, according to data compiled by Mark Parrington, a senior scientist at the European Union's Copernicus Atmosphere Monitoring Service (CAMS)...

■ As of August 2021, NASA reported that 505 megatons of carbon dioxide has been spewed into the atmosphere above the remote Sakha Republic in northeastern Siberia – well past the 450 megatons released in 2020, with several more weeks of fire season to go  
■ The vast, thick, acrid fumes from hundreds of forest fires unfurled 2,000 miles from east to west and from 2,500 miles from north to south  
■ In July alone, raging blazes unleashed some 350

megatons of carbon dioxide  
■ In the Amazon rainforest, there have been 267 major fires detected in 2021 so far, burning 60,000 acres – or an area roughly the size of Los Angeles, according to the environmentalist site Monga Bay  
■ Apart from the US and Russia, Southern Europe has seen staggering fires in Greece, Italy, Turkey, Spain Portugal, and Montenegro  
■ In the Middle East, Algeria, Lebanon and Tunisia, have also been badly damaged

Carbon dioxide is the leading ingredient in greenhouse gases, fuelling climate change



## IN OTHER NEWS



### DELHI GETS INDIA'S FIRST SMOG TOWER TO COMBAT POLLUTION

Chief minister Arvind Kejriwal inaugurated the country's first smog tower at Connaught Place in Delhi on August 23, and said it will prove to be a milestone, and many such structures can be installed in the city if the pilot project yields results. "The structure will suck polluted air from above and release clean air from below. It will purify 1,000 cubic metres of air per second," Kejriwal said. The over 24-metre-tall structure will help improve air quality in a radius of around 1 km.

### ANNOUNCEMENT ON AFGHANISTAN GOVERNMENT SOON: TALIBAN



Amid Pakistan foreign minister's Kabul visit, Taliban has announced that talks on the formation of a new government with Afghan political leaders are underway and that a new government will be announced in the near future. Abdullah Abdullah, the head of High Council for National Reconciliation (HCNR) in a Facebook post confirmed the meeting with the Taliban leaders, saying that discussions were focused on the political process and the formation of an inclusive government.

## Pfizer's Covid-19 vaccine first to get full US FDA approval

The US Food and Drug Administration (US FDA) has granted full approval to the Covid-19 vaccine developed jointly by Pfizer and BioNTech. The approval is expected to "instill additional confidence to get vaccinated" with Comirnaty – the brand name under which the vaccine will be marketed – and convince the unvaccinated that the two dose vaccine is safe. Till now, the Comirnaty, like other vaccines, was being administered under the emergency use authorisation (EUA) granted by the FDA in December last year.

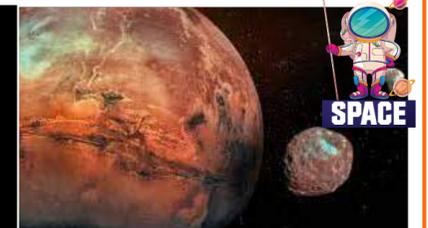


■ The full approval by the FDA is only applicable to people 16 years and older – it will continue to remain under EUA for children in the 12-15 age group  
■ The vaccine is also not available in India as the company has not yet sought permission for use of its vaccine in the country, though the government and the company are in talks for supply of 5 crore doses

## Japan aims to bring back soil samples from Martian moon by 2029

Japan's space agency plans to bring soil samples back from the Mars region ahead of the US and Chinese missions now operating on Mars, in hopes of finding clues to the planet's origin and traces of possible life. The Japan Aerospace Exploration Agency, or JAXA, plans to launch an explorer in 2024 to land on the Martian moon Phobos to collect 10 grams (0.35 ounce) of soil and bring it back to the Earth in 2029.

■ Any life forms that might have come from Mars will have died because of harsh solar and cosmic radiation on Phobos, JAXA scientists said. The NASA and the European Space Agency missions focus on potential life forms and evolution of the area of the Jezero crater, believed to be an ancient lake  
■ By studying Phobos soil samples including



material from Mars, scientists hope to learn about the evolution of the Martian biosphere  
■ The rapid return trip would put Japan ahead of the US and China in bringing back samples from the Martian region despite starting later, scientists said

**SPACE**

## Scientists calculate pi to a new record of 62.8 trillion figures in 108 days!

Pi has been calculated to an astonishing 62.8 trillion figures by a team of Swiss scientists, who spent 108 days working it up – 3.5 times as fast as the previous record. Researchers haven't revealed the exact numbers involved in the extra 12.8 trillion digits, as they are waiting for the Guinness Book of Records to certify their achievement, but say the final 10 digits they discovered are '7817924262'

► The number pi (pi) is a constant in mathematics that is roughly equal to 3.14159, and is the ratio of a circle's circumference to its diameter.  
► The previous record of 50 trillion digits was set by Timothy Mullican from the US, who achieved the feat after eight months of processing in January 2020

**1** The invention of calculus in the late 17th Century, independently by Isaac Newton and Gottfried Leibniz, allowed scientists to calculate pi to hundreds of digits

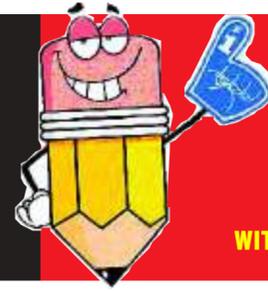
**2** With the invention of computing devices in the 20th Century, the race began to increase the accuracy and push computers to their limit

**3** Apart from being useful in mathematics and science, pi is also used every day by engineers and craftsmen

(SOURCE: DAILY MAIL)



Beginning the journey of learning in an alphabetical order, Times NIE takes you through one concept from each subject every week



TEACHERS, IF YOU HAVE A CONCEPT THAT CAN CHANGE A CLASSROOM, SHARE IT ON [toinie175@gmail.com](mailto:toinie175@gmail.com) WITH YOUR PHOTOGRAPH

# CLASSROOMS TO EXPERIENCE ZONES

## GEOGRAPHY

### LAGOON

Many people confuse lagoons with lakes, bays, estuaries, and other water bodies. So, what is a lagoon? Some of the most beautiful water bodies in the world are lagoons. Usually found near or in an ocean, a lagoon is shallow and separated from the ocean by coral reefs, sand bars or barrier islands.

DID YOU KNOW?

Although there are many lagoons, hardly any of them have the word 'lagoon' in their names! The Great South Bay (New York), Albemarle Sound (North Carolina), and Lake Illawarra (Australia) are actually all lagoons, though you can't tell that from their names. Although people often call them bays, lakes or estuaries, they're actually lagoons



### Characteristics of a lagoon

A lagoon is a shallow body of water separated from a larger body of water by reefs, barrier islands, or a barrier peninsula.

They can have fresh water, ocean water, or brackish water. Brackish water has more salt in it than fresh water, but less salt than ocean water.



### Atoll Lagoon

Mostly found in the Indian Ocean or in tropical waters like the South Pacific, Atoll Lagoon is always filled with salt water.

An atoll is a ring-shaped coral reef, island, or series of islets; it surrounds a body of water called a lagoon. Sometimes, atolls and lagoons protect a central island. Atolls develop with underwater volcanoes, called seamounts.

### Coastal Lagoon

Coastal lagoons form along gently

sloping coasts; they are shallower than atoll lagoons and are separated from the ocean by an island or reef.

The Kerala backwaters are a network of brackish lagoons lying parallel to the Malabar Coast.

Located in the state of Odisha, Chilika is the largest coastal lagoon in India and the second-largest lagoon in the world.

**TEACHER PROMPT:** As extension activity, teachers should ask kids the difference between fringing, barrier, atolls and patch reefs

## ECONOMICS

### LIQUIDITY



Liquidity is the ability to convert capital to cash. It is an important consideration for businesses and individuals as liquidity is required to meet financial obligations such as payroll and bills. Some types of capital are considered liquid and others are aren't. The following are common examples of liquidity.

### CASH

Cash of a major currency is considered completely liquid.

### Restricted Cash

Legally restricted cash deposits such as compensating balances against loans are considered illiquid.



### MARKET SECURITIES

Financial instruments that can be bought and sold on a public market. The liquidity of marketable securities relates to the daily trading volume of the security. A government bond with high trading volumes is considered almost as liquid as cash. A small cap stock with little volume is considered illiquid.

### CASH EQUIVALENTS

Cash equivalents include marketable securities and other cash-convertible instruments such as treasury bills and commercial paper.

### CREDITS

Unsecured credit such as a line of credit may help an entity to achieve liquidity. Such facilities may be subject to terms that make them far less reliable than cash in a liquidity crunch. For example, if a global financial crisis occurs, banks may have incentive to revoke lines of credit.

### ASSETS

Assets such as inventory, receivables, equipment, vehicles and real estate aren't considered liquid as they can take many months to convert to cash. In the event of financial stress, such assets can become difficult to convert to cash at all.

## LANGUAGE

### LANGUAGE

By Kartik Bajoria  
Jaipur-based  
Communication Skills  
Educator & Writer



It might seem a bit odd that in a language column, I am talking about 'L for Language'. However, language may not be a concept in itself; the kind of language we use in writing and communication is of utmost importance.

Usually when we are advised about language in writing, we are encouraged to use complicated, big, flowery, elaborate words. We are often suggested that we must employ our absolute best vocabulary, make a showcase of our language prowess. Language competence itself has been exaggeratedly married to flowery words. That is the myth I want to dispel here.

Good writing does not necessarily mean language flourish. Sure, it is good if one's vocabulary is rich and diverse; there are however other facets in writing that, by comparison, are far more important. In terms of non-fiction writing, it is vital that the writer communicate his/her opinions, points of view, perspective, thoughts on the given topic/subject, rather than merely take content from the internet (or another source) and write it in a fancy manner.

In fiction writing too, it is much more important to stress on characters, their conflicts, their struggles, and time ought to be invested in delving into the different shades/layers of their personalities rather than merely peppering the writing with big words. Fancy language without content substance then is like garnishing a cake with beautiful candy while the actual cake is stale and dry! Good language must be used in conjunction with well thought-out content that is personal and opinionated.



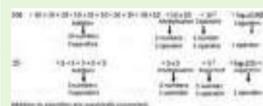
## MATHS

By Sandeep Srivastava  
Educator since 20 yrs, he specialises in making Maths easy and fun



### LONG FORM

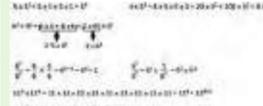
Many a times numbers are expressed in short form and we must read them in long form to get their fuller import. The number forms that are of particular importance are: exponents, square, cube, logarithm, ratio, rate, unitary rate, percentage, and proportion, as well as sequences and series.



### A DREAM CONNECTION EXPONENTS

Exponents are a short way of representing repeated multiplication of same number.

OPERATION ON EXPONENTS  
Operations of exponents helps multiplication and division expressions involving



same base to be simplified.

**LOGARITHM**  
Logarithms are another way of writing exponents. It represents the power to which a base must be raised to produce a given number. The base of the logarithm is always the same as the base of the exponent. They speed up multiplication (and division) calculations, by converting them into simple addition expressions. Base 10

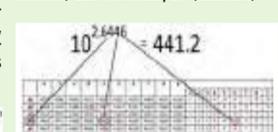
$$10000 \times 1000000 = \log 10000 + \log 1000000 = 4 + 6 = 10 = 10^7$$

based logarithm is called common logarithm.

**WHY DO WE USE LOGARITHM?**  
Logarithms reduces big numbers into smaller manageable numbers. Earthquakes, decibels and pH are measured using logarithmic scale. It helps in solving half-life, decay constant, or unknown time in exponential decay problems.

### LOGARITHMIC TABLES

These are pre-calculated tables that facilitate use of logarithms. Common logarithm of a number can be separated into integer part (characteristics) and fractional part (mantissa).



### USING LOGARITHM TABLES

Finding the product of numbers, say x and y, starts with looking up the logarithmic values of the two, adding the values, and then converting the sum of logarithmic values (the product) into its decimal number form (known as antilogarithm - reverse of looking for logarithm).

### RELATIONSHIP OF NUMBERS

Ratio is the common name used for number relationships expressed as ab, where 'a' and 'b' are two numbers (quantities), and if one number is 'a', then the other number will be 'b'.

### WHY ARE RATIOS IMPORTANT?

Ratio reduces two sets of values to just two numbers, e.g., relationship between series 'a' and 'b', is ab.

We usually express ratios in simplest terms, using the smallest numbers that can express the relationship; for example, 4:6 is better expressed as 2:3. Ratio can also be expressed for more than two quantities, e.g., 5:3:11.

### LIMITATION OF RATIOS

1. In ratios, only similar things have definite relationships. In ab, 'a' and 'b' may both be weight, height, money, etc. Thus, 2 teaspoons: 1 cup is not a valid ratio unless we express teaspoon and cup in the same unit, such as 10ml: 200ml.

2. Ratio expresses an order in relationship;

4:12 is not same as 12:4.

3. Ratio is about quantitative relationship of numbers (quantities).

### RATE

Rate is a special kind of ratio. It shows the quantitative relationship between two different kind of quantities, having different units. Speed is a rate that is the ratio of distance and time. Price of things is mostly expressed as rate a very common ratio, e.g., price per dozen.

### UNITARY RELATIONSHIPS

It's a kind of special rate. When one of the quantities is expressed in one unit, and the other quantity is scaled up, or down, multiplicatively. For example, if a ratio is 16:42, then two unitary ratios are possible:

$$1: \frac{42}{16}, \text{ or } \frac{16}{42}:1$$

### PERCENT (%)

Percent is a special kind of unitary relationship where the 'unit' is 100, not 1. It is a numerical value followed by the sign %, such as literacy rate is 99% (i.e., 99 out of every 100 is literate). The unit, or the quantity, is that of the thing being expressed.

80% is 80 per 100, i.e., 80 for every 100

Thus, 80% of 120 can be calculated as:

$$120 \times 80 = 120 \times \frac{80}{100} = \frac{120}{100} \times 80 = 1.2 \times 80 = 96$$

$$80\% \text{ of } 120 = 80\% \text{ of } 100 + 80\% \text{ of } \frac{20}{100} \times 120 = 80 + 19.2 = 99.2$$

### 'RATIO OF RATIOS' - PROPORTION

Two ratios can also be in relationship; each relationship being expressed as a ratio. When the two relationships are same, it is called proportion, e.g., relationship between

3:4, can be expressed as

$$3:4::12:16$$

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## HISTORY

### LASCARS

Mahia Bashir writes for Times NIE about interesting events and terms from history. The author is pursuing BA prog at St Stephen's College, and interning at the History Diaries - an initiative to revamp the current pedagogical system of history through tours, drama in schools

Lascars were sailors or militiamen from the Indian Ocean who served on European ships from the 16th through 21st centuries.

The term lascar derived from the Persian word for army or camp followers, 'Lashkar'. It was used by the Mughals and in the Urdu language to describe horde-like formations in battlefield.

### The Native Seamen

When the Portuguese took control of the Indian Ocean in the 16th century, they employed native sea men from regions across the ocean from Africa to Middle East to India because these people were knowledgeable about the dynamics of navigation.

The Portuguese designated these sea-men as 'lascarim'. Through Portuguese ships, many lascars found their way to the Dutch, French and English ships that plied the Indian Ocean. By the 19th century, the English controlled the highest volume of shipping and employed many native-shipmen. The English initially referred to them as 'Topazes' (from the

Tamil *tupassi* meaning bilingual), but later adopted the Portuguese term.

### Global Indian Labour Force

The story of lascars is an integral part of the colonial experience of the sub-continent. Gopal Balachandran refers to lascars as the first global Indian labour force.

Through their work, they often travelled across the port-cities of the British empire. In particular from the 18th century onwards, many lascars started settling in British port cities as sailors and servants. Some chose to stay in Britain of their own will. Many were abandoned by their shipmasters and were forced to stay.



They took British names and got baptised to assimilate into the British society. Despite being a very important part of the colonial enterprise, lascars often faced brutal discrimination by the British. They were paid very little compared to their white counterparts, and often lived in poverty.

### Role in World War

The lascars served all over the world in the two world wars. In Kolkata, the Lascar War memorial commemorates the 896 lascars who died serving on ships of the Royal Navy and British Merchant Navy during the World War I.

In the World War II, thousands of lascars served on British ships throughout the world. With the decline of British empire, the numbers of lascars dwindled, as did their mention from the history of Britain, sub-continent and the British Empire.

