

**INDIAN HERITAGE AND CULTURE, HISTORY****Skandagupta Vikramaditya**

Union home minister Amit Shah inaugurated a two-day international seminar on the role of Gupta dynasty emperor Skandagupta at Banaras Hindu University in Varanasi.

**About:**

- Skandagupta was a Gupta Emperor of northern India. Skandagupta was a son of the Gupta emperor Kumaragupta I.
- He ascended the throne in 455 AD and ruled till 467 AD.
- By defeating Pushyamitras during his initial years of ascendancy, Skandagupta proved his ability to rule and took upon himself the title of Vikramaditya.
- During the 12 year rule, he not only defended the great culture of India but also from external aggression and defeated the Huns, who had invaded India from the north-west.
- He is generally considered the last of the great Gupta Emperors.

**GEOGRAPHY****Multiverse**

A new book titled 'The Number of the Heavens' written by science journalist Tom Siegfried explores how the concept of the multiverse has evolved.

**About:**

- Multiverse is a scientific concept under which some scientists believe that our universe may indeed be just one of many.
- The multiverse is a hypothetical group of multiple universes. Together, these universes comprise everything that exists: the entirety of space, time, matter, energy, and the physical laws and constants that describe them.
- The multiverse is also known as a maniverse, megaverse, metaverse, omniverse, or meta-universe. The different universes within the multiverse are called "parallel universes", "other universes", "alternate universes", or "alterverses".
- Prominent physicists are divided about whether any other universes exist outside of our own. Stephen Hawking was one of the proponent of the multiverse hypotheses.

**INTERNATIONAL AFFAIRS- BILATERAL, GROUPINGS, ORGANISATIONS****Interpol General Assembly**

India will host the 91st Interpol General Assembly in 2022 after a proposal received the support of member countries at this year's congregation at Santiago in Chile.

**About:**

- The general assembly of Interpol, where representatives of all member countries converge, is an annual exercise where all major decisions affecting general policy, working methods and finances are deliberated by representatives.
- The 91st Interpol General Assembly in India in the year 2022 will be held as part of celebrations of the 75th anniversary of Indian Independence.
- Earlier, Interpol had hosted the general assembly in India in 1997.
- Central Bureau of Investigation (CBI) represents Interpol in India as the country's national central bureau.

**Interpol:**

- Full name: The International Police Organisation is commonly known as Interpol.
- Mandate: It is an international organization facilitating international police cooperation against cross-border terrorism, trafficking, and other crime.
- Membership: It is a 194 member body.
- Governance: All decisions regarding the activities of INTERPOL are made by the General Assembly which is its supreme governing body which meets annually.
- Status: It is 'NOT' a unit or part of united nation system. It is an independent international organization.
- HQ: Lyon in France.

- Founded in: 1923.
- Interpol Notices: It issues 8 type of notices (7 of which are colour-coded) which are in the form of alert/requests allowing police in member countries to share critical crime-related information.

## **INDIAN ECONOMY**

### **Hurun Global Unicorn List 2019**

According to Hurun Global Unicorn List 2019, India, with 21 unicorns, has emerged as third largest ecosystems for more successful start ups right behind China and US but ahead of Britain and Israel.

#### **About:**

- Hurun Research found 494 unicorns in the world, based in 25 countries and 118 cities. Set up seven years ago on average, they are worth \$3.4 billion on average and \$1.7 trillion in total.
- With 21 unicorns, India has emerged as third largest ecosystems for more successful start ups right behind China and US but ahead of Britain and Israel.
- Leading the pack from the India are payments solutions platform One97 Communications (\$10 billion), cab aggregator Ola Cabs (\$6 billion), online educator Byjus (\$6 billion), and travel-stay finder OYO Rooms (\$5 billion).
- China pipped the USA to lead by 206 versus 203, together accounting for over 80 per cent of the worlds unicorns. Europe has 35 unicorns.
- City wise, Beijing is the worlds unicorn capital with 82 unicorns.
- As a region, Silicon Valley leads the world with 102 or 21 per cent of the worlds unicorns.

#### **Unicorn:**

- In the venture capital industry, a unicorn refers to any tech startup company that reaches a \$1 billion dollar market value as determined by private or public investment. The term was originally coined by Aileen Lee, founder of Cowboy Ventures.

## **ENVIRONMENT- CONSERVATION, BIO-DIVERSITY AND ISSUES**

### **Definition of Forest**

The Forest Advisory Committee (FAC) of the Environment Ministry has clarified that the States need not take the Centre's approval to define what constitutes unclassified land as forest.

current affairs image

#### **About:**

- States, having well established forest departments, are in a better position, rather than Union Environment Ministry, to understand their own forests and needs, and should frame criteria for their forests; criteria so finalised by a State need not be subject to approval by Union Environment Ministry.
- The freedom to define land, not already classified as forests by the Centre or State records, as forest has been the prerogative of the States since 1996 and stems from a Supreme Court order..

#### **1996 Supreme Court judgment:**

- The 1996 Supreme Court judgment expanded the definition of forest to include lands that were already notified by the Centre as forests, that appear in government records as forests as well as those that fell in the "dictionary definition" of forest.
- The latter clause allows the States to evolve their own criteria and define tracts of land as forest, and these would then be bound by forest conservation laws.
- An all-encompassing definition of forest wasn't possible for India because the country has 16 different kinds of forest. A tract of grassland in one State might qualify in one region as forest, but not in another.

#### **Forest Advisory Committee (FAC):**

- The Forest Advisory Committee (FAC) of the Environment Ministry is a statutory body.
- The advisory body considers questions on the diversion of forest land for non-forest uses such as mining, industrial projects, townships and advises the government on the issue of granting forest clearances.

- it comprises official members in the Centre's forestry division and independent experts, who are the non-official members.

### **Tasmanian Tiger**

Recently released documents from Tasmania's Department of Primary Industries, Parks, Water and Environment show that thylacine, which is said to have gone extinct over 80 years ago, has been spotted across Tasmania 8 times during 2016 -2019.

#### **About:**

- The thylacine, now extinct, is one of the largest known carnivorous marsupials, evolving about 4 million years ago.
- Names: The thylacine is commonly known as the Tasmanian tiger because of its striped lower back, or the Tasmanian wolf because of its canid-like characteristics.
- IUCN status: The last known thylacine died in captivity over 80 years ago, in Tasmania's Hobart Zoo in 1936.
- Distribution: It was native to Tasmania, New Guinea, and the Australian mainland.
- Features: The thylacine appeared like a medium-to-large-size dog, except for its stiff tail and abdominal pouch similar to a kangaroo, and dark transverse stripes that radiated from the top of its back, reminiscent of a tiger.

### **Saharan Silver Ant**

Researchers announced that the Saharan silver ant is the world's fastest known ant species.

#### **About:**

- The Saharan silver ant (*Cataglyphis bombycina*) is an ant that lives in the Sahara Desert.
- It can clock a blistering 855 millimetres — nearly a metre — per second. Measured another way, it covers 108 times its own body length per second, a feat topped only by two other creatures, the Australian tiger beetle and the California coastal mite.
- It does this by swinging its tiny 5-mm long appendages at speeds of up to 1,300 mm per second.

## **SCIENCE AND TECHNOLOGY**

### **WiS; WiBS**

Scientists have announced Li-ion battery that 'won't catch fire.'

#### **About:**

- Background: Lithium-ion batteries are vulnerable to fire and explosion, which often happens without warning. This is because they are built with flammable and combustible materials.
- Recent development: Now, the Johns Hopkins Applied Physics Laboratory has developed a Lithium-ion battery that will not catch fire.
- Significance: Li-ion batteries have emerged as the energy storage vehicle of choice for portable electronics, electric vehicles, and grid storage. These safety advancements mark a significant step forward in transforming the way Li-ion batteries are manufactured and used in electronic devices.

#### **Working:**

- The team has announced the discovery of a new class of "water-in-salt" and "water-in-bisalt" electrolytes—referred to as WiS and WiBS, respectively.
- This new class of electrolytes, when incorporated in a polymer matrix, reduces water activity and elevates the battery's energy capabilities and life cycle while ridding it of the flammable, toxic, and highly reactive solvents present in current Li-ion batteries. It's a safe, powerful alternative.

### **First All-Women Spacewalk**

Two Female Astronauts of United States of America, Christina Koch and Jessica Meir became the first all-female pairing to carry out a spacewalk.

#### **About:**

- The first such mission was supposed to take place in March but was cancelled because the space agency had only one medium-sized suit, with a male-female combination performing the required task at a later date.

- The US sent its first female astronaut into space in 1983 and has now had more women astronauts than any other country.
- But the first woman in space was Soviet cosmonaut Valentina Tereshkova in 1963, followed by compatriot Svetlana Savitskaya in 1982. Svetlana Savitskaya was also the first woman spacewalker two years later.

**Extravehicular Mobility Unit (EMU):**

- A spacesuit, or Extravehicular Mobility Unit (EMU), is worn to be able to work outside the space station.
- Spacesuits provide astronauts with oxygen supply while they are in the vacuum of space and the suits also give them protection against extreme temperatures, radiation and space dust.
- An EMU consists of components such as the upper torso, lower torso, gloves and arms, which are manufactured in different sizes and assembled together in combinations that fits an astronaut best.

**Spectroscopy**

The Indian Space Research Organisation (ISRO) released an image from Chandrayaan-2 showing measurements from the Moon, carried out by the instrument Imaging Infrared Spectrometer (IIRS). Such studies make up a branch of physics called spectroscopy.

**About:**

- Spectroscopy is the technique of splitting light (or more precisely electromagnetic radiation) into its constituent wavelengths (a spectrum), in much the same way as a prism splits light into a rainbow of colours.
- Old style spectroscopy was carried out using a prism and photographic plates. These days, modern spectroscopy uses diffraction gratings to disperse the light, which is then projected onto CCDs (Charge Coupled Devices) similar to those used in digital cameras.

**Imaging Infrared Spectrometer (IIRS):**

- IIRS is designed to measure light from the lunar surface in narrow spectral channels (bands). It has the ability to split and disperse reflected sunlight (and its emitted component) into these spectral bands.
- From the reflected solar spectrum, scientists will look for signatures, including of minerals. This will help map the lunar surface composition, which in turn will help us understand the Moon's origin and evolution in a geologic context.

**DEFENCE**

**Dilli Series' Sea Power Seminar**

The sixth edition of the Dilli Series Seapower Seminar on "Role of Sea Power in Shaping of Nations" concluded at the Indian Naval Academy (INA). Eight papers were presented during the seminar centered on the theme.

**About:**

- The Indian Naval Academy (INA Ezhimala) is the initial officer training establishment of the Indian Navy and the Indian Coast Guard, located in Ezhimala, Kannur district, Kerala.
- Named after the Mount Dilli located within INA, Ezhimala premises, Dilli Series Seminar is conducted at INA during Autumn Term every year, with an aim to expose young trainees to the vibrant maritime history and arouse in them a curiosity to explore further.
- The theme of the sixth edition of the seminar held at INA on 17-18 Oct 19, was 'Role of Sea Power in Shaping Nations'.

**QUOTES FOR ESSAY- Education**

**To educate a person in mind and not in morals is to educate a menace to society.**

**Theodore Roosevelt**

## **DAILY ANSWER WRITING PRACTICE**

**Qns: Do you see a shift in India's international ethics in light of its non-alignment policy? Give reasons in support of your answer.**

**Ans**

India's non-alignment policy was based on the idea that a country should be free to have its own foreign policy, which should not be based on the dictates of any other country. Hence, it focused on self-determination, national independence and sovereignty and territorial integrity of States and non-adherence to multilateral military pacts.

It was based on the 'Panchsheel' principles:

- Mutual respect for each other's territorial integrity and sovereignty
- Mutual non-aggression
- Mutual non-interference in domestic affairs
- Equality and mutual benefit
- Peaceful co-existence

'Moral idealism' in Indian foreign policy:

- India's idealism in foreign policy is guided by its civilizational values of peace, tolerance and cosmopolitanism. Hence, India mainly relied on its soft power based on its culture, democratic governance, etc.
- India's active participation in drafting of the Universal Charter for Human Rights, India's contribution to UN peacekeeping operations, offering of Indian diplomatic services for mediation during the Korean war, were all intended to project India's civilizational responsibility to the international community.

Following factors indicate a shift in India's international ethics:

- Priority to short term national interest: National interest may come in conflict with ethics in international relations. For ex: India going for nuclear weapons for its national interest even though it explicitly promotes nuclear disarmament and peaceful coexistence.
- India did not raise 'Rohingya issue' with Myanmar due to its national interest even though India has philosophy of 'Vasudev Kutumbakam' and 'Atithi Devo Bhava'.
- Elements of 'moral realism' are emerging in an era of NAM 2.0 where due consideration is being given to power view of international politics.
- India's shift to realpolitik can be observed during the 1971 Bangladesh Liberation War, 1988 Operation Cactus in Maldives, and the recent foreign policy stance towards Pakistan.
- Geo-political changes: From non-alignment, India's ambition of being a 'net security provider' in the Indo-Pacific region pushes India to go for alliances and engage in military exercises. For ex: the Malabar exercise with the USA and Japan, emergence of QUAD grouping with USA, Japan and Australia.

Conclusion: Even after a shift in its foreign policy, India's core values still remain intact. This can be seen in its support to peaceful transition in Afghanistan and its focus on people-to-people connect instead of the reliance on military dominance.



**DAILY CURRENT AFFAIRS MCQS**

1. What is 'Spectroscopy', recently seen in news?
  - a) **It is the technique of splitting light into its constituent wavelengths.**
  - b) It is the technical field of using microscopes to view objects and areas of objects that cannot be seen with the naked eye.
  - c) It is the study of the relative spatial arrangement of atoms that form the structure of molecules and their manipulation.
  - d) It is the experimental science of determining the arrangement of atoms in crystalline solids.
2. Consider the following statements:
  1. Christina Koch and Jessica Meir of United States of America became the first all-female pairing to carry out a spacewalk.
  2. Svetlana Savitskaya is the first woman in space in 1963.

Which of the statements given above is/are correct?

  - a) **1 only**
  - b) 2 only
  - c) Both 1 and 2
  - d) Neither 1 nor 2
3. With reference to the Interpol, consider the following statements:
  1. India for the first time will host the 91st Interpol General Assembly in 2022.
  2. It is a unit or part of United Nation system.

Which of the statements given above is/are correct?

  - a) 1 only
  - b) 2 only
  - c) Both 1 and 2
  - d) **Neither 1 nor 2**
4. Consider the following fauna:
  1. Javan tiger
  2. Siberian tiger
  3. Tasmanian tiger

Which of the above is/are listed as Extinct on IUCN Red List of Threatened species?

  - a) 1 only
  - b) **1 and 3 only**
  - c) 2 and 3 only
  - d) None of the above
5. With reference to the Multiverse, consider the following statements:
  1. It is a scientific concept under which some scientists believe that our universe may indeed be just one of many.
  2. The different universes within the multiverse are called "parallel universes".

Which of the statements given above is/are correct?

  - a) 1 only
  - b) 2 only
  - c) **Both 1 and 2**
  - d) Neither 1 nor 2
6. What are 'WiS and WiBS', recently seen in news?
  - a) **Electrolytes used to build Li-ion battery that 'won't catch fire'.**
  - b) Successfully Edited the First Human Embryos in the U.S.A.
  - c) Alien planets which supports extraterrestrial life.
  - d) None of the above.
7. With reference to the forest, consider the following statements:
  1. The Forest Advisory Committee (FAC) of the Environment Ministry has recently clarified that the States need not take the Centre's approval to define what constitutes unclassified land as forest.
  2. The Forest Advisory Committee (FAC) of the Environment Ministry is a statutory body.

Which of the statements given above is/are correct?

  - a) 1 only
  - b) 2 only
  - c) **Both 1 and 2**
  - d) Neither 1 nor 2
8. Which of the following is the world's fastest known ant species?
  - a) **Saharan silver ant**
  - b) European fire ant
  - c) Dark rover ant
  - d) Asian needle ant
9. 'Unicorn club' sometimes seen in the news is related to:
  - a) **Startups valued at \$1 billion and above.**
  - b) The United Kingdom's European Union membership referendum.
  - c) Movement in opposition to the possible expansion of permanent seats in the UNSC.
  - d) None of the above.
10. Mount Dilli, recently seen in news, located in which of the following state/ Union territory?
  - a) Delhi NCR
  - b) Maharashtra
  - c) **Kerala**
  - d) Karnataka