

ForumIAS

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Prelims Marathon

5th to 11th September, 2022

HISTORY
ECONOMICS
POLITY
SCIENCE AND TECHNOLOGY
GEOGRAPHY AND ENVIRONMENT

FORUMIAS



Environment

Q.1) Consider the following statements about Effects of Snow on plants:

1. Snow protects seedlings from excessive cold and frost.
2. Snow influences the distribution of deodar, fir and spruce.

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

ANS: C

Explanation: Effects of Snow on plants:

- Snow influences the distribution of deodar, fir and spruce.
- Snow acts as blanket, prevents further drop in temperature and protects seedlings from excessive cold and frost.
- It results in mechanical bending of tree stem.
- Shortens the period of vegetative growth also uproots the trees.

Source: ShankarIAS

Q.2) “These plant growing on the host plant but not nourished by the host plant. They do not draw food from the host plant. They only take the help of the host plant in getting access to light.”

Which of the following is mentioned in the above statement?

- a) Herbs
- b) Climbers
- c) Shrubs
- d) Epiphytes

ANS: D

Explanation: Plant Classification:

- Herb is defined as a plant whose stem is always green and tender with height of not more than 1 meter.
- Shrub is defined as a woody perennial plant differing from a perennial herb in its persistent and woody stem. It differs from a tree in its low stature and its habit of branching from the base. Not more than 6 meters in height.
- Tree is defined as a large woody perennial plant having a single well defined stem with more or less definite crown.
- Parasites - An organism that draws a part or whole of its nourishment from another living organism. These plants do not draw moisture and mineral nutrients from the soil. They grow on some living plant called host and penetrate their sucking roots, called haustoria, into the host plants.
 - Total parasite - draws whole of its nourishment
 - Partial parasite - draws a part of its nourishment

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

- Epiphytes - plant growing on the host plant but not nourished by the host plant. They do not draw food from the host plant. They only take the help of the host plant in getting access to light. Their roots perform two functions. While climbing roots establish the plant on the branches of the host plant, aerial roots draw moisture from the air. Eg. Vanda
- Climbers - herbaceous or woody plant that climbs up trees or other support by twining round them or by holding on to them by tendrils, hooks, aerial roots or other attachments.

Source: ShankarIAS

Q.3) Which one of the following is an endangered species of the Indian medicinal plants?

- a) Garlic
- b) Ocimum
- c) Nependenthes
- d) Podophyllum

ANS: D

Explanation:

- Podophyllum hexandrum is an endangered high-elevation plant species in Himalaya region.
- Podophyllotoxin is a derivative of Podophyllum hexandrum, is used in the treatment of many cancers.
- The root and underground stem (rhizome) are used to make medicine.
- Podophyllum is poisonous when taken by mouth. Despite this, some people take it orally for yellowed skin (jaundice), liver ailments, fever, syphilis, hearing loss, and cancer.
- Podophyllum is also used to empty the bowels, kill parasitic worms in the intestine, and counteract snakebites. Some women take it to cause an abortion.
- Podophyllum has been used as a laxative. But it has been removed from the market due to safety concerns. Podophyllum is applied directly to the skin for removal of warts, including plantar warts and genital warts. It is also used topically for white patches on the tongue in people with weakened immune systems (hairy leukoplakia) and for corns.
- Podophyllum can stop cell duplication and new growth. It can also have laxative effects.

Source: <https://www.webmd.com/vitamins/ai/ingredientmono-806/podophyllum>

Q.4) Which kind of forest is found in Silent Valley of Kerala?

- a) Mangrove Forest
- b) Deciduous Forest
- c) Tropical Rain Forest
- d) Littoral and Swamp Forest

ANS: C

Explanation:

- Silent valley is a National Park in Nilgiri Hills in Kerala's Palakkad District. It consists of tropical rain forests & moist deciduous forests.

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

- Along with Karimpuzha & Mukurthi National Park, it forms the part of Nilgiri International Biosphere Reserve.

Source: <http://www.silentvalley.gov.in/>

Q.5) Which of the following is considered as the “forest of world heritage”?

- a) Nandankanan in Orissa
- b) Kaziranga in Assam
- c) Sundarban in West Bengal
- d) Indian botanic garden Shibpur in West Bengal

ANS: C

Explanation: UNESCO World Heritage Forests:

- Forests are some of the most biodiversity-rich habitats on Earth.
- These forests play a crucial role in climate regulation by absorbing carbon dioxide (CO₂) and are considered as one of the most cost-effective forms of climate action.
- As of today, more than 200 World Heritage sites harbor unique forest ecosystems.
- Ranging in size from 18 hectares (Vallée de Mai, Seychelles), to more than 5 million hectares (Central Amazon Conservation Complex, Brazil), World Heritage forest sites now have a total surface area of over 69 million hectares (roughly twice the size of Germany).
- Sundarbans lie in Ganga Brahmaputra delta. They are one of the largest mangrove forests in the world. It was designated as World Heritage Site by UNESCO in 1987.

Source: <https://www.sunderbannationalpark.in/>

Q.6) Sacred groves are useful for which one of the following?

- a) Preventing soil erosion
- b) generating environmental awareness
- c) conservation rare and threatened species
- d) year-round flow of water in rivers

ANS: C

Explanation:

- India has a long tradition of prudent use and wise conservation of all resources that are useful to people.
- Forests have been the lifelines for forest-dwelling communities since ancient times. One method for conservation of this green resource was the creation of sacred groves, usually dedicated to a local deity.
- A traditional means of biodiversity conservation, these groves can be considered the ancient equivalent of natural sanctuaries where all forms of living creatures are given protection by a deity.
- No one is permitted to cut any tree or plant, kill animals and birds, or harm any form of life in this area. Ancient Indian texts have many references to sacred groves, for example, Kalidaasa’s Vikramorvashiyam.
- Sacred groves vary in size from a few trees to dense forests covering vast tracts of land. These groves are important today as they are banks of genetic and plant diversity that have to be preserved and sustained.

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

- These areas often contain species that have disappeared from the regions outside the grove. The extant groves are proof that the forests exist not only because there are regulations but also because there are traditions.

Source: <https://sacredland.org/sacred-groves-of-india-india/>

Q.7) Which one of the following is not a site for the in-situ method of conservation of Flora?

- a) Botanical Garden
- b) Wildlife Sanctuary
- c) National Park
- d) Biosphere Reserve

ANS: A

Explanation:

- Ex-situ conservation is done by preserving the components of biological diversity outside their natural habitats.
- It is done by conserving genetic resources, as well as wild and cultivated or species. Examples include Gene banks, Microbial cultures, Botanical Garden, Zoo etc.
- In-situ conservation is done by conserving the species in their natural habitats. It is the best way of biodiversity conservation.
- Examples include Sacred groves, National parks, Biosphere Reserve, Wildlife Sanctuary etc.

Source: <http://www.oas.org/dsd/publications/unit/oea04e/ch04.htm>

Q.8) Which one of the following is correct explanation for the process of afforestation?

- a) Cleaning forests
- b) Plantation
- c) Cutting of forest
- d) Collecting forest resources

ANS: B

Explanation: Afforestation

- Afforestation is a process where new forests are planted across land without trees. As a forest grows, it naturally removes CO₂ from the atmosphere and stores it in its trees.
- The technique has been described as one of the most “natural” and technologically simple of the “negative emissions technologies” (NETs) – a term describing a group of methods that aim to remove CO₂ from the atmosphere.
- However, others have raised concerns that afforestation could be costly, difficult to manage and could take up large amounts of land.
- Some point out that many regions are still grappling with deforestation and may not be able to protect new forests from destruction.

Source: <https://www.carbonbrief.org/mapped-where-afforestation-is-taking-place-around-the-world/#:~:text=Afforestation%20is%20a%20process%20where,stores%20it%20in%20its%20trees.>

Q.9) Heri Tiera Fomes (sundari tree) is a type of which of the following plants?

- a) Tidal Forest
- b) Thorn Forest
- c) Mountain Forest
- d) Taiga Forest

ANS: A

Explanation: Heritiera Fomes (Sundari tree) is a type of mangrove tree mostly found in the Sundarban delta of Ganga Brahmaputra rivers. It constitutes over 70% of forest in this area.

Source: <https://www.indianetzone.com/48/sundri.htm>

Q.10) Which one of the following state produces largest number of orchids in India?

- a) Assam
- b) Arunachal Pradesh
- c) Meghalaya
- d) Sikkim

ANS: B

Explanation:

- The highest number of orchid species is recorded from Arunachal Pradesh with 612 species, followed by Sikkim 560 species and West Bengal; Darjeeling Himalayas have also high species concentration, with 479 species.
- While north-east India rank at the top in species concentration, the Western Ghats have high endemism of orchids.
- There are 388 species of orchids, which are endemic to India of which about one-third (128) endemic species are found in Western Ghats. The publication point out that Kerala has 111 of these endemic species while Tamil Nadu has 92 of them.

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/india-is-home-to-1256-species-of-orchid-says-first-comprehensive-survey/article28429797.ece>

History

Q.1) Which of the following statement about Ajivika is/are correct?

1. Nanda Vaccha is considered as the founder of the Ajivika Sect.
2. The Cholas are known to have levied a tax on the Ajivikas.

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: Ajivika Sect

- The Ajivikas are believed to have evolved from one of the many ascetic groups of the times. According to Buddhist records, Nanda Vaccha was considered the founder of the Ajivika sect. He was succeeded by Kisa Samkicca, followed by Makkhali Gosala, who was the third and the greatest of the Ajivikas.
- Gosala met Mahavira for the first time in Nalanda and their friendship lasted for six years. They separated due to doctrinal differences. Gosala then went to Sravasti, where he was patronised by a rich potter woman called Halahala.
- He believed in the doctrine of reanimation, and criticised and ridiculed the severe austerities of the Vedic ascetics. Being rival sects, both the Buddhist and Jaina accounts portray Gosala as a person of vicious character.
- Sravasti was the headquarters of the Ajivika sect. The Ajivikas were naked ascetics. The basic principle of the Ajivikas was niyati or fate: they believed that nothing in this world could be changed as everything was predetermined.
- Everyone has to pass through a series of transmigrations to put an end to pain. According to Ajivikas, there were six inevitable factors in life, viz. gain and loss, joy and sorrow, and life and death.
- Two other preachers, Purana Kassapa and Pakudha Kacchayana, joined the Ajivikas after the death of Gosala and infused new life to it.
- **Ajivikas in Tamil Land**
 - Manimekalai, Nilakesi and Sivagnanasiddhiyar have references to Ajivika doctrine. Nilakesi's quest for truth takes her to Buddha and Puranan. Puranan was the leader of the Ajivika sect.
 - The Cholas are known to have levied a tax on the Ajivikas.

Source: Tamil Nadu State Board Class 11

Q.2) Which one of the following is termed as a formal philosophical system of Indian materialism?

- a) Buddhism
- b) Ajivika
- c) Carvaka
- d) Jainism

ANS: C

Explanation: Carvaka or Lokayata

The term "lokeyata" signifies materialist thought. Indian materialism has also been named Carvaka after one of the two founders of the school. Carvaka and Ajita Kesakambalin are said to have established

Indian materialism as a formal philosophical system. Carvakas developed the concept of scepticism and believed in the pursuit of knowledge through experience. They questioned the authority of Vedas.

Source: Tamil Nadu State Board Class 11

Q.3) Acharrangasutra, Sutrakritanga, and Kalpasutra are literary text related to which one of the following?

- a) Buddhism
- b) Jainism
- c) Hinduism
- d) None

ANS: B

Explanation:

- On the death of Bhadrabahu, Shulabhadra held a Great Council at Pataliputra, which compiled the Jaina canon.
- It consisted of 12 angas (limbs). Another council was held in Valabhi, Gujarat, in the 5th century CE. It added 12 upangas (minor sections). The Jaina monks not only wrote
- religious treatises but also promoted secular literature. Acharrangasutra, Sutrakritanga, and Kalpasutra are the earliest Jaina texts.
- Most of the early Jaina texts were written in Ardha-Magadhi, the language of the common people.

Source: Tamil Nadu State Board Class 11

Q.4) Which one of the following, describe the term 'Mahabhiraskramana'?

- a) The great going forth
- b) The wheel of the great law
- c) The Members of the Great Community
- d) Believers in the Teachings of the Elders

ANS: A

Explanation:

- Overcome by remorse at the misery of people, he left his palace in the dead of night in search of eternal truth. He rode in his chariot pulled by his favourite horse Kanthaka and driven by his charioteer Channa far away from the city.

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

- He cut his hair and sent it along with his discarded garments and jewellery to his father. This is known as Mahabhiraskramana or the Great Going Forth.
- After 49 days of meditation, he attained enlightenment, at the age of 35. Thereafter, he came to be called Buddha or the Enlightened.
- He then delivered his first sermon in a deer park in Sarnath near Varanasi. This event is described as Dharmachakra-parivartana or 'wheel of the great law'. He spoke about the Four Noble Truths and the Middle Path.
- He established Sangha and spread his ideas far and wide. Buddha and his followers travelled for eight months of the year and stayed at a place for four months of the rainy season. At the age of 80, he passed away in Kusinagara.
- This is known as Parinirvana.

Source: Tamil Nadu State Board Class 11

Q.5) Which one of the following is not the astangika marga of the Buddhism?

- a) Right Love
- b) Right Speech
- c) Right Action
- d) Right Thought

ANS: A

Explanation: Buddha's Middle or Eightfold Path

1. Right Views;
 2. Right Resolve;
 3. Right Speech;
 4. Right Conduct;
 5. Right Livelihood;
 6. Right Effort;
 7. Right Recollection;
 8. Right Meditation.
- Hence Buddha did not mention or talk about God. He neither accepted nor denied the existence of God. Buddhism advocated equality.
 - It preached non-violence or ahimsa and love towards all. However, it was a moderate religion compared to Jainism's insistence on ahimsa.
 - It promoted trade and capitalism as it was against waste and advocated frugality. Jobs involving any form of killing were forbidden. Trade in weapons, living beings, meat, liquor and poison were not permitted.

Source: Tamil Nadu State Board Class 11

Q.6) Which one of the following pair is not correctly matched regarding Buddha life and Symbols?

- a) Birth : Lotus
- b) Great Renunciation : Horse
- c) First Sermon : White Elephant
- d) Enlightenment : Bodhi Tree

ANS: C

Explanation: The five forms that represent Buddha are:

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

- Lotus and Bull – Birth.
- Horse – Renunciation.
- Bodhi Tree – Mahabodhi.
- Dhammachakra Pravartana – First sermon.
- Footprints – Nirvana.

Source: Tamil Nadu State Board Class 11

Q.7) Which one of the following literary text is not related to Buddhism?

- a) Manimekalai
- b) Kundalakesi
- c) Dipavamsa
- d) Neelakesi

ANS: D

Explanation: Buddhist Literature:

- The Buddhist texts were compiled in Pali.
- The Pali canons are called as the Tripitakas (Three Baskets). They are Vinaya Pitaka, Sutta Pitaka and Abhidhamma Pitaka.
- Vinaya Pitaka deals with monastic rules and moral disciplines. Sutta Pitaka dwells upon discourses and teachings of Buddha.
- Abhidhamma Pitaka expounds Buddhist philosophy. The Sutta Pitaka, which contains the teachings of Buddha, is divided into five groups or Nikayas. They contain popular works such as Theragatha and Therigatha (Hymns of the Elder Monks and Nuns) and Jataka tales (Buddha's deeds in previous births as Bodhisattva).
- Other important Buddhist works include Milinda Panha, a discussion between Greco-Bactrian king Menander and Buddhist monk Nagasena, and Ceylonese chronicles Dipavamsa (Island Chronicles), Mahavamsa (Great Chronicle) and Culavamsa (Lesser Chronicle).
- Manimekalai by Sattanar one of the twin epics of the post-Sangam age is a Buddhist literature. Similarly the now extinct Kundalakesi is a Buddhist epic.
- Kanchipuram in the early Christian era was a flourishing Buddhist centre. Dinnaga and Dhammapala who headed the famous Nalanda University were renowned Buddhist scholars from Kanchipuram.

Jaina: influence is strong in early Tamil literature.

- Naladiyar, Palamoli, Jivaka Chinthamani, Yapperunkalam Karikai, Neelakesi are some of the prominent Jaina works in Tamil

Source: Tamil Nadu State Board Class 11

Q.8) With reference to Indian History, who among the following is a future Buddha, yet to come to save the world?

- a) Avalokiteshvara
- b) Lokeshvara
- c) Maitreya
- d) Padmapani

ANS: C

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

Explanation: Maitreya will be the successor of Gautama Buddha. Maitreya is a bodhisattva who will appear on Earth in the future and is regarded as a future Buddha of this world.

Source: ForumIAS

Q.9) Which of the following pairs are correctly matched?

1. First Buddhist Council : At Rajgir
2. Second Buddhist Council : At Patliputra
3. Third Buddhist Council : At Vaishali
4. Fourth Buddhist Council : At Kashmir

Select the correct answer using the codes given below:

- 1, 2 and 3 Only
- 1, 2 and 4 Only
- 1 and 4 Only
- 2 and 3 Only

ANS: C

Explanation: Buddhist Councils:

	Patronage	Presidency	Important Remarks
1 st council – Rajgriha, 400 BC	Ajatshatru	Mahakashyapa	The Buddhist Canon as it exist today was settled at this Council and preserved as an oral tradition.
2 nd council – Vaishali, 383 BC	Kalasoka	Sabakami	First schism occurs in which the Mahasanghika school parts ways with the Sthaviravadins and the Theravadins.
3 rd council – Patliputra, 250 BC	Ashoka	Moggaliputta Tissa	Abhidhamma Pitaka was established
4 th council – Kashmir, 72 AD	Kanishka	Vasumitra	Buddhism got divided into Mahayana & Hinayana

Source: Tamil Nadu State Board Class 11

Q.10) Who among the following was the chairman of Third Buddhist Council?

- Mhakasyapa
- Sabakami
- Vasumitra
- Moggaliputta Tissa

ANS: D

Explanation:

	Patronage	Presidency	Important Remarks
1 st council – Rajgriha, 400 BC	Ajatshatru	Mahakashyapa	The Buddhist Canon as it exist today was settled at this Council and preserved as an oral tradition.
2 nd council – Vaishali, 383 BC	Kalasoka	Sabakami	First schism occurs in which the Mahasanghika school parts ways with the Sthaviravadins and the Theravadins.
3 rd council – Patliputra, 250 BC	Ashoka	Moggaliputta Tissa	Abhidhamma Pitaka was established
4 th council – Kashmir, 72 AD	Kanishka	Vasumitra	Buddhism got divided into Mahayana & Hinayana

Source: Tamil Nadu State Board Class 11

International News

Q.1) “Living Lands Charter” which mandates member countries to safeguard global land resources and arrest land degradation has been adopted by which of the following?

- a) European Union
- b) Commonwealth Nations
- c) UN
- d) ASEAN

ANS: B

Explanation: Living Lands Charter

The Commonwealth leaders have adopted the Living Lands Charter at the 2022 Commonwealth Heads of Government meeting in Kigali, Rwanda. It is a non-binding agreement. The Charter mandates member countries to safeguard global land resources and arrest land degradation while acting against climate change, biodiversity loss and towards sustainable management. The commonwealth members have also agreed to voluntarily dedicate ‘living land’ in their respective countries to future generations, in line with the strategy set for the United Nations Decade on Ecosystem Restoration.

Source: EPIC July 2022

Q.2) World Cities Report is released by which among the following?

- a) World Bank
- b) EIU
- c) UN-Habitat
- d) UNESCO

ANS: C

Explanation: World Cities Report, 2022

The UN-Habitat has released the World Cities Report, 2022.

Key Findings of the Report

- **Global Urban Population:** The urban population is forecast to grow from 56% in 2021 to 68% by 2050. The growth will be driven by middle- and low-income countries.
- **India’s Urban Population:** By 2035, India’s urban population is expected to reach 43.2% (675 million). This will be the second-highest behind China’s 1 billion.

Source: EPIC July 2022

Q.3) Barents Sea recently seen in news is located in which of the following ocean?

- a) Pacific Ocean
- b) Arctic Ocean
- c) Atlantic Ocean
- d) Antarctica Ocean

ANS: B

Explanation: About the Barents Sea

The Barents Sea is a marginal sea of the Arctic Ocean located off the northern coasts of Norway and Russia. It is divided between Norwegian and Russian territorial waters. The Barents Sea is bounded by the Svalbard archipelago in the northwest, Franz Josef Land islands in the northeast, the Novaya Zemlya archipelago in the east, the Norwegian Sea and the Greenland Sea in the west, and by the Kola Peninsula in the south.



Source: EPIC July 2022

Q.4) The Large Hadron Collider, sometimes seen in news is built by which among the following?

- a) European Organisation
- b) Institute for Nuclear Research of the Russian Academy of Sciences
- c) IAEA
- d) None of the above

ANS: A

Explanation: About the Large Hadron Collider

The Large Hadron Collider is a giant, complex machine built to study particles that are the smallest known building blocks of all things. It is a 27-km-long track-loop buried 100 meters underground on the Swiss-French border. It has been built by the European Organization for Nuclear Research (CERN) between 1998 and 2008 in collaboration with over 10,000 scientists from hundreds of universities and laboratories. It is the world's largest and most powerful particle accelerator.

Source: EPIC July 2022

Q.5) Which among the following country is a not partner in the Blue Pacific (PBP) Initiative?

- a) Japan
- b) South Korea
- c) Australia
- d) New Zealand

ANS: B

Explanation: About the Partners in the Blue Pacific (PBP) Initiative

It has been launched by the US, Australia, New Zealand, Japan and the United Kingdom. It is an 'informal mechanism' to support Pacific islands and to boost diplomatic, and economic ties in the pacific region.

The objectives include:

- To deliver results for the Pacific more effectively and efficiently;
- To expand cooperation between the Pacific and the rest of the world;
- To focus on bolstering 'Pacific regionalism'.

The areas where PBP aims to enhance cooperation with the Pacific islands include climate crisis, connectivity and transportation, maritime security and protection, health, prosperity, and education.

Source: EPIC July 2022

Q.6) Which among the following pair of countries is a part of I2U2?

- a) India and Iran
- b) USA and UK
- c) India and Iraq
- d) India and Israel

ANS: D

Explanation: About I2U2:

- I2U2 is the group formed by 4 nations: India, Israel, the UAE and the US.
- The 1st summit of I2U2 nations was held in a virtual mode in July 2022.
- Issues like food security and other areas of cooperation were discussed at the summit.
- The group members met for the first time under a new framework in October 2021.
- At that time, the grouping was called 'International Forum for Economic Cooperation'.
- The Ambassador of UAE to India had referred to the new grouping as the 'West Asian Quad'.

Source: EPIC July 2022

Q.7) Which among the following organization publishes Global Findex Report?

- a) World Bank
- b) IMF
- c) EIU
- d) Both (a) and (c)

ANS: A

Explanation: Global Findex Report by the World Bank

About the Report: The report surveyed over 125,000 adults in 123 economies during COVID-19 to better understand how people use formal and informal financial services and digital payment.

Key Findings of the Report

- Increase in Bank account Ownership: Account ownership worldwide increased by 50% to reach 76% of the global adult population.
- Access to Formal Banking: Large shares of the global population without formal banking lives in India and China because of their size. India is among 7 countries home to half the world's 1.4 billion adults without access to formal banking.
- Gender Gap: Women are often excluded from formal banking services because they lack official forms of identification, do not own a mobile phone or other forms of technology and have the lower financial capability. 74 % of men had an account in developing countries while women account for 68%.
- COVID-19 and Digital Payments: COVID-19 pandemic catalyzed growth in the use of digital payments. In developing countries in 2021, 18% of adults paid utility bills directly from an account. About 33% of these paid bills online for the first time.
- Mobile Money: Mobile money has become an important enabler of financial inclusion — especially for women e.g., in Sub-Saharan Africa.

Source: EPIC July 2022

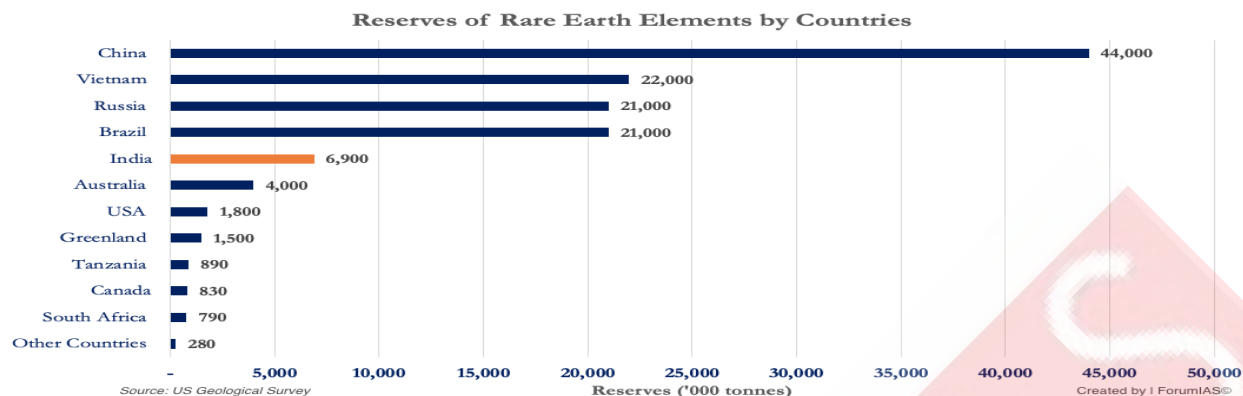
Q.8) Which of the following statement about current status of the reserves of Rare Earth Elements (REEs) is not correct?

- a) China holds the leading position among producers of rare earth oxides.
- b) India is ranked 5th in terms of reserves.
- c) China holds the leading position in global reserves followed by USA.
- d) None of the above

ANS: C

Explanation: What is the current status of the reserves of REEs?

- The total global reserves are estimated at 120 million tonnes of rare earth oxides equivalent content (REO);
- China alone accounts for 44 million tones followed by Vietnam and Russia;
- China holds the leading position among producers of rare earth oxides with 140 thousand tonnes. The other major producers are Myanmar, Australia, USA, Russia and Malaysia;
- India is ranked 5th in terms of reserves;
- Significant rare earth minerals found in India are ilmenite, sillimanite, garnet, zircon, monazite, and rutile, collectively called Beach Sand Minerals (BSM);
- Monazite is the principal source. Monazite is mainly found in Odisha, Andhra Pradesh, Tamil Nadu, Kerala, West Bengal, and Jharkhand. According to the India Minerals Yearbook (2019), India had 12.47 million tonnes of Monazite Resources;
- They are classified as atomic minerals and are therefore not at par with other minerals. The reason that they are classified as atomic minerals is because some of these elements occur in the earth's surface along with thorium and uranium which are radioactive minerals.



Q.9) The term “e-transmission Moratorium”, sometimes seen in news is related to which of the following?

- a) WTO
- b) WHO
- c) UNESCO
- d) BRICS

ANS: A

Explanation: About the e-transmission Moratorium

WTO members have agreed not to impose customs duty on electronic transmission since 1998 and the moratorium has been periodically extended at the successive Ministerial Conferences. The moratorium is on digitizable products like photographic films, cinematographic films, printed matter, music, media, software and video games. Many WTO members are seeking a temporary extension of the moratorium till the 13th ministerial conference. India and other countries like South Africa have repeatedly asked the WTO to revisit the issue and have highlighted the adverse impact of the moratorium on developing countries.

Source: EPIC June 2022

Q.10) Which of the following is not a train running between India and Bangladesh?

- a) Maitree Express
- b) Samjhauta Express
- c) Bandhan Express
- d) Mitali Express

ANS: B

Explanation: Rail Links between India and Bangladesh

- Bandhan Express: It was resumed by rebooting a long-forgotten rail link between Kolkata and the industrial hub of Khulna, the 3rd-largest city of Bangladesh. In 1965, this route was served by the Barisal Express which was stopped due to the India-Pakistan war.
- Maitree Express: It runs between Kolkata and Dhaka Cantonment.
- Mitali Express: It will connect New Jalpaiguri in North Bengal with Dhaka. This train was announced by PM during his visit to Dhaka in March 2021.

Source: EPIC June 2022

Science and Technology

Q.1) Consider the following statements about Rare Earth Elements:

1. Rare earth elements (REEs) are a group of 17 chemically similar metallic elements in the periodic table.
2. Rare earth elements do occur in a free state.

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

ANS: A

Explanation: What are Rare Earth Elements?

- Rare earth elements (REEs) are a group of 17 chemically similar metallic elements in the periodic table;
- The REEs are actually not 'rare' in nature; they occur abundantly but are often not concentrated enough to undertake viable extraction;
- REEs are characterized by high density, high melting point, high conductivity, and high thermal conductance. REEs are classified into Heavy REE and Light REE;
- REEs do not occur in a free state. They are found in mineral oxide ores.

Source: EPIC July 2022

Q.2) Which of the following statement about Critical Information Infrastructure (CII) is/are correct?

1. IT resources of ICICI Bank, HDFC Bank and UPI managing entity NPCI as Critical Information Infrastructure.
2. National Critical Information Infrastructure Protection Centre (NCIIPC) was created in 2021 as the nodal agency to protect the nation's Critical Information Infrastructure (CII).

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: A

Explanation: The Union Ministry of Electronics and IT (MeitY) has declared the IT resources of ICICI Bank, HDFC Bank and UPI managing entity NPCI as Critical Information Infrastructure.

About Critical Information Infrastructure (CII)

- The Information Technology Act, 2000 defines CII as a computer resource, the incapacitation or destruction of which shall have a debilitating impact on national security, economy, public health or safety.
- Under the Act, the Government has the power to declare any database, IT network or communications infrastructure as CII to protect that digital asset.

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

- Any person who secures access or attempts to secure access to a protected system in violation of the law can be punished with a jail term of up to 10 years.

Protection of CIIs in India

National Critical Information Infrastructure Protection Centre (NCIIPC) was created in 2014. It is the nodal agency for taking all measures to protect the nation's Critical Information Infrastructure (CII).

Source: EPIC July 2022

Q.3) Consider the following statements about Technology Information, Forecasting and Assessment Council (TIFAC):

1. It is an autonomous organization set up in 1988 under the Department of Science & Technology.
2. It look ahead in the technology domain, assess the technology trajectories and support innovation.

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

ANS: C

Explanation: TIFAC

- Technology Information, Forecasting and Assessment Council is an autonomous organization set up in 1988 under the Department of Science & Technology to look ahead in the technology domain, assess the technology trajectories and support innovation.
- NITI Aayog and Technology Information, Forecasting and Assessment Council (TIFAC) have released a report titled 'Forecasting Penetration of Electric Two-Wheelers in India'.

Source: EPIC July 2022

Q.4) Consider the following statements:

1. Green hydrogen is hydrogen gas produced through the electrolysis of water using renewable power.
2. The Green Hydrogen Catapult, a United Nations initiative is aimed at bringing down the cost of green hydrogen.

Which of the following statement is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: About Green Hydrogen

- Green hydrogen is hydrogen gas produced through the electrolysis of water using renewable power.
- Electrolysis is an energy intensive process for splitting water into hydrogen and oxygen.

Green hydrogen featured in a number of emissions reduction pledges at the UN Climate Conference, COP26, as a means to de-carbonize heavy industry, long haul freight, shipping, and aviation. Governments and industry have both acknowledged hydrogen as an important pillar of a net zero economy.

The Green Hydrogen Catapult, a United Nations initiative to bring down the cost of green hydrogen announced that it is almost doubling its goal for green electrolyzers from 25 gigawatts set last year, to 45 gigawatts by 2027. The European Commission has adopted a set of legislative proposals to decarbonize the EU gas market by facilitating the uptake of renewable and low carbon gases, including hydrogen, and to ensure energy security for all citizens in Europe. The United Arab Emirates is also raising ambition, with the country's new hydrogen strategy aiming to hold a fourth of the global low-carbon hydrogen market by 2030 and Japan recently announced it will invest \$3.4 billion from its green innovation fund to accelerate research and development and promotion of hydrogen use over the next 10 years.

Source: EPIC July 2022

Q.5) Consider the following statements about Large Hadron Collider:

1. It is a 27-km-long track-loop buried 100 meters underground on the Swiss-French border.
2. It is the world's largest and most powerful particle accelerator.

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

ANS: C

Explanation: About the Large Hadron Collider

- The Large Hadron Collider is a giant, complex machine built to study particles that are the smallest known building blocks of all things.
- It is a 27-km-long track-loop buried 100 meters underground on the Swiss-French border.
- It has been built by the European Organization for Nuclear Research (CERN) between 1998 and 2008 in collaboration with over 10,000 scientists from hundreds of universities and laboratories.
- It is the world's largest and most powerful particle accelerator.

Source: EPIC July 2022

Q.6) Consider the following statements about Quarks:

1. Quarks are elementary particles that come in 6 'flavours': up, down, charm, strange, top, and bottom.
2. They usually combine together in groups of twos and threes to form hadrons such as the protons and Neutrons.

Which of the statements given above is/are correct?

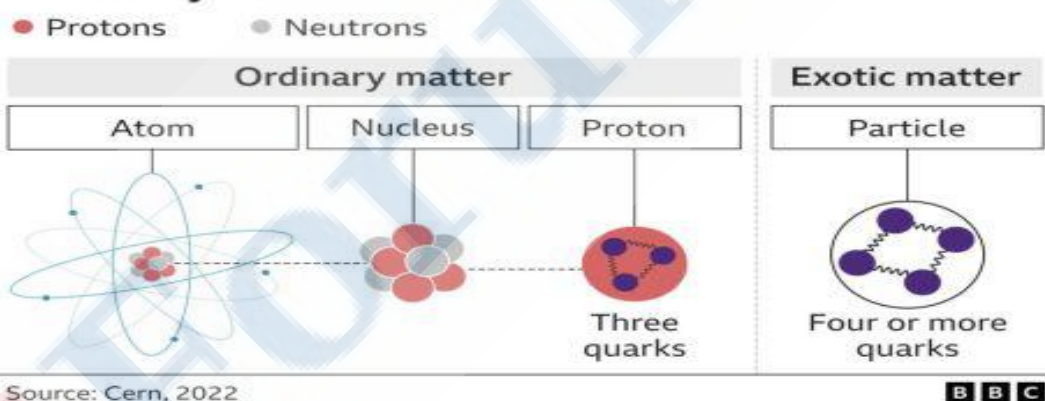
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: About Quarks, Pentaquark and Tetraquark

- Quarks are elementary particles that come in 6 'flavours': up, down, charm, strange, top, and bottom.
- They usually combine together in groups of twos and threes to form hadrons such as the protons and neutrons that make up atomic nuclei.
- But they can also combine into four-quark and fivequark particles called tetraquarks and pentaquarks.
- These exotic hadrons were predicted by theorist about six decades ago — around the same time as conventional hadrons — but they have been observed by the Large Hadron Collider and other experiments only in the past 20 years.

Ordinary and exotic matter



Source: EPIC July 2022

Q.7) Consider the following statements about Cervical Cancer:

1. It is a common sexually transmitted infection.
2. Human Papilloma Virus is responsible for more than 95% of cervical cancer cases.

Which of the statements given above is/are not correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: D

Explanation: About Cervical Cancer

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

- Cervical cancer occurs in the cells of the cervix — the lower part of the uterus that connects to the vagina.
- It is a common sexually transmitted infection. HPV is responsible for more than 95% of cervical cancer cases, and it kills more than 60,000 women in India every year.
- Cervical cancer is preventable as long as it is detected early and managed effectively.
- Worldwide, cervical cancer is the second most common cancer type and the second most common cause of cancer death in women of reproductive age (15–44).
- India accounts for about a fifth of the global burden of Cervical Cancer.

Source: EPIC July 2022

Q.8) Consider the following statements about Web 5.0:

1. It is being built with an aim to return ownership of data and identity to individuals.
2. Web 5.0 is aimed at building an extra centralized web.

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

ANS: A

Explanation: Web 5.0

Former Twitter CEO, Jack Dorsey, has announced his vision for a new decentralized web platform that is being called Web 5.0. It is being built with an aim to return ownership of data and identity to individuals. Web 5.0 is aimed at building an extra decentralized web that puts one in control of their data and identity.

Source: EPIC July 2022

Q.9) CAPSTONE, a microwave oven-sized CubeSat weighing just 25 kg has been launched to moon by which of the following organization?

- a) ISRO
- b) JAXA
- c) NASA
- d) ROSCOSMOS

ANS: C

Explanation: CAPSTONE

- NASA has launched CAPSTONE, a microwave oven-sized CubeSat weighing just 25 kg. It stands for Cislunar Autonomous Positioning System Technology Operations and Navigation Experiment (CAPSTONE).
- Its aim is to help reduce risk for future spacecraft by validating innovative navigation technologies and by verifying the dynamics of the halo-shaped orbit.
- At the Moon, CAPSTONE will enter NRHO, where it will fly within 1,600 km of the Moon's North Pole on its near pass and 70,000 km from the South Pole at its farthest.
- The spacecraft will repeat the cycle every six-and-a-half days and maintain this orbit for at least six months to study dynamics. The study will provide useful insights for Gateway mission.

Source: EPIC July 2022

Q.10) Fujian Aircraft Carrier, recently seen in news is constructed by which of the following countries?

- a) North Korea
- b) China
- c) Japan
- d) India

ANS: B

Explanation: Fujian Aircraft Carrier

- Fujian is China's first 'fully domestically developed and constructed' aircraft carrier.
- It has been named after China's eastern coastal province which lies across from Taiwan.
- It joins two other carriers currently operated by China: Shandong, commissioned in 2019 and the Liaoning, bought second-hand from Ukraine in 1998.
- The Fujian's displacement is 80,000 tonnes, much more than the existing Chinese carriers, and comparable to the U.S. Navy aircraft carriers.
- It also has the latest launch technology — the Electromagnetic Aircraft Launch System (EMALS), first developed by the U.S. Navy.

Source: EPIC July 2022

Economy

Q.1) With respect to Goods and Services Tax (GST), consider the following statements:

1. A cess is levied on the tax slab of 12% on luxury, sin and demerit goods.
2. The collection from the cess goes to a separate corpus called Compensation fund.

Which of the above given statement is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: B

Explanation: What is the GST and its key provisions?

- The Goods and Services Tax (GST) is an indirect tax on the manufacture, sale, and consumption of goods and services throughout India;
- It was launched in 2017. It replaced the existing indirect taxes with varying rates levied by the Union and State Governments. It is a single uniform tax applicable in the whole nation;
- It is a destination-based tax applied on goods and services at the place where final/actual consumption happens;
- GST is applied to all goods other than crude petroleum, motor spirit, diesel, aviation turbine fuel, natural gas and alcohol for human consumption;
- There are four slabs for taxes for both goods and services: 5%, 12%, 18%, and 28%. Different tax slabs were introduced because goods of daily necessities could not be subjected to the same rate as luxury items;
- A cess is levied on the highest tax slab of 28% on luxury, sin and demerit goods. The collection from the cess goes to a separate corpus called Compensation fund. It is used to make up for revenue loss suffered by the States due to roll out of the GST. States were promised a compensation for 5 years if their GST collection falls short of the 14 percent compounded revenue growth.

Source: EPIC July 2022

Q.2) “RAISE Framework”, sometimes seen in news is related to which among the following?

- a) Social Security for Gig or Platform Workers.
- b) Social Security for Defence Personnel.
- c) Skill Development for ST girls aged 18-21.
- d) Generating employment opportunities to De-notified Tribes.

ANS: A

Explanation:

RAISE Framework

NITI Aayog has proposed a five-pronged RAISE approach to ensure realisation of full access to social security for all gig and platform workers.

Recognise the varied nature of platform work to design equitable schemes.

Allow augmentation of social security through innovative financing mechanisms.

Ensure benefits are readily accessible to workers.

Incorporate, while designing schemes, the specific interests of platforms, factoring the impact on job creation, platform businesses and workers.

Support workers to subscribe to government schemes and welfare programmes through widespread awareness campaigns.

Source: NITI Aayog

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Source: EPIC July 2022

Q.3) Which of the following is not correct about draft 'Guidelines to Regulate Child Participation in the Entertainment Industry'?

- The producer needs to ensure the child's education under the RTE Act.
- The guidelines will cover TV programmes, content on OTT platforms and also content on social media.
- There is provision of mandatory registration with District Magistrates.
- 80% of the income earned by the child shall be directly deposited in a fixed deposit account which may be credited to the child on attaining the majority.

ANS: D

Explanation:

The National Commission for the Protection of Child Rights (NCPCR) has published draft 'Guidelines to Regulate Child Participation in the Entertainment Industry'. The guidelines also cover social media and OTT Platforms.

Salient Features: The aim of the guidelines is to ensure a healthy work environment for children in the Entertainment Industry with minimal physical and psychological stress.

Coverage: The guidelines will cover TV programmes including reality shows, serials, news, movies, content on OTT platforms, content on social media and any other kind of involvement of children in commercial entertainment activities.

Accountability: Parents have to be held accountable. At least one parent or legal guardian has to be present during a shoot, and for infants, a registered nurse needs to be present along with the parent or legal guardian.

Focus on child education: The producer also needs to ensure the child's education under the RTE Act, to ensure no discontinuity from school or lessons as well as adequate and nutritious food, and water for the children.

Mandatory registration: The guidelines mandate child artists and children participating in entertainment need to be registered with District Magistrates.

Inclusion of different Acts protecting children: Provisions under the Juvenile Justice Act, 2015, Child Labour Amendment Act, 2016, Protection of Children from Sexual Offences Act,

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

2012, Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, etc., have been included in the guidelines.

Prohibited activities: Children cannot be shown imbibing alcohol, smoking or using any other substance or shown to be indulging in any sort of antisocial activity. Further, no child can be engaged in any situation involving nudity.

Salary-related norms: At least 20% of the income earned by the child shall be directly deposited in a fixed deposit account which may be credited to the child on attaining the majority.

Penal provisions: The guidelines include stringent penal provisions for violating the guidelines, including imprisonment. These penalties cover different acts including the Child and Adolescent Labour Act, 1986, the Protection of Children from Sexual Offences Act, 2012, and the Juvenile Justice (Care and Protection of Children) Act, 2015.

Source: EPIC July 2022

Q.4) Consider the following statements about Performance Grading Index for Districts:

1. Highest achievable Grade is Akanshi.
2. The index is released by NITI Aayog.

Which of the statement given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: D

Explanation: The Department of School Education and Literacy, Ministry of Education has released the Performance Grading Index for Districts for 2018-19 and 2019-20.

About the Index

The aim of the Index is to assess the performance of the school education system at the District level by creating an index for comprehensive analysis.

The index comprises a total weightage of 600 points across 83 indicators which are grouped under 6 categories:

- Outcomes;
- Effective Classroom Transaction;
- Infrastructure Facilities & Student's Entitlements;
- School Safety and Child Protection;
- Digital Learning;
- Governance Process.

Categorisation of Districts: The index grades the districts into 10 grades: Highest achievable Grade is Daksh which is for Districts scoring more than 90% of the total points in that category or overall. The lowest grade called Akanshi-3 which is for scores upto 10% of the total points.

The index is expected to help the state education departments to identify gaps at the district level and improve their performance in a decentralized manner.

Source: EPIC July 2022

Q.5) Which among the following released the 'State Ranking Index for NFSA'?

- a) FSSAI
- b) NITI Aayog
- c) Ministry of Health and Family welfare
- d) Ministry of Consumer Affairs, Food and Public Distribution

ANS: D

Explanation: State Ranking Index for National Food Security Act:

The Union Minister of Consumer Affairs, Food and Public Distribution has released the 1st edition of 'State Ranking Index for NFSA'.

About the Index

The aim of the Index is to document the status and progress of implementation of NFSA and various reform initiatives across the country post consultation with States.

The States and UTs were ranked on the basis of three parameters:

- NFSA coverage, rightful targeting and implementation of all provisions under the Act;
- The delivery platform while considering the allocation of food grains, their movement and last-mile delivery to fair price shops;
- Nutrition initiatives of the department.

The index will help create an environment of competition, cooperation and learning among states and help address matters of food security and hunger. The Index denotes only the efficiency of Targeted Public Distribution System (TPDS) operations. It does not reflect the level of hunger, if any or malnutrition, or both, in a particular state or union territory.

Key Takeaways

General Category States: Odisha has been ranked as the top State followed by Uttar Pradesh and Andhra Pradesh.

Special Category States: (the North-eastern States, Himalayan States and the Island States): Tripura has obtained the first rank. Himachal Pradesh and Sikkim are in the second and third positions.

Source: EPIC July 2022

Q.6) Consider the following statements:

1. A fiscal deficit (FD) situation occurs when the government's income exceeds its expenditure.
2. It is the difference between the total expenditure of the government and its total revenue (excluding borrowings).

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

ANS: B

Explanation: About Twin Deficit:

A twin deficit refers to a situation where an economy runs relatively large Current Account and Fiscal deficits. A higher twin deficit is inherently destabilizing and was the primary reason why India faced a currency crisis back in 1991.

About Fiscal Deficit

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

A fiscal deficit (FD) situation occurs when the government's expenditure exceeds its income. It is the difference between the total expenditure of the government and its total revenue (excluding borrowings).

It indicates the extent by which government spending exceeds its income and the total borrowings needed by it to fill this gap.

Source: EPIC July 2022

Q.7) Consider the following statements about State Start-up Ranking:

1. Kerala and Maharashtra appeared as the Best Performers in the States category.
2. The ranking is undertaken by the Department for Promotion of Industry and Internal Trade (DPIIT) since 2018.

Which of the statements given above is/are not correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: A

Explanation: About State Start-up Ranking:

The ranking is undertaken by the Department for Promotion of Industry and Internal Trade (DPIIT) since 2018. Its aim is to support States and Union Territories in developing their start-up ecosystem and learn from the best practices of others.

The States are evaluated across 7 broad Reform Areas:

- Institutional Support;
- Fostering Innovation and Entrepreneurship;
- Access to Market;
- Incubation support;
- Funding Support;
- Mentorship Support;
- Capacity Building of Enablers.

The States and Union Territories are classified into 5 categories:

- Best Performers;
- Top Performers;
- Leaders;
- Aspiring Leaders;
- Emerging Start-up Ecosystems.

Rankings 2021

Best Performers: Gujarat and Karnataka appeared as the Best Performers in the States category. Meghalaya topped among UTs and North-eastern States category.

Top Performers: Kerala, Maharashtra, Orissa and Telangana won the Top Performers award among states category. Jammu and Kashmir appeared as the Top Performer among UTs and NE states category.

Source: EPIC July 2022

Q.8) Business Reforms Action Plan (BRAP) has been released by which of the following organization?

- a) Department for Promotion of Industry and Internal Trade (DPIIT)
- b) NITI Aayog
- c) WTO
- d) Both (a) and (c)

ANS: A

Explanation: About the Business Reforms Action Plan (BRAP):

- The Assessment has been released by the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry since 2014.
- The aim is to boost investor confidence, foster businessfriendly climate and augment the Ease of Doing Business.
- This is done by introducing an element of healthy competition through a system of assessing States based on their performance in the implementation of the Business Reforms Action Plan.

It includes 301 reform points that cover 15 business regulatory areas such as access to Information, single window system, labour, environment, sectoral reforms and other reforms spanning across the lifecycle of a typical business.

Sectoral reforms have been introduced for the first time in BRAP 2020 wherein 72 reforms were identified across 9 sectors namely: Trade license, Healthcare, Legal metrology, Cinema halls, Hospitality, Fire NOC, Telecom, Movie shooting and Tourism.

The report categorizes States into:

- Top achievers;
- Achievers;
- Aspires;
- Emerging business ecosystems as against the earlier practice of announcing ranks.

Source: EPIC July 2022

Q.9) Which of the following statement about National Industrial Corridor Development Programme (NICDP) is/are correct?

1. Government of India has signed a \$250 million loan to support the NICDP with World Bank.
2. National Industrial Corridor Development and Implementation Trust (NICDIT) is the implementing agency.

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: A

Explanation: National Industrial Corridor Development Programme (NICDP):

It is India's most ambitious infrastructure programme aiming to develop new industrial cities as 'Smart Cities' and converge next-generation technologies across infrastructure sectors.

Its objective is to

- (a) expand the industrial output;
- (b) increase employment opportunities;

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

(c) provide better living and social facilities for the new and growing workforce.

NICDC is developing 11 Industrial corridors comprising 32 projects in 4 Phases. The Asian Development Bank (ADB) and the Government of India have signed a \$250 million loan to support the NICDP. National Industrial Corridor Development and Implementation Trust (NICDIT) is the implementing agency.

Source: EPIC July 2022

Q.10) Consider the following statements about Jan Samarth Portal:

1. It is a unique digital portal linking 13 credit-linked Government Schemes on a single platform.
2. The portal will help reduce turnaround time and facilitate faster sanction of loans to beneficiaries.

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

ANS: C

Explanation: Jan Samarth Portal:

The Portal was launched by the Prime Minister. It is a unique digital portal linking 13 credit-linked Government Schemes on a single platform. The portal will be an 'end-to-end delivery platform' and more people will come forward to avail of loans because of the ease of compliance.

The portal will help reduce turnaround time and facilitate faster sanction of loans to beneficiaries.

Source: EPIC June 2022

Polity

Q.1) The power of the Supreme Court of India to decide disputes between the Centre and the States falls under its

- a) Advisory jurisdiction
- b) Appellate jurisdiction
- c) Original jurisdiction
- d) Constitutional jurisdiction

ANS: C

Explanation: Original jurisdiction:

As a federal court, the Supreme Court decides the disputes between different units of the Indian Federation. More elaborately, any dispute between:

- a) the Centre and one or more states; or
- b) the Centre and any state or states on one side and one or more states on the other; or
- c) Between two or more states.

Source: UPSC PYQ

Q.2) The abolition of the I.A.S. and the I.P.S. has been recommended by the:

- a) Dhebar Commission
- b) Kalekar Commission
- c) Kher Commission
- d) Rajamannar Commission

ANS: D

Explanation: Rajmanner Commission was set up by the then DMK Government of Tamil Nadu in 1969 under the Chairmanship of Dr P.V. Rajamanar. It was appointed to look into the question regarding the relationship that should subsist between the Centre and the States in a federal set-up. It submitted its report in 1971. It demanded readjustment of the VII schedule and residuary power to the states. Its other important recommendations are given in the following:

- The setting of an Inter-State council immediately
- Finance commission to be made a permanent body
- Deletion of Articles 356, 357, and 365 which dealt with the President's rule
- Abolition of All-India Services (IAS, IPS, and IFS)
- Planning Commission to be replaced by a statutory body
- The Central government completely ignored its recommendations.

Source: UPSC PYQ

Q.3) The state which has the largest number of seats reserved for the Scheduled Tribes in the Lok Sabha is:

- a) Bihar
- b) Gujarat
- c) Uttar Pradesh
- d) Madhya Pradesh

ANS: D

Explanation: Seats Reserved for SCs and STs in the Lok Sabha:

States with maximum number of SC seats		States with maximum number of ST seats	
State	No. of SC seats	State	No. of ST seats
UP	17	Madhya Pradesh	6
West Bengal	10	Jharkhand	5
Andhra Pradesh	7	Odisha	5
Tamil Nadu	7	Chhattisgarh	4
Bihar	6	Maharashtra	4

Source: UPSC PYQ

Q.4) Which one of the following statements is correct?

- a) All the members of the Rajya Sabha are elected by State Legislative Assemblies.
- b) As the Vice-president is the ex-officio Chairman of the Rajya Sabha, only a member of the Rajya Sabha can contest for the office of the Vice-president.
- c) A point of difference between the Lok Sabha and the Rajya Sabha is that while a candidate to the Lok Sabha can contest from any State in India, a candidate to the Rajya Sabha should ordinarily be a resident of the State from where he is contesting.
- d) The Constitution of India explicitly prohibits the appointment of a nominated member of the Rajya Sabha to the post of a minister.

ANS: C

Explanation: Members of Parliament:

- A point of difference between the Lok Sabha and the Rajya Sabha is that while a candidate to the Lok Sabha can contest from any State in India, a candidate to the Rajya Sabha should ordinarily be a resident of the State from where he is contesting.
- Some elected members do not qualify to sit in the house. A Rajya Sabha member has to be 'ordinarily resident' of the state which returns him or her to the house. Keeping this

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

in view, the Supreme Court should have thrown out the act nearly 10 years ago when it was first challenged. Instead, the court persisted with the mistake.

- Subsequently, the bench sought to spell out the qualification for election. In its wisdom it did away with the domicile qualification for the candidates contesting for the Rajya Sabha. The qualification says that a member has to be ordinarily living in the state from where he seeks election.
- The nub of the problem is that political parties wanted to do away with the domicile clause so that they could send their favourite to the Rajya Sabha even though he or she did not belong to the State or lived there.
- Unfortunately, Parliament substituted the word, India, in place of State. This made little sense because no person other than Indian could be elected. The Supreme Court should have restored the domicile clause but it went along with the interpretation that did away with the domicile requirement.

Source: UPSC PYQ

Q.5) Prohibition of discrimination on grounds of religion etc. (Article 15 of the Constitution of India) is a Fundamental Right classifiable under:

- a) The Right to Freedom of Religion
- b) The Right against Exploitation
- c) The Cultural and Educational Rights
- d) The Right to Equality

ANS: D

Explanation:

CONSTITUTION OF INDIA PART III: FUNDAMENTAL RIGHTS	
Right to Equality <ul style="list-style-type: none">• Equality before law<ul style="list-style-type: none">- equal protection of laws• Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth<ul style="list-style-type: none">- equal access to shops, hotels, wells, tanks, bathing ghats, roads etc.• Equality of opportunity in public employment• Abolition of Untouchability• Abolition of titles	Right against Exploitation <ul style="list-style-type: none">• Prohibition of traffic in human beings and forced labour• Prohibition of employment of children in hazardous jobs
Right to Freedom <ul style="list-style-type: none">• Protection of Right to freedom of speech and expression:<ul style="list-style-type: none">- assemble peacefully:- form associations/unions:- move freely throughout the territory of India:- reside and settle in any part of India:- practise any profession, or to carry on any occupation, trade or business.• Protection in respect of conviction for offences• Right to life and personal liberty• Right to education• Protection against arrest and detention in certain cases	Right to Freedom of Religion <ul style="list-style-type: none">• Freedom of conscience and free profession, practice and propagation of religion• Freedom to manage religious affairs• Freedom to pay taxes for promotion of any particular religion• Freedom to attend religious instruction or worship in certain educational institutions Cultural and Educational Rights <ul style="list-style-type: none">• Protection of language, culture of minorities• Right of minorities to establish educational institutions Right to Constitutional Remedies <ul style="list-style-type: none">• Right to move the courts to issue directions/orders/writs for enforcement of rights

Source: UPSC PYQ

Q.6) Which one of the following is NOT a principle of “Panchsheel”?

- a) Non-alignment
- b) Peaceful Co-existence
- c) Mutual respect for each other’s territorial integrity and sovereignty
- d) Mutual non-interference in each other’s internal affairs

ANS: A

Explanation: Panchsheel:

Panchsheel implies the five principles of conduct in international relations. It was embodied in the Preamble of the Indo-China Treaty on Tibet, signed in 1954 by Jawaharlal Nehru and Chou-En-Lai, the Chinese Premier. The five principles were:

1. mutual respect for each other’s territorial integrity and sovereignty;
2. non-aggression;
3. non-interference in each other’s internal affairs;
4. equality and mutual benefit; and
5. peaceful co-existence

Source: UPSC PYQ

Q.7) The concept of Public Interest Litigation originated in:

- a) United Kingdom
- b) Australia
- c) The United States
- d) Canada

ANS: C

Explanation: Public Interest Litigation:

- The concept of Public Interest Litigation (PIL) originated and developed in the USA in the 1960s.
- In the USA, it was designed to provide legal representation to previously unrepresented groups and interests.
- It was undertaken in recognition of the fact that the ordinary marketplace for legal services fails to provide such services to significant segments of the population and to significant interests.
- Such groups and interests include the poor, environmentalists, consumers, racial and ethnic minorities, and others.
- In India, the PIL is a product of the judicial activism role of the Supreme Court.
- It was introduced in the early 1980s. Justice V.R. Krishna Iyer and Justice P.N. Bhagwati were the pioneers of the concept of PIL.

Source: UPSC PYQ

Q.8) Economic Survey in India is published officially, every year by the:

- a) Reserve Bank of India
- b) Planning Commission of India
- c) Ministry of Finance, Govt. of India
- d) Ministry of Industries, Govt. of India

ANS: C

Explanation: The Department of Economic Affairs, Finance Ministry of India presents the Economic Survey in the parliament every year, just before the Union Budget. It is prepared under the guidance of the Chief Economic Adviser, Finance Ministry. It is the ministry's view on the annual economic development of the country.

Source: UPSC PYQ

Q.9) A British citizen staying in India cannot claim Right to:

- a) Freedom of trade and profession
- b) Equality before the law
- c) Protection of life and personal liberty
- d) Freedom of religion

ANS: A

Explanation:

Fundamental rights available to both citizens and foreigners except enemy aliens	Fundamental Rights Available Only to Citizens of India
Article 14 – Equality before the law and equal protection of laws.	Article 15 – Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth.
Article 20 – Protection in respect of conviction for offences.	Article 16 – Equality of opportunity in matters of public employment.
Article 21 – Protection of life and personal liberty.	Article 19 – Protection of six rights related to freedom – (a) of speech and expression; (b) to assemble peaceably and without arms; (c) to form associations or unions; (d) to move freely throughout the territory of India; (e) to reside and settle in any part of the territory of India; and (f) to practice any profession, or to carry on any occupation, trade or business.
Article 21A – Right to elementary education.	Article 29 – Protection of language, script and culture of minorities.
Article 22 – Protection against arrest and detention in certain cases.	Article 30 – Right of minorities to establish and administer educational institutions.
Article 23 – Prohibition of traffic in human beings and forced labour.	
Article 24 – Prohibition of employment of children in factories etc.	
Article 25 – Freedom of conscience and free profession, practice and propagation of religion.	
Article 26 – Freedom to manage religious affairs.	
Article 27 – Freedom from payment of taxes for promotion of any religion.	
Article 28 – Freedom from attending religious instruction or worship in certain educational institutions.	

Source: UPSC PYQ

Q.10) The Speaker can ask a member of the House to stop speaking and let another member speak. This phenomenon is known as

- a) Decorum
- b) Crossing the floor
- c) Interpellation
- d) Yielding the floor

ANS: D

Explanation: The speaker of the Lok Sabha can ask a member of the house to stop speaking and let another member speak. It is known as **yielding the floor**.

Crossing the floor: Passing between the member addressing the House and the Chair which is considered breach of Parliamentary etiquette.

Point of Order: A Member of Parliament may raise a point of order if he feels that the proceedings of the House do not follow the normal rules. The presiding officer decides whether the point of order raised by the member should be allowed.

Calling Attention Motion: With the prior permission of the Speaker, any member of the Parliament may call the attention of a Minister to a matter of urgent public importance. The Minister may make a brief statement about the matter or he may ask for time to make a statement later.

Source: UPSC PYQ

Geography

Q.1) Who among the following is associated with the continental drift theory?

- a) Alfred Wegner
- b) Aortelius
- c) Hall and Danna
- d) Abraham Ortelius

ANS: A

Explanation: Continental Drift Theory:

- Continental drift describes one of the earliest ways geologists thought continents moved over time.
- Today, the theory of continental drift has been replaced by the science of plate tectonics. The theory of continental drift is most associated with the scientist Alfred Wegener.
- In the early 20th century, Wegener published a paper explaining his theory that the continental landmasses were “drifting” across the Earth, sometimes plowing through oceans and into each other. He called this movement continental drift.

Source: <https://education.nationalgeographic.org/resource/continental-drift>

Q.2) Consider the following plates:

- 1. Nazca
- 2. Arabia
- 3. Antarctica

Which one of the following is/are minor plate?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

ANS: A

Explanation: The major plates are as follows :

Major and minor plates of the world I Antarctica and the surrounding oceanic plate II North American (with western Atlantic floor separated from the South American plate along the Caribbean islands) plate III South American (with western Atlantic floor separated from the North American plate along the Caribbean islands) plate IV Pacific plate V India-Australia-New Zealand plate VI Africa with the eastern Atlantic floor plate VII Eurasia and the adjacent oceanic plate.

Some important minor plates are listed below:

- Cocos plate: Between Central America and Pacific plate
- Nazca plate: Between South America and Pacific plate
- Arabian plate: Mostly the Saudi Arabian landmass
- Philippine plate: Between the Asiatic and Pacific plate
- Caroline plate: Between the Philippine and Indian plate (North of New Guinea)
- Fuji plate: North-east of Australia.

Source: NCERT Class 11

Q.3) Which one of the following terms is related to Polar fleeing force?

- a) Revolution of the Earth
- b) Gravitation
- c) Rotation of the Earth
- d) Tides

ANS: C

Explanation: Force for Drifting:

- Wegener suggested that the movement responsible for the drifting of the continents was caused by pole-fleeing force and tidal force.
- The polar-fleeing force relates to the rotation of the earth. You are aware of the fact that the earth is not a perfect sphere; it has a bulge at the equator.
- This bulge is due to the rotation of the earth. The second force that was suggested by Wegener — the tidal force — is due to the attraction of the moon and the sun that develops tides in oceanic waters.
- Wegener believed that these forces would become effective when applied over many million years.
- However, most of scholars considered these forces to be totally inadequate.

Source: NCERT Class 11

Q.4) What is a tectonic plate that lies between the Asiatic and Pacific Plate?

- a) Cocos Plate
- b) Nazca Plate
- c) Arabian Plate
- d) Philippine Plate

ANS: D

Explanation: Some important minor plates are listed below:

- Cocos plate: Between Central America and Pacific plate
- Nazca plate: Between South America and Pacific plate
- Arabian plate: Mostly the Saudi Arabian landmass
- Philippine plate: Between the Asiatic and Pacific plate
- Caroline plate: Between the Philippine and Indian plate (North of New Guinea)
- Fuji plate: North-east of Australia.

Source: NCERT Class 11

Q.5) By which method has facilitated correlating the rock formation from different continents across oceans?

- a) The radiometric dating methods
- b) Carbon 14 method
- c) Radioactive methods
- d) Fling method

ANS: A

Explanation: Rocks of Same Age Across the Oceans:

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

- The radiometric dating methods developed in the recent period have facilitated correlating the rock formation from different continents across the vast ocean.
- The belt of ancient rocks of 2,000 million years from Brazil coast matches with those from western Africa.
- The earliest marine deposits along the coastline of South America and Africa are of the Jurassic age.
- This suggests that the ocean did not exist prior to that time.

Source: NCERT Class 11

Q.6) Which one of the following is the type of plate boundary of the Indian plate along the Himalayan Mountains?

- a) Ocean- Continents convergence
- b) Divergent boundary
- c) Transform boundary
- d) Continent convergence

ANS: D

Explanation: Movement Of The Indian Plate:

- The Indian plate includes Peninsular India and the Australian continental portions. The subduction zone along the Himalayas forms the northern plate boundary in the form of continent— continent convergence.
- In the east, it extends through Rakinyoma Mountains of Myanmar towards the island arc along the Java Trench. The eastern margin is a spreading site lying to the east of Australia in the form of an oceanic ridge in SW Pacific.
- The Western margin follows Kirthar Mountain of Pakistan. It further extends along the Makrana coast and joins the spreading site from the Red Sea rift southeastward along the Chagos Archipelago.
- The boundary between India and the Antarctic plate is also marked by oceanic ridge (divergent boundary) running in roughly W-E direction and merging into the spreading site, a little south of New Zealand.

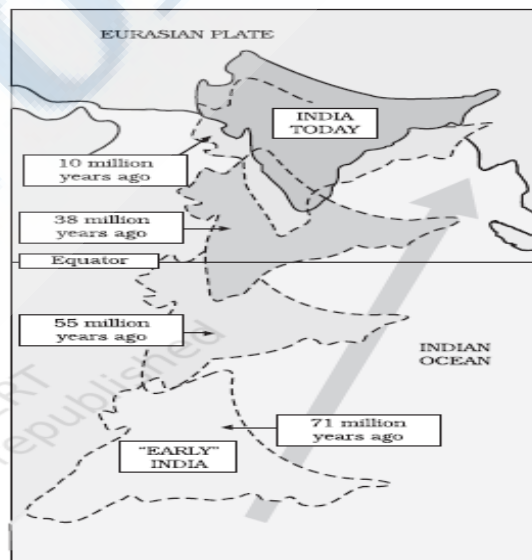


Figure 4.6 : Movement of the Indian plate

Source: NCERT Class 11

Q.7) Tillite is formed due to:

- a) deposits on mountains
- b) deposits of volcanoes
- c) deposits of glaciers
- d) deposits of gold

ANS: C

Explanation: Tillite:

- It is the sedimentary rock formed out of deposits of glaciers.
- The Gondawana system of sediments from India is known to have its counterparts in six different landmasses of the Southern Hemisphere.
- At the base, the system has thick tillite indicating extensive and prolonged glaciation. Counterparts of this succession are found in Africa, Falkland Island, Madagascar, Antarctica and Australia.
- Overall resemblance of the Gondawana-type sediments clearly demonstrates that these landmasses had remarkably similar histories. The glacial tillite provides unambiguous evidence of palaeoclimates and also of drifting of continents.

Source: NCERT Class 11

Q.8) The second group of deep sea basin lying between the continental margins and mid-ocean ridges is known as

- a) Continental margin
- b) Abyssal plains
- c) Gondwanaland
- d) Mid-ocean ridges

ANS: B

Explanation: Ocean Floor Configuration:

- In this section we shall note a few things related to the ocean floor configuration that help us in the understanding of the distribution of continents and oceans.
- The ocean floor may be segmented into three major divisions based on the depth as well as the forms of relief. These divisions are continental margins, deep-sea basins and mid-ocean ridges.

Abyssal Plains: These are extensive plains that lie between the continental margins and mid-oceanic ridges.

- The abyssal plains are the areas where the continental sediments that move beyond the margins get deposited.

Source: NCERT Class 11

Q.9) Rich placer deposits of gold occur in:

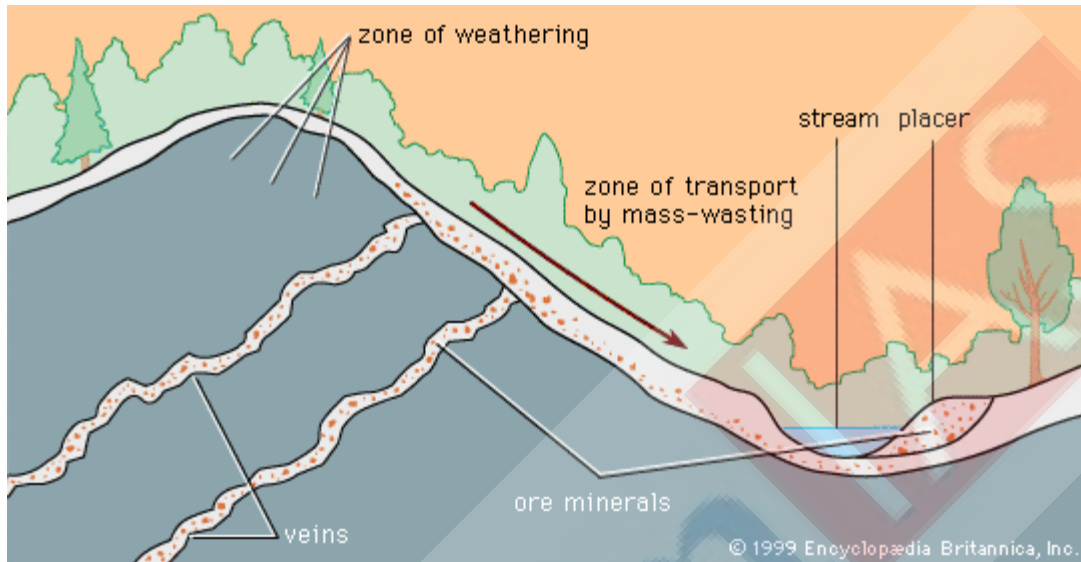
- a) Australia
- b) America
- c) Madagascar
- d) Ghana coast

ANS: D

Explanation: Placer Deposits:

PRELIMS MARATHON COMPILATION FOR THE MONTH OF SEPTEMBER (FIRST WEEK), 2022

- The occurrence of rich placer deposits of gold in the Ghana coast and the absolute absence of source rock in the region is an amazing fact.
- The gold bearing veins are in Brazil and it is obvious that the gold deposits of the Ghana are derived from the Brazil plateau when the two continents lay side by side.



Source: NCERT Class 11

Q.10) Consider the following statements:

1. Pacific plate is largely an oceanic plate whereas the Eurasian plate may be called a continental plate.
2. Plates move horizontally over the asthenosphere as rigid units.

Which of the above given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation:

- A tectonic plate (also called lithospheric plate) is a massive, irregularly-shaped slab of solid rock, generally composed of both continental and oceanic lithosphere.
- Plates move horizontally over the asthenosphere as rigid units. The lithosphere includes the crust and top mantle with its thickness range varying between 5 and 100 km in oceanic parts and about 200 km in the continental areas.
- A plate may be referred to as the continental plate or oceanic plate depending on which of the two occupy a larger portion of the plate. Pacific plate is largely an oceanic plate whereas the Eurasian plate may be called a continental plate.
- The theory of plate tectonics proposes that the earth's lithosphere is divided into seven major and some minor plates. Young Fold Mountain ridges, trenches, and/or faults surround these major plates.

Source: NCERT Class 11