

ForumIAS

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## Prelims Marathon

15<sup>th</sup> to 21<sup>st</sup> August, 2022

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*HISTORY  
ECONOMICS  
POLITY  
SCIENCE AND TECHNOLOGY  
GEOGRAPHY AND ENVIRONMENT*

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FORUMIAS



## *Environment*

**Q.1) Consider the following statements about Oil spills:**

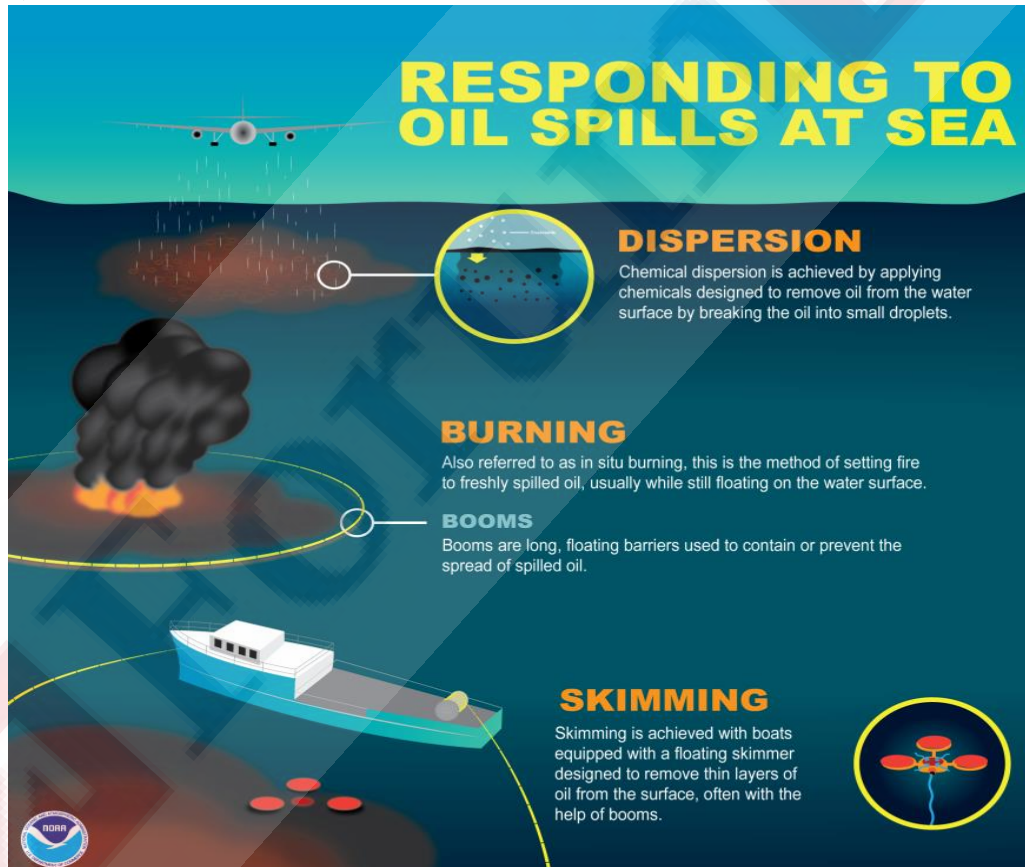
1. Oil spills decreases the level of dissolved oxygen in water killing marine organisms.
2. Oil spills can be controlled by chemical dispersion and combustion.

**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:** Oil Spills are very difficult to control as oil tends to spread very fast affecting a large area over shorter time. Their impact is detrimental to the subjected environment (land, water, air). Oil films retard the dissolved oxygen, decreases light penetration.



Source: <https://response.restoration.noaa.gov/about/media/how-do-oil-spills-out-sea-typically-get-cleaned.html>

**Q.2) Which of the following statements is/are correct regarding the impact of mining activities on the environment?**

1. Mine drainage can modify water pH and temperature and make the groundwater acidic.
2. It destroys landscapes which in turn lead to soil erosion and destruction of agricultural land.

3. It does not impact species in areas of excavation and piling of mine wastes.

**Select the correct answer using the codes given below:**

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

**ANS: C**

**Explanation: Impact of Mining:**

Sulphur, usually present as an impurity in many ores gets converted into sulphuric acid through microbial action, thereby making the water acidic. Sometimes radioactive substances like uranium also contaminate the water bodies through uranium mine wastes and kill aquatic animals. Miners working in different types of mines suffer from asbestosis, silicosis, black lung disease etc.

The most direct effect on wildlife is destruction or displacement of species in areas of excavation and piling of mine wastes. Mobile wildlife species, like game animals, birds, and predators, leave these areas. More sedentary animals, like invertebrates, many reptiles, burrowing rodents, and small mammals, may be more severely affected.

Habitat modification such as pH and temperature modification disturb communities in the area.

Source: Environmental Law Alliance Worldwide (ELAW)

**Q.3) Which of the following indoor air pollutants and its source is/are correctly matched?**

- 1. Volatile Organic Compounds (VOCs) - perfumes and hair sprays.
- 2. Polyvinyl Chloride (PVC) - window frames and indoor plumbing.
- 3. Formaldehyde - from carpets and insulation foam.

**Select the correct answer using the codes given below:**

- a) One pair only
- b) Two pairs only
- c) All Three pairs
- d) None

**ANS: C**

**Explanation: Volatile organic compounds** originate mainly from solvents and chemicals. The main indoor sources are perfumes, hair sprays, furniture polish, glues, air fresheners, moth repellents, wood preservatives, and many other products used in the house.

**Pesticides**, if used carefully and the manufacturers' instructions followed carefully they do not cause too much harm to the indoor air.

**Biological pollutants** include pollen from plants, mite, hair from pets, fungi, parasites, and some bacteria. Most of them are allergens and can cause asthma, hay fever, and other allergic diseases.

**Formaldehyde** is a gas that comes mainly from carpets, particle boards, and insulation foam. It causes irritation to the eyes and nose and may cause allergies in some people.

**Asbestos** is mainly a concern because it is suspected to cause cancer.

**Radon** is a gas that is emitted naturally by the soil. Due to modern houses having poor ventilation, it is confined inside the house causing harm to the dwellers.

**PVC** is used in an enormous range of domestic and industrial products, from raincoats and shower curtains to window frames and indoor plumbing.

Source: <https://www.epa.gov/indoor-air-quality-iaq/introduction-indoor-air-quality#:~:text=Some%20sources%2C%20such%20as%20building,doing%20hobbies%20releas,e%20pollutants%20intermittently>.

**Q.4) India has high incidences of high deaths due to water related diseases. Consider the following statements about water borne diseases:**

1. Japanese encephalitis is majorly found in the urban regions of India.
2. Filariasis and Malaria is spread by parasites that breed in contaminated water bodies.

**Which of the above statements is/are true?**

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

**ANS: D**

**Explanation:** Water related diseases are the most common cause of deaths. And India is no different. Deaths due to water related diseases in India are in the range of nearly 80 percent. Cholera can happen to both children and adults. Japanese encephalitis is majorly found in the agricultural regions of India. Filariasis and Malaria is spread by parasites that breed in fresh and stagnant water bodies. Diarrhea remains the most prevalent water related disease in India.

Source: <https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases>

**Q.5) Consider the following statements about the Particulate Matter:**

1. It is a complex mixture of solid and gaseous pollutants, only caused by manmade activities.
2. Sulphates and organic compounds are its major components.

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

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

**ANS: A**

**Explanation:** PM is a sum of all microscopic solid and liquid particles, of human and natural origin, that remain suspended in a medium such as air for some time. These particles vary greatly in size, composition, and origin, and may be harmful. Particulate matter may be in the form of fly ash, soot, dust, fog, fumes etc.

Particulate pollution does not include gas pollutants like ozone and NO<sub>2</sub>. PM 10 is particles 10 microns and below. PM 2.5 is 2.5 microns and below. (That means PM 10 includes PM 2.5.)

The major components of PM include metals, organic compounds (measured as organic carbon [OC]) including materials of biological origin, inorganic carbonaceous material (including black carbon [BC] and elemental carbon [EC]), and sulfate, nitrate, ammonium, and other ions.

Source: Shankar IAS

**Q.6) Which of the following compounds are present in the chemical composition of Fly Ash?**

1. Aluminum silicate



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2. Silicon dioxide
3. Calcium oxide
4. Sulfur oxide

**Select the correct answer using the codes given below:**

- a) 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4

**ANS: C**

**Explanation:** Fly ash, also known as pulverized fuel ash in the United Kingdom, is a coal combustion product composed of fine particles that are driven out of the boiler with the flue gases. Ash that falls in the bottom of the boiler is called bottom ash. In modern coal-fired power plants, fly ash is generally captured by electrostatic precipitators or other particle filtration equipment before the flue gases reach the chimneys.

**Chemical Composition of fly ash:**

- Aluminum silicate (enlarge amounts);
- Silicon dioxide (SiO<sub>2</sub>); and
- Calcium oxide (CaO).

Source: Shankar IAS

**Q.7) With respect to ecological footprint, which of the following statement is correct?**

- a) It focuses strictly on the greenhouse gases released due to burning of fossil fuels.
- b) It measures the impact of human activities on ocean resources.
- c) It is an estimate of an individual's environmental impact, based on the lifestyle and income of particular persons.
- d) None of the above.

**ANS: C**

**Explanation:** The Ecological Footprint measures the amount of biologically productive land and water area an individual, a city, a country, a region, or all of humanity uses to produce the resources it consumes and to absorb the waste it generates with today's technology and resource management practices.

Ecological Footprints can be calculated for individual people, groups of people (such as a nation), and activities (such as manufacturing a product).

The Ecological Footprint of a person is calculated by considering all of the biological materials consumed, and all of the biological wastes generated, by that person in a given year.

These materials and wastes each demand ecologically productive areas, such as cropland to grow potatoes, or forest to sequester fossil carbon dioxide emissions.

All of these materials and wastes are then individually translated into an equivalent number of global hectares.

Source: Shankar IAS

**Q.8) Which of the following is/are considered as point sources of water pollution?**

1. Factories
2. Sewage treatment plants
3. Oil tankers
4. Acid deposition
5. Livestock feedlots

**Select the correct answer using the codes given below:**

- a) 1, 2 and 3 only
- b) 2, 3 and 5
- c) 4 and 5
- d) 2, 4 and 5 only

**ANS: A**

**Explanation:** Point and non-point sources of water pollution. Point sources are pollutants that are discharged at specific locations through pipes, ditches or sewers into bodies of surface waters. Ex: Factories, sewage treatment plants, abandoned underground mines and oil tankers.

Non point sources these pollutants cannot be traced to a single point of discharge. They are large land areas or air-sheds that pollute water by runoff, subsurface flow or deposition from the atmosphere. Ex: Acid deposition, runoff of chemicals into surface water from croplands, livestock feedlots, logged forests, urban streets, lawns, golf courses and parking lots.

Source: <https://www.britannica.com/topic/point-source-pollutant>

**Q.9) Which of the following terms associated with the plastic pollution have been correctly defined?**

1. Plastiglomerate: It is formed when plastic trash melts and fuses together with natural materials as sand and basalt.
2. Plasticsphere: It is a term used to refer to ecosystems that have evolved to live in human-made plastic environments.
3. Microdebris: Plastic debris when it is larger than 20 mm.

**Select the correct answer using the codes given below:**

- a) One pair only
- b) Two pairs only
- c) All three pairs only
- d) None

**ANS: C**

**Explanation:** Plasticsphere is a term used to refer to ecosystems that have evolved to live in human-made plastic environments. Plastic that has made its way into marine habitats has been found to host various microorganisms.

Microdebris are plastic pieces between 2 mm and 5 mm in size. Plastic debris that starts off as meso- or macrodebris can become microdebris through degradation and collisions that break it down into smaller pieces.

Plastic debris is categorized as macrodebris when it is larger than 20 mm. These include items such as plastic grocery bags.

Plastiglomerate is a term that was proposed by Patricia Corcoran, Charles J. Moore and Kelly Jazvac for a stone that contains mixtures of sedimentary grains, and other natural debris (e.g. shells, wood) that is held together by hardened molten plastic. It has been considered a potential marker of the Anthropocene, an informal epoch of the Quaternary proposed by some social scientists, environmentalists, and geologists.

Source: <https://www.britannica.com/science/plastic-pollution>

**Q.10) Consider the following pairs related to the different techniques:**

1. Bio Venting : ex situ method of treating soils contaminated by petroleum hydrocarbons.
2. Bioremediation : use of micro organisms in extraction of metals from their ores.
3. Bio Reactors : ex situ technique of treating groundwater contaminants.

**Which of the above given pairs is/are correctly matched?**

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

**ANS: B**

**Explanation:** Bio-venting is one of the most widely used in situ methods of remediating soils contaminated by petroleum hydrocarbons.

Land farming is an ex situ bio remediation technique used to dispose of oily sludge from petroleum refinery operations.

Composting, Land farming, Bio reactors and Bio piles are ex situ bioremediation techniques whereas bio venting is an in situ bioremediation technique.

Bioremediation (or biomining) is a process in mining and biohydrometallurgy (natural processes of interactions between microbes and minerals) that extracts valuable metals from a low-grade ore with the help of microorganisms such as bacteria or archaea.

**Source:** The Hindu

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## *History – Medieval History*

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**Q.1) The concept of 'Zil-i-illahi' or 'Shadow of God' introduced by Balban refers to :**

- a) The rule of king on the basis of divine sanction and not answerable to anyone.
- b) The idea of kingship is derived from Sassanid Persia.
- c) The Universal Principle of harmony and peace.
- d) The idea of a superior religion for masses.

**ANS: A**

**Explanation: BALBAN Zil-E-Ilahi:**

- Balban ascended the throne in 1266.
- He broke the power of Chalukya and restored the prestige of the crown. That was his greatest contribution towards the stability of the Sultanate.
- To keep himself well-informed Balban appointed spies.

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- He created a strong centralised army to deal with internal disturbances and to check Mongols who were posing a serious danger to Delhi Sultante.
- He established the military department Diwani-i-Arz
- The Persian court model influenced balban's conception of Kingship. He took up the title of Zil-i-Ilahi(Shadow of God). He believed that he ruled on the basis of Divine Sanction and was not answerable to anyone.

Source: NCERT

**Q.2) Which of the following policies are associated with Akbar's administration?**

1. Decree of infallibility
2. Bandobast system
3. Mansabdari

**Select the correct answer using the codes given below:**

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

**ANS: D**

**Explanation: Akbar's Administrative Policies:**

- Akbar introduced the Mansabdari system in his administration. Under this system every officer was assigned a rank (mansab). The ranks were divided into two - zat and sawar.
- He disliked the interference of the Muslim Ulemas in political matters.
- In 1579, he issued the "Infallibility Decree" by which he asserted his religious powers.
- Akbar made some experiments in the land revenue administration with the help of Raja Todar Mal. The land revenue system of Akbar was called Zabti or Bandobast system. It was known as Dahsala System which was completed in 1580.

Source: NCERT

**Q.3) Barid-i-Mumalik or Munihiyan in the context of Medieval Indian history refers to:**

- a) Tax Collector
- b) Bodyguards of the Emperor.
- c) The spy department or intelligence officers.
- d) Officer-in-charge of state exchequer.

**ANS: C**

**Explanation: Barid-i-Mumalik:**

- Barid-i-Mumalik was the head of the information and intelligence department. Only a nobleman who enjoyed the fullest confidence of Sultan was appointed the chief barid.
- The Barid-i-Mumalik had to keep information of all that was happening in the Sultanate.
- At local level there were barids who used to send regular news concerning the matters of the state to the central office.
- Apart from Barids, another set of reporters also existed who were known as Munihiyan.

Source: NCERT



**Q.4) Under Vijaynagara empire, a system of village organization comprising of 12 functionaries conducting every village affair refers to:**

- a) Manyoms system
- b) Auagar System
- c) Agaram style
- d) Vidyaranya style

**ANS: B**

**Explanation: Vijayanagara Administration:**

- The Auagar system was an important feature of the Vijayanagara village organization.
- It is the Body of twelve functionaries, known as "Auagars".
- It conducted every village affair. They were granted tax free lands "Manyoms", which they were to enjoy in perpetuity.

Source: NCERT

**Q.5) Which of the following pairs regarding the administration of Delhi Sultanate are correctly matched?**

- | Post                | Department               |
|---------------------|--------------------------|
| 1. Diwan- i-Bandgan | : Department of Slaves   |
| 2. Diwan -i-Isthiaq | : Department of Pensions |
| 3. Diwan -i-Wizarat | : Department of Finances |
| 4. Diwan-i-Ariz     | : Department of Military |

**Select the correct answer using the codes given below:**

- a) One pair only
- b) Two pair only
- c) Three pair only
- d) All four pairs

**ANS: D**

**Explanation:**

Department	Category of Department	Function of the Department
Diwan-i-Risalat	Department of appeals	In charge of foreign affairs and dealing with diplomatic correspondences
Diwan-i-arz	Department of Military	Responsible for maintaining the royal army and recruiting troops. This department was introduced by Balban
Diwan-i-Ishtiaq	Department of pensions	In charge of pensions
Diwan-i-Mustakhrāj	Department of arrears	This was the department of revenue
Diwan-i-kohi	Department of agriculture	In charge of managing the agricultural activities in the kingdom. This department was created by Muhammad Bin Tughlaq
Diwan-i-insha	Department of correspondence	In charge of the royal correspondence and the regulations set by the Sultans were the basis of law
Diwan-i-Bandagan	Department of slaves	In charge of slaves
Diwan-i-Qaza	Department of	Managing justice in the empire

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	justice	
Diwan-i-Khairat	Department of charity	In charge of charity in the kingdom

Source: Tamil Nadu Board

**Q.6) Which of the following statements is/are correct regarding the Alvars of the Bhakti movement?**

1. They were the devotees of lord Shiva and hence called Shaivites.
2. They initiated a movement of protest against the caste system.

**Select the correct answer using the codes given below:**

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

**ANS: B**

**Explanation: Bhakti Movement- ALVARs:**

- Some of the earliest Bhakti Movements (c. Sixth century) were led by the Alvars.
- Alvars were literally those who were immersed in devotion to Vishnu and Nayanars were the devotees of Shiva.
- They travelled from place to place singing hymns in Tamil in praise of their gods.
- The devotees hailed from diverse social backgrounds ranging from Brahmanas to artisans and cultivators and even from castes considered 'untouchable'.

Source: Tamil Nadu Board

**Q.7) The 'Amara-Nayaka System' was a major political innovation of which of the following medieval kingdoms?**

- Pallavas
- Mauryan
- Chalukyas
- Vijayanagara

**ANS: D**

**Explanation: Amara Nayak System:**

- The Amara-Nayaka system was a major political innovation of the Vijayanagar Empire. It is likely that many features of this system were derived from the IQTA system of the Delhi Sultanate.
- The Amara-Nayakas were military commanders who were given territories to govern.
- They collected taxes and other dues from peasants, crafts persons and traders in the area. They retained part of the revenue for personal use and for maintaining a stipulated contingent of horses and elephants.

Source: Tamil Nadu Board

**Q.8) Which of the following best explains the term Kharaj?**

- Worship tax on Hindus

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- b) Education Tax
- c) Poll or a head tax
- d) Individual Islamic land tax

**ANS: D**

**Explanation: Islamic Law – KHARAJ:**

- Kharajis a type of individual Islamic tax on agricultural land and its produce developed under Islamic law.
- It was first imposed only on non-Muslims but which was later imposed on Muslims as well.

Source: Tamil Nadu Board

**Q.9) Consider the following statements regarding the Third battle of Panipat:**

1. It was fought between Marathas and Ahmad Shah Abdali.
2. Just after the battle, Marathas entered into treaty with Mughals for collecting Chauth all over India.
3. Division of the Mughal nobility in contending groups was one of the reason for the battle.

**Which of the above statements is/are correct?**

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

**ANS: C**

**Explanation: Third Battle of Panipat:**

- The most important event of the period of Balaji was the third battle of Panipat which was fought between the Marathas and Ahmad Shah Abdali, the ruler of Afghanistan. In 1761 AD.
- The Peshwa entered into a treaty with the Mughul emperor in 1752 A.D. By it the Mughul emperor gave the Marathas the right to collect chauth and sardeshmukhi from all over India and, in return, the Marathas were obliged to help the Emperor in times of need. Thus, the Marathas involved themselves directly with the politics at Delhi.
- The weakness of Mughul emperors, the division of the nobility in contending groups, the ambition of the Marathas to gain influence in the North were the primary causes of the third battle of Panipat.

Source: NCERT

**Q.10) Consider the following statements regarding the Sikh Gurus:**

1. Guru Arjan Dev compiled the writings of Nanak Dev in Guru Granth Sahib in Gurmukhi Script.
2. Guru Ram Das founded the city of Amritsar.
3. Guru Gobind Singh Sahib created the Khalsa.

**Which of the above statements are correct?**

- a) 1 and 2 Only
- b) 2 and 3 Only

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

**ANS: B**

**Explanation: Sikh Gurus**

- The era of the ten gurus of Sikhism spans from the birth of Nanak Dev in 1469, through the life of Guru Gobind Singh. At the time of Guru Gobind Singh's death in 1708, he passed the title of Guru to the Sikh scripture, Guru Granth.
- Guru Nanak Dev - Guru from 1469 to 1539. Guru Nanak Dev, first of the 10 gurus, founded the Sikh faith, introducing the concept of one God. He started the institution of Guru Ka Langar. Langar is the term in the Sikh religion refers to the common kitchen where food is served to everyone without any discrimination.
- Guru Angad Dev - Guru from 1539 to 1552. Guru Angad Dev, second of the 10 gurus, invented and introduced the Gurmukhi (written form of Punjabi) script. He compiled the writings of Nanak Dev in Guru Granth Sahib in Gurmukhi Script.
- Guru Ram Das - Guru from 1574 to 1581. Guru Ram Das, fourth of the 10 gurus, founded the city of Amritsar. He started the construction of the famous Golden Temple at Amritsar, the holy city of the Sikhs.
- Guru Gobind Singh Sahib - Guru from 1675 to 1708. He became Guru after the martyrdom of his father Guru Tegh Bahadur. He created the Khalsa in 1699, changing the Sikhs into a saint-soldier order for protecting themselves.

Source: NCERT



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## *Schemes/ Programmes/ Institutions*

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**Q.1) Consider the following countries:**

1. Kazakhstan
2. Belarus
3. Tajikistan
4. Iran

**Which of the above mentioned countries is/are members of Shanghai Cooperation Organization (SCO)?**

- a) 1 and 4 only
- b) 2, 3 and 4 only
- c) 1 and 3 only
- d) 1, 3 and 4 only

**ANS: C**

**Explanation: Expansion of the Shanghai Cooperation Organization (SCO): Iran and Belarus might join**

- **The SCO has 8 members at present:** India, Russia, China, Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan and Pakistan.
- Iran and Belarus might join as new members soon. In the 2021 summit in Dushanbe, the members of SCO agreed to admit Iran as a member.
- Belarus has also applied for the membership.
- China and Russia are looking to frame the SCO as a counter to the West — particularly after Russia's invasion of Ukraine.

Source: EPIC July 2022

**Q.2) "Mo Bus Service", which are designed to integrate smart technologies such as free onboard Wi-Fi service, digital announcements, surveillance cameras, and electronic ticketing, have been launched in which of the following state/UT?**

- a) Delhi
- b) Odisha
- c) Madhya Pradesh
- d) Chandigarh

**ANS: B**

**Explanation: Mo Bus Service:**

- It was launched by the Government of Odisha in 2018 to serve the public transport needs of Odisha's Capital Region (Bhubaneswar, Cuttack).
- The Mo buses are designed to integrate smart technologies such as free onboard Wi-Fi service, digital announcements, surveillance cameras, and electronic ticketing.
- An e-Rickshaw system called 'Mo e-Ride' is also introduced as a last-mile feeder service to Mo Bus.
- 57% of the commuters in the city are now using Mo Bus. e-Ride will promote a green, sustainable transportation solution with an estimated pollution reduction of 30 – 50%. 40% of Mo Bus conductors are women and 100% of Mo E-Ride drivers are women, transgender people and people from disadvantaged communities.
- Mo Bus was one of the 10 recipients of the UN Public Service Award (UNPSA) for 2022.

Source: EPIC July 2022

**Q.3) 'Leave it In the Ground' Group has been related to which of the following?**

- a) E-waste
- b) Rare Earth Minerals
- c) Carbon Bombs
- d) Radioactive materials

**ANS: C**

**Explanation: 'Leave it In the Ground' Group:**

A group of environmentalists, lawyers and activists have come together to 'defuse the carbon bombs'. The group is called Leave It In the Ground Initiative (LINGO). Its mission is to leave fossil fuels in the ground and learn to live without them. It believes that 100% use of renewable energy sources is the solution to global warming.

**Carbon Bomb**

A Carbon Bomb is 'an oil or gas project that will result in at least a billion tonnes of CO2 emissions over its lifetime'. In total, around 195 such projects have been identified the world over. The listed carbon bomb projects include Carmichael Coal Project (Australia) owned by the Adani Group, Gevra Coal Mines in Chhattisgarh owned by Coal India, and Rajmahal Coal Mines in eastern Jharkhand owned by Eastern Coalfields.

Source: EPIC July 2022

**Q.4) Consider the following statements about EU's Nature Restoration Law:**

1. It aims to cover at least 50% of the EU's land and sea areas by 2030 with nature restoration measures.
2. It aims to halve the use of pesticides across Europe by 2030.

**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: EU's Nature Restoration Law:**

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- The European Commission (EC) has unveiled a draft 'Nature Restoration Law' to restore nature and mitigate climate change on the European continent.
- It aims to cover at least 20% of the EU's land and sea areas by 2030 with nature restoration measures, and extend these to all ecosystems in need of restoration by 2050.
- It sets several targets like to halve the use of pesticides across Europe by 2030, no net loss of green urban spaces by 2030 etc.
- The EU countries and the European Parliament will need to approve the draft legislation before it becomes law.
- Under the law, ~€100 billion (\$105 billion) will be available for biodiversity spending, including restoration.

Source: EPIC July 2022

**Q.5) "King Hamad Bin Isa Al-Khalifa Prize" is awarded by which of the following?**

- a) Saudi Arabia
- b) Iran
- c) UNESCO
- d) Organisation of Islamic Cooperation

**ANS: C**

**Explanation: UNESCO Award to CIET:**

- The Central Institute of Educational Technology (CIET) has been awarded the UNESCO's King Hamad Bin Isa Al-Khalifa Prize.
- The award has been given for use of ICT in Education under a comprehensive initiative called PM eVIDYA.
- PM eVIDYA was launched in 2020 by the Ministry of Education.
- It is a comprehensive initiative which unifies all efforts related to digital/online/on-air education to enable multimode access to education.

Source: EPIC July 2022

**Q.6) Consider the following statements about National Industrial Corridor Development Programme (NICDP):**

1. National Industrial Corridor Development and Implementation Trust (NICDIT) is the implementing agency.
2. It aims to develop new industrial cities as 'Smart Cities' and converge next-generation technologies across infrastructure sectors.

**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: 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;
- (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.7) 'Sambal' and 'Samarthya' are sub-schemes of which of the following?**

- a) Mission Shakti
- b) Beti Bachao- Beti Padhao
- c) One Stop Centre Scheme
- d) Support to Training and Employment Programme for Women (STEP) Scheme

**ANS: A**

**Explanation: Mission Shakti:**

It has been launched by the Ministry of Women Child Development (MWCD). It is a mission mode scheme aimed at strengthening interventions for women's safety, security and empowerment.

'Mission Shakti' has two sub-schemes – 'Sambal' and 'Samarthya'.

- **Sambal:** It is for safety and security of women.
  - The components consist of erstwhile schemes of One Stop Center (OSC), Women Helpline (WHL), Beti Bachao Beti Padhao (BBBP) with a new component of Nari Adalats – women's collectives to promote and facilitate alternative dispute resolution and gender justice in society and within families.
- **Samarthya:** It is for the empowerment of women.
  - The components consist of erstwhile schemes of Ujjwala, Swadhar Greh and Working Women Hostel have been included with modifications.
  - The existing schemes of National Creche Scheme for children of working mothers and Pradhan Mantri Matru Vandana Yojana (PMMVY) under umbrella ICDS have also been included.
  - A new component of Gap Funding for Economic Empowerment has also been added.

Source: EPIC July 2022

**Q.8) "Balika Panchayat", an initiative under the 'Beti Bachao Beti Padhao' campaign has been launched by which of the following state?**

- a) Rajasthan
- b) Tamil Nadu
- c) Manipur
- d) Gujarat

**ANS: D**

**Explanation: Balika Panchayat:**

It is an initiative of the Gujarat Government under the 'Beti Bachao Beti Padhao' campaign. Its aim is to promote the social and political development of the girls and to ensure their active



participation in politics. Balika Panchayat is managed by girls in the 11-21 age groups. Members of the Balika Panchayat are elected after an intense campaigning process.

Source: EPIC July 2022

**Q.9) Which of the following statement about Central Institute of Educational Technology (CIET) is/are not correct?**

1. It is a constituent unit of the All India Council for Technical Education (AICTE).
2. Its aim is to promote utilization of educational technologies.

**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: Central Institute of Educational Technology (CIET):**

- It is a constituent unit of the National Council of Educational Research and Training (NCERT).
- It was established in 1984.
- Its aim is to promote utilization of educational technologies viz. radio, TV, films, Satellite communications and cyber media either separately or in combinations.

Source: EPIC July 2022

**Q.10) “Global Liveability Index” is published by which of the following institutions?**

- a) World Bank
- b) UNDESA
- c) Economist Intelligence Unit (EIU)
- d) World Economic Forum

**ANS: C**

**Explanation: Global Liveability Index:**

- It is published by the Economist Intelligence Unit (EIU) annually. Its aim is to quantify the challenges presented to an individual’s lifestyle in 173 cities.
- The index ranks the cities based on the categories: stability, healthcare, culture and environment, education and infrastructure.
- Austrian capital Vienna has topped the list of most liveable cities in the world. New Delhi has been ranked 112th on the list while Mumbai is ranked at 117th position.

Source: EPIC July 2022

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## Science

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**Q.1) Consider the following statements about ARYABHAT-1:**

1. It stands for Analog Reconfigurable Technology and Bias-scalable Hardware for AI Tasks.
2. It allows Artificial Intelligence (AI) and Machine Learning apps to perform much better and faster.

**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: ARYABHAT-1:**

- Researchers at the Indian Institute of Science have developed an analogue chipset called ARYABHAT-1.
- It stands for Analog Reconfigurable Technology and Bias-scalable Hardware for AI Tasks.
- It will allow Artificial Intelligence (AI) and Machine Learning apps to perform much better and faster. It is useful for AI-based applications which deal with object or speech recognition systems, like Alexa or Siri.
- They are also very useful in operations that require massive parallel computing at high speeds.

Source: EPIC July 2022

**Q.2) CAPSTONE, a microwave oven-sized CubeSat, recently seen in news is launched by which of the following organisations?**

- a) ISRO
- b) NASA
- c) JAXA
- d) Both (b) and (c)

**ANS: B**

**Explanation: CAPSTONE:**

- NASA has launched CAPSTONE, a microwave oven-sized CubeSat weighing just 25 kg.

**PRELIMS MARATHON COMPILATION FOR THE MONTH OF AUGUST (THIRD WEEK), 2022**

- 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.3) Consider the following statements about Halo Orbit:**

1. These are influenced by the gravity of two bodies.
2. These orbits are highly unstable, maximising the amount of propellant needed to keep a spacecraft circling the moon.

**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: Halo Orbit:**

- Halo orbits are those influenced by the gravity of two bodies like in Gateway's case, the Earth and the moon.
- The influence of two bodies helps make the orbit highly stable, minimizing the amount of propellant needed to keep a spacecraft circling the moon.

Source: EPIC July 2022

**Q.4) "Gateway, which is a small space station around the moon", is a major component of which of the following?**

- a) Chandrayaan 2
- b) China's Tiangong
- c) ROSCOSMOS's Luna 25
- d) NASA's Artemis Mission

**ANS: D**

**Explanation: Gateway:**

- Gateway is a major component of NASA's Artemis Mission. Gateway is a small space station around the moon.
- That would make it easier for astronauts to reach more parts of the moon.
- This outpost is to be placed in what is known as a Near-Rectilinear Halo Orbit (NRHO).

Source: EPIC July 2022

**Q.5) Consider the following statements about India's GSAT-24 satellite:**

1. It has been placed into the geostationary orbit by ISRO.
2. GSAT-24 is a 24-Ku band communication satellite.

**Which of the statements given above is/are correct?**

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

**ANS: B**

**Explanation: GSAT-24:**

- India's GSAT-24 satellite was successfully placed into the geostationary orbit by French agency Ariane space.
- GSAT-24 is a 24-Ku band communication satellite. The satellite will provide high-quality television, broadcasting and telecommunications services.
- GSAT-24 has been built by ISRO for New Space India Limited (NSIL). It weighs ~4200 kg.
- It is the first 'demand-driven' communication satellite mission undertaken by NSIL post space sector reforms. NSIL has leased the entire satellite capacity to Tata Play.

Source: EPIC July 2022

**Q.6) Consider the following statements about Electromagnetic Aircraft Launch System (EMALS):**

1. It is a catapult system which helps to provide the extra push to aircraft.
2. It has been first developed by North Korea.

**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: Electromagnetic Aircraft Launch System (EMALS):**

- It is a catapult system which helps to provide the extra push to aircraft.
- Once the catapult is released, the aircraft attached to the catapult moves forward with great speed in a short time, which helps it to gain the speed required to take-off before it reaches the end of the runway of the aircraft carrier.
- Electromagnetic Aircraft Launch System (EMALS) was first developed by the U.S. Navy.

Source: EPIC July 2022

**Q.7) Fujian, Shandong and Liaoning, recently seen in news are types of:**

- a) Supercomputer
- b) Missiles
- c) Aircraft Carrier
- d) Parts of Space station

**ANS: C**

**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.



## PRELIMS MARATHON COMPILATION FOR THE MONTH OF AUGUST (THIRD WEEK), 2022

- 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

### **Q.8) Consider the following statements about Cervavac:**

1. Cervavac is India's first quadrivalent human papillomavirus vaccine (qHPV) vaccine.
2. It is intended to protect women against breast cancer.

#### **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: About Cervavac:**

- Cervavac is India's first quadrivalent human papillomavirus vaccine (qHPV) vaccine. It is intended to protect women against cervical cancer.
- The vaccine is based on VLP (virus-like particles), similar to the hepatitis B vaccine and provides protection by generating antibodies against the HPV virus's L1 protein.
- The approval of this vaccine will allow the government to procure enough HPV vaccines at a special price to vaccinate nearly 50 million girls aged 9–14 years in India who are waiting to receive the vaccine.
- This will be a huge step to accelerate cervical cancer elimination in India and globally.

Source: EPIC July 2022

### **Q.9) Large Hadron Collider is located at which of the following places?**

- a) Russia
- b) Canada
- c) Switzerland
- d) Brazil

**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.10) A report titled ‘Harnessing Green Hydrogen: Opportunities for Deep Decarbonisation in India’ has been released by which of the following?**

- a) NITI Aayog
- b) Ministry of Environment, Forest and Climate Change
- c) Ministry of New and Renewable Energy
- d) None

**ANS: A**

**Explanation:** NITI Aayog has released a report titled ‘Harnessing Green Hydrogen: Opportunities for Deep Decarbonisation in India’.

**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.

**Demand for Green Hydrogen**

- The report predicted that hydrogen demand in India could grow more than 4-fold by 2050, representing almost 10% of global hydrogen demand.
- In the longer term, steel and heavy-duty trucking are likely to drive the majority of demand growth, accounting for almost 52% of total demand by 2050.

**Benefits of Adoption of Green Hydrogen**

- Adoption of green hydrogen will result in 3.6 giga tonnes of cumulative CO2 emissions reductions between 2020 and 2050.
- Energy import savings from green hydrogen can range from US\$ 246 billion to US\$ 358 billion within the same period.
- Beyond the financial savings, the energy security that green hydrogen provides will translate to less volatile price inputs for India’s industries as well as strengthen India’s foreign exchange situation in the long run.

Source: EPIC July 2022

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## *Indian Economy*

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**Q.1) Consider the following statements about Net National Product (NNP):**

1. It is the total money value of final goods and services produced in the economy during a year after deducting depreciation and net income from abroad.
2. It is always lower than NDP.
3. NNP is expressed in the currency of the nation it represents.

**Which of the above given statement is/are correct?**

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

**ANS: A**

**Explanation:** Net national product (NNP) is the market value of a nation's goods and services (GNP) minus depreciation (often referred to as capital consumption).

**The formula for NNP is:**

- $NNP = \text{Market Value of Finished Goods} + \text{Market Value of Finished Services} - \text{Depreciation}$
- Alternatively, NNP can be calculated as:
- $NNP = \text{Gross National Product} - \text{Depreciation}$
- It can also be found out by adding the NFIA (National Factor Income from Abroad) to the NDP. If the NFIA is positive, that is, the inflow of factor income from abroad is more than the outflow;
- NNP will be more than NDP. Conversely, if NFIA is negative, NNP will be less than NDP and it would be equal to NDP in case the NFIA is zero.
- NNP provides an expression of the net value of the goods and services a nation has produced during a specific time, often examined on an annual basis as a way to measure a nation's success in continuing minimum production standards.
- The NNP is expressed in the currency of the nation it represents.

**Source:** NCERT

**Q.2) Which of the following would be the effect of increase in Bank Rate?**

- a) It increases the cost of borrowing by commercial banks.

- b) It increases the supply of money.
- c) It shows tightening of RBI monetary policy.
- d) Both (a) and (c)

**ANS: D**

**Explanation: Bank Rate:**

- Bank Rate refers to the official interest rate at which Central Bank (RBI) will provide loans to the banking system which includes commercial / cooperative banks, development banks etc.
- Central Bank buys or rediscounts bills of exchange or other commercial papers at Bank Rate. It also signals the medium-term stance of monetary policy.
- Bank rate is used as a signal by the RBI to the commercial banks on RBI's thinking of what the interest rates should be. When bank rate is raised, it is expected that all interest rates will move together in the same direction.
- It also decreases the money supply in market.

Difference between Bank Rate and Repo Rate:

- Bank Rate and Repo Rate seem to be similar terms because in both of them RBI lends to the banks.
- However, Repo Rate is a short-term measure and it refers to short-term loans and used for controlling the amount of money in the market.
- On the other hand, Bank Rate is a long-term measure and is governed by the long-term monetary policies of the RBI.

Source: Ramesh Singh

**Q.3) Consider the following pairs about types of inflation and their meanings:**

1. Creeping Inflation: A kind of mild inflation that boosts demand.
2. Trotting Inflation: When inflation rises to 10 percent or more.
3. Core Inflation: It measures rising prices in everything including food and energy.
4. Disinflation: It is opposite of inflation in which the prices fall.

**Select the correct answer using the codes given below:**

- a) One Pair only
- b) Two Pair only
- c) Three Pair only
- d) All four Pairs

**ANS: B**

**Explanation:** Inflation means a sustained increase in the general price level. However, this increase in the cost of living can be caused by different factors.

- Creeping or mild inflation is when prices rise 3 percent a year or less.
- Trotting Inflation is when inflation rises to 10 percent or more.
- Core inflation reflects the long-term trend in a particular price level. It is a measure of inflation that excludes certain items that face volatile price movements (like food and energy) because in finding out the legitimate long run inflation, short-term price volatility and transitory changes in price must be removed
- Disinflation is a reduction in rate of inflation whereas DEFLATION is fall in prices (opposite of inflation).

Source: Indian Economy by Sankarganesh Karuppiah

**Q.4) Which of the following best represents the functions of RBI?**

1. RBI has the sole autonomy to print notes and mint Rs 1 coins.
2. RBI policy of sterilization helps in stabilizing exchange rates.

**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: B**

**Explanation:** RBI was established in 1935 under the provisions of RBI Act, 1934.

**RBI has seven major functions:**

- **Print Notes:** RBI has the sole autonomy to print notes. Government of India has the sole authority to mint coins and one rupee notes NOT RBI.
- **Banker to the Government:** It manages government's deposit accounts. It also represents govt. as a member of the IMF and World Bank.
- **Custodian of Commercial Bank Deposits**
- **Custodian to Country's Foreign Currency Reserves**
- **Lender of Last Resort:** Commercial banks come to RBI for their monetary needs in case of emergency.
- **Central Clearance and Accounts Settlement:** As RBI keeps cash reserves from commercial banks therefore it rediscounts their bills of exchange easily.
- **Credit Control:** It controls supply of money in the economy through its monetary policy
  - The Banking Regulation Act 1949 gives the Reserve Bank of India (RBI) the power to license banks, have regulation over shareholding and voting rights of shareholders;
  - supervise the appointment of the boards and management;
  - regulate the operations of banks; lay down instructions for audits;
  - control moratorium, mergers and liquidation;
  - issue directives in the interests of public good and on banking policy, and impose penalties.
  - Sterilization process is used to manipulate the value of one domestic currency relative to another in foreign exchange market.

**Source: PIB**

**Q.5) Which of the following does not represents the recommendations of the Narashimhan Committee?**

1. SLR and CRR should be increased over the period of time.
2. The banks should be allowed to set the interest rates for their customers thus deregulating interest rates.

**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**



**PRELIMS MARATHON COMPILATION FOR THE MONTH OF AUGUST (THIRD WEEK), 2022**

**Explanation:** In August 1991, Government of India appointed a high level committee under the Chairmanship of Shri M. Narasimham to examine all aspects relating to the structure organisation, functions and procedures of the financial system.

The main recommendations of the committee are as follows:

- The Narasimham Committee recommended that SLR should be reduced to 25% over the period of 5 years and CRR should be reduced to 10% over the period of time.
- It redefined the priority sector to include the marginal farmers, tiny sector, small business and transport sector, village and cottage industries etc.
- The committee recommended deregulation of the Interest Rates, so that banks can themselves set the interest rates for their customers.
- It also recommended setting up tribunals for recovery of Loans, tackling doubtful debts, restructuring the banks and allowing entry of the new private Banks.

Source: Ramesh Singh

**Q.6) Consider the following statements about GDP:**

1. GDP is the measure of welfare or happiness.
2. GDP is the measure of Disposable Personal Income.

**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: D**

**Explanation:** GDP stands for gross domestic product and represents the total production of a nation within its domestic borders. But the rise in GDP doesn't guarantee the welfare of the masses.

- This is because the rise in GDP may be concentrated in the hands of very few individuals or firms. For the rest, the income may in fact have fallen. In such a case the welfare of the entire country cannot be said to have increased.
- Disposable income, also known as disposable personal income (DPI), is the amount of money that households have available for spending and saving after deduction of income taxes.
- Disposable Income = Personal Income - Personal Income Taxes Payments

Source: Indian Economy by Sankarganesh Karupiah

**Q.7) NPCI has been set up as an umbrella organization owned and operated by the banks. Which of the following payment systems has been authorized by Reserve Bank of India under NPCI?**

1. Immediate Payment System
2. Aadhaar Enabled Payments System
3. Operation of Cheque Truncation System

**Select the correct answer using the codes given below:**

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

**ANS: D**

**Explanation:** NPCI has been set up as an umbrella organization owned and operated by the banks. NPCI has been authorised by Reserve Bank of India under the PSS Act, 2007 to operate the following Payment Systems:

- National Financial Switch (NFS).
- Immediate Payment System (IMPS).
- Affiliation of RuPay Cards (debit cards/ prepaid cards) issued by banks and co-branded credit cards issued by non-banking financial companies (NBFCs) or any other entity approved by the RBI.
- National Automatic Clearing House (ACH).
- Aadhaar Enabled Payments System (AEPS).
- Operation of Cheque Truncation System.

Source: <https://www.npci.org.in/>

**Q.8) Which of the following characteristic feature of different money market instruments is/are not correctly matched?**

1. T-Bills: The Treasury Bills are marketable, affordable and risk free.
2. Banker's Acceptance: Companies use these negotiable time drafts to finance imports, exports and other trade.
3. Commercial papers: These are time deposits that are issued by the commercial banks.

**Select the correct answer using the codes given below:**

- a) One Pair only
- b) Two Pair only
- c) All Three Pairs
- d) None

**ANS: A**

**Explanation:** The money market is the arena in which financial institutions make available to a broad range of borrowers and investors the opportunity to buy and sell various forms of short-term securities. There is no physical "money market", instead it is an informal network of banks and traders linked by telephones, fax machines, and computers.

Types of Money Market Instruments

- The Treasury bills are short-term money market instrument that mature in a year or less than that. The purchase price is less than the face value. At maturity the government pays the Treasury bill holder the full face value. The Treasury Bills are marketable, affordable and risk free. The security attached to the treasury bills comes at the cost of very low returns.

## PRELIMS MARATHON COMPILATION FOR THE MONTH OF AUGUST (THIRD WEEK), 2022

- Bankers Acceptance: It is a short-term credit investment. It is guaranteed by a bank to make payments. The Banker's Acceptance is traded in the Secondary market. The banker's acceptance is mostly used to finance exports, imports and other transactions in goods.
- Certificates of Deposits - The certificates of deposit are basically time deposits that are issued by the commercial banks with maturity periods ranging from 3 months to five years.
- Commercial Paper - Commercial paper refers to unsecured short-term promissory notes issued by financial and nonfinancial corporations.

Source: Indian Economy by Sankarganesh Karupiah

**Q.9) Promoting digital payments has been mandated to which of the following institution?**

- a) Ministry of IT and Electronics (MeiTY)
- b) NITI Aayog
- c) NIC
- d) Ministry of Finance

**ANS: A**

**Explanation:**

- The responsibility to promote digital transactions in India has been shifted from NITI Aayog to the Ministry of IT and Electronics (MEITY).
- By shifting the responsibility to promote digital transaction to MEITY, the government is trying to utilize the core competence of specific ministries.
- NITI Aayog would have a role to monitor and recommend ways to improve government schemes and growth of IT-enabled.

Source: <https://www.meity.gov.in/digidhan-mission>

**Q.10) Which of the following pair is/are correctly matched?**

1. Tarapore Committee - Capital Account Convertibility
2. Tendulkar Committee - Poverty Estimation
3. Urijit Patel Committee - Monetary Policy Reforms
4. Kelkar Committee - Revisiting & Revitalizing PPP

**Select the correct answer using the codes given below:**

- a) One Pair only
- b) Two Pair only
- c) Three Pair only
- d) All four Pairs

**ANS: D**

**Explanation: Tarapore Committee: -**

- In 1997, a committee on capital account convertibility was setup by the Reserve Bank of India (RBI) under the chairmanship of former RBI deputy governor S.S. Tarapore to "lay the road map" to capital account convertibility.
- Rangarajan Committee was also for poverty estimation. Bibek Debroy committee was for restructuring Indian Railways.

**PRELIMS MARATHON COMPILATION FOR THE MONTH OF AUGUST (THIRD WEEK), 2022**

- Urijit Patel Committee was appointed to examine the current monetary policy framework of the Reserve Bank of India. It was headed by Urjit Patel, Deputy Governor of the Reserve Bank of India to strengthened Monetary Policy Framework of RBI
- Kelkar Committee was a committee set up to study and evaluate the extant public-private partnership (PPP) model in India.

Source: ForumIAS

## *Indian Polity*

**Q.1) How many Pairs in List I and List II are correctly matched?**

**List I**

1. Third Schedule
2. Fourth Schedule
3. Seventh Schedule
4. Eighth Schedule

**List II**

- Forms of Oath or Affirmations
- Allocation of seats in the Council of States
- Languages
- List of subject matter of laws to be made by the Parliament and by State Legislatures

**Select the correct answer using the codes given below:**

- a) One Pair Only
- b) Two Pairs Only
- c) Three pairs only
- d) All Four Pairs

**ANS: B**

**Explanation:**

### **12 Schedules of Indian Constitution**

<b>Schedules</b>	<b>Details</b>
Schedule 1	State and Union Territories Name and their Boundary details
Schedule 2	Special Powers and Salary details of President, Governors of state, Speakers and Deputy speakers of Rajiya sabha and Lok sabha, Supreme court and High Court Judges.
Schedule 3	Oath and Promises of All authority except President, and vice president.
Schedule 4	Rajiya Sabha MP count of state and Union Territories
Schedule 5	Scheduled Area and scheduled Tribes Administration and control Law Details
Schedule 6	States of Assam, Meghalaya, Tripura and Mizoram Tribal areas Administration and control law details
Schedule 7	Detailed List about Union and State Government Power and Concurrent List
Schedule 8	Official Languages
Schedule 9	Validation of certain Acts and Regulations.
Schedule 10	Details about Party changes and disqualification of MP/MLA
Schedule 11	Responsibilities and Powers of Panchayat
Schedule 12	Responsibilities and Powers of Municipalities

**Source:** Laxmikanth



**PRELIMS MARATHON COMPILATION FOR THE MONTH OF AUGUST (THIRD WEEK), 2022**

**Q.2) Which one of the following did NOT serve as Vice President before assuming the office of the President of India?**

- a) Dr. Shankar Dayal Sharma
- b) Neelam Sanjiva Reddy
- c) Dr. Zakir Hussain
- d) R. Venkatraman

**ANS: B**

**Explanation: Vice President:**

- In India, Vice-President has the second-highest office in the country.
- Article 63 of the Indian Constitution mentions the post of Vice-President.
- There is no direct election for the Vice-President of India however, he/she is indirectly elected by an Electoral College.
- He acts as the ex-officio Chairman of Rajya Sabha.

Vice President	Term	Term of President
Sarvepalli Radhakrishnan	1952-1962	1962-1967
Zakir Hussain	1962-1967	1967-1969
V. V. Giri	1967-1969	1969-1974
Gopal Swarup Pathak	1969-1974	Not became president
B. D. Jatti	1974-1979	Not became president
Mohammad Hidayatullah	1979-1984	1969 (Acting President)
R. Venkataraman	1984-1987	1987-1992
Shankar Dayal Sharma	1987-1992	1992-1997
K. R. Narayanan	1992-1997	1997-2002
Krishan Kant	1997-2002	Not became president
Bhairon Singh Shekhawat	2002-2007	Not became president
Mohammad Hamid Ansari	2007-2017	Not became president
Venkaiah Naidu	2017-Incumbent	Not became president

- From the table, it is clear that Neelam Sanjiva Reddy did NOT serve as Vice President before assuming the office of the President of India.
- The only unopposed President of India, Neelam Sanjiva Reddy became the President in 1977.
- He was elected on 21 July 1977 and was sworn in as the sixth President of India on 25 July 1977.
- Reddy worked with three governments, with Prime Ministers Morarji Desai, Charan Singh, and Indira Gandhi.
- He was also the first chief minister of Andhra Pradesh, credited with the architecture and modernization of the state.
- He participated in various freedom struggles against the British and was imprisoned several times.

Source: Laxmikanth

**Q.3) The term “fourth estate” refers to which of the following?**

- a) Executive
- b) Judiciary
- c) Parliament
- d) Press

**ANS: D**

**Explanation:** The Fourth Estate is a societal or political institution whose influence is not officially recognized and is most commonly referred to the news media, especially print journalism or "the press".

Conservative Anglo-Irish MP Edmund Burke coined the phrase as a way of mocking the gentlemen of the press. Edmund Burke first dubbed the press as the 'Fourth Estate'.

Source: <https://theconversation.com/right-to-know-the-nation-the-people-and-the-fourth-estate21253#:~:text=The%20media%20as%20the%20Fourth%20Estate&text=Conservative%20Anglo%2DIRish%20MP%20Edmund,as%20the%20'Fourth%20Estate'>.

**Q.4) Which one of the following does not figure in the list of languages in the eighth schedule of constitution of India?**

- a) Dogri
- b) Bhoti
- c) Maithili
- d) Santhali

**ANS: B**

**Explanation:** Languages recognized by the Constitution. Originally, it had 14 languages but presently there are 22 languages. They are: Assamese, Bengali, Bodo, Dogri (Dongri), Gujarati, Hindi, Kannada, Kashmiri, Konkani, Mathili (Maithili), Malayalam, Manipuri, Marathi, Nepali, Odia, Punjabi, Sanskrit, Santhali, Sindhi, Tamil, Telugu and Urdu. Sindhi was added by the 21st Amendment Act of 1967; Konkani, Manipuri and Nepali were added by the 71st Amendment Act of 1992; and Bodo, Dongri, Maithili and Santhali were added by the 92nd Amendment Act of 2003. Oriya was renamed as 'Odia' by the 96th Amendment Act of 2011.

Source: Laxmikanth

**Q.5) Which one of the following statements about the National Green Tribunal is not correct?**

- a) It was set up in the year 2010.
- b) It is involved in effective and expeditious disposal of cases relating to environmental protection and conservation of forests.
- c) It may consider giving relief and compensation for damages to persons and property.
- d) It is bound by the procedures laid down under the Code of Civil Procedure, 1908.

**ANS: D**

**Explanation: National Green Tribunal (NGT):**

- The National Green Tribunal was formed on 18 October 2010.
- It is a statutory body formed under the National Green Tribunal Act 2010. Hence, NGT is a statutory body.
- It is related to Article 21 of the Indian Constitution.

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- This Tribunal has the same status as the High Court.
- Its headquarters is located in New Delhi.
- The main objective of the establishment of the National Green Tribunal is to speedy disposal of environmental issues to reduce the burden of pending litigations in the country's courts. Hence, NGT is a Quasi-Judicial Body.
- According to the National Green Tribunal Act, NGT must deal with the environmental issues faced by them within 6 months.
- There are at least 10 and a maximum of 20 full-time judicial members and expert members.
- Tenure: 5 years
- Not eligible for re-appointment.

### **Appointment:**

- The Chairman is appointed by the Central Government after consulting the Chief Justice of India.
- A selection committee is formed by the central government to appoint judicial and expert members.
- Salary and Allowances are determined by the Central Government.
- Being a statutory body, the NGT has appellate jurisdiction and under which it can conduct hearings.
- NGT is not obliged to follow the judicial process mentioned in Civil Procedure Code, 1908.

There are four Regional Offices of the National Green Tribunal. These include:

- Bhopal
- Kolkata
- Chennai
- Pune

With the establishment of the National Green Tribunal, India has become the third country in the world to set up a special environmental tribunal after Australia and New Zealand.

**Source:** <https://greentribunal.gov.in/methodologyngt#:~:text=The%20National%20Green%20Tribunal%20Act,by%20principles%20of%20natural%20justice>

### **Q.6) The provision under Article 350A of the Constitution of India relates to the:**

- a) Right of any section of the citizens to preserve its distinct language and culture
- b) Right of the Sikh community to carrying and wearing of kirpans
- c) Provision for providing facilities for instruction in mother-tongue at primary stage
- d) Freedom of Minority-managed educational institutions from discrimination in the matter of receiving aid from the State

**ANS: C**

**Explanation: Article 350-A pertains to linguistic minorities.**

- It imposes a duty on the states to Endeavour to provide adequate facilities for instruction in the mother tongue at the primary stage of education to children belonging to linguistic minorities.
- The president is authorized to issue such directions to any state, as he considers necessary or proper for securing the provisions of such facilities.

Article 29(1):

- It deals with the Rights of citizens to preserve their language, script, and culture.

Article 25

- It provides the right to the Sikh community to carrying and wearing of kirpans.

Article 30:

- It deals with the Right of minorities to establish and administer educational institutions.
- All minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.

Source: Laxmikanth

**Q.7) Under Article 344 of Indian Constitution, the first 'Official Language Commission' was established**

- a) In 1950 under the Chairmanship of K.M. Munshi
- b) In 1955 under the Chairmanship of B.G. Kher
- c) In 1960 under the Chairmanship of M.C. Chagala
- d) In 1965 under the Chairmanship of Humayun Kabir

**ANS: B**

**Explanation: The Official Language Commission, 1955**

The President, by using the powers conferred under the Article 344 (I) of the Constitution, appointed a Commission on 7th June, 1955 under the Chairmanship of Shri Bal Gangadhar Kher for making recommendations.

Source: <https://rajbhasha.gov.in/sites/default/files/cpolreport9-chapter1eng.pdf>

**Q.8) Which Article of the Constitution provides that every state shall endeavour to provide an adequate facility for instruction in mother tongue at primary stage of education?**

- a) Article 349
- b) Article 350
- c) Article 350A
- d) Article 351

**ANS: C**

**Explanation: Official Language**

- 343. Official language of the Union
- 344. Commission and committee of Parliament on official language
- 345. Official language or languages of a state
- 346. Official languages for communication between one state and another or between a state and the Union.
- 347. Special provision relating to language spoken by a section of the population of a state
- 348. Language to be used in the Supreme Court and in the high courts and for acts, bills, etc.
- 349. Special procedure for enactment of certain laws relating to language
- 350. Language to be used in representations for redress of grievances
- 350A. Facilities for instruction in mother-tongue at primary stage
- 350B. Special officer for linguistic minorities
- 351. Directive for development of the hindi language

**Source:** Laxmikanth



**Q.9) Under which one of the following Constitutional Amendment Acts, four languages were added to the languages under the Eighth Schedule of the Constitution. Thereby raising their number to 22?**

- a) Constitution (90th Amendment) Act
- b) Constitution (91st Amendment) Act
- c) Constitution (92nd Amendment) Act
- d) Constitution (93rd Amendment) Act

**ANS: C**

**Explanation: Ninety-Second Amendment Act, 2003**

It included four more languages in the Eighth Schedule. They are Bodo, Dogri (Dongri), Mathilli (Maithili) and Santhali. With this, the total number of constitutionally recognised languages increased to 22.

Source: Laxmikanth

**Q.10) Constitutional status and protection has been awarded to co-operative societies which led to changes in which of the following sections of the constitution?**

- 1. Fundamental Rights
- 2. DPSPs
- 3. Fundamental Duties
- 4. A new part was added in constitution

**Select the correct answer using the codes given below:**

- a) 1 and 3 Only
- b) 1, 2 and 3 Only
- c) 1, 2 and 4 Only
- d) All of the above

**ANS: C**

**Explanation:** The 97th Constitutional Amendment Act of 2011 gave a constitutional status and protection to co-operative societies.

This changed the following sections of the constitution –

- It made the right to form co-operative societies a fundamental right (Article 19).
- It added the words "or co-operative societies" after the word "or unions" in Article 19 (l) (c).
- It included a new Directive Principle of State Policy on promotion of co-operative societies (Article 43-B).
- It added a new Part IX-B in the Constitution which is entitled 'The Co-operative Societies' (Articles 243-ZH to 243-ZT).

The amendment objective is to encourage economic activities of co-operatives. This will help in progress of rural India.

Article 43 B states that there should efforts of state to promote voluntary formation, autonomous functioning, democratic control and professional management of co-operative societies.

**Incorporation of Co-operative Societies** - The state legislature may make provisions for the incorporation, regulation and winding-up of co-operative societies based on the principles of voluntary formation, democratic member-control, member-economic participation and autonomous functioning.



**Number and Term of Members of Board and its Office Bearers –**

- The board shall consist of such number of directors as may be provided by the State Legislature.
- But, the maximum number of directors of a co-operative society shall not exceed 21.
- The State Legislature shall provide for the reservation of one seat for the Scheduled Castes or the Scheduled Tribes and two seats for women on the board of every co-operative society having members from such a category of persons.
- The term of office of elected members of the board and its office bearers shall be five years from the date of election.
- The State Legislature shall make provisions for co-option of persons having experience in the field of banking, management, finance or specialization in any other related field, as members of the board.
- But, the number of such co-opted members shall not exceed two (in addition to 21 directors).
- Also, the co-opted members shall not have the right to vote in any election of the co-operative society or be eligible to be elected as office bearers of the board.
- The functional directors of a co-operative society shall also be the members of the board and such members shall be excluded for the purpose of counting the total number of directors (that is, 21).

Source: Laxmikanth

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## Geography

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**Q.1) “Bailadila Iron ore mine” is located in which of the following state?**

- a) Bihar
- b) Karnataka
- c) Chhattisgarh
- d) Odisha

**ANS: C**

**Explanation:**

- Durg-Bastar-Chandrapur belt lies in Chhattisgarh and Maharashtra. Very high grade hematites are found in the famous Bailadila range of hills in the Bastar district of Chattisgarh.
- The range of hills comprises of 14 deposits of super high grade hematite iron ore. It has the best physical properties needed for steel making. Iron ore from these mines is exported to Japan and South Korea via Vishakhapatnam port.

Source: NCERT

**Q.2) Consider the following statements with respect to Copper mineral in India:**

1. India is critically deficient in the reserve and production of copper
2. The Balaghat mines in Maharashtra produce more than 50% per cent of India's copper
3. The Khetri mines in Rajasthan are also famous for copper ores

**Which of the following codes below given is/are correct?**

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

**ANS: B**

**Explanation:**

- India is critically deficient in the reserve and production of copper. Being malleable, ductile and a good conductor, copper is mainly used in electrical cables, electronics and chemical industries.
- The Balaghat mines in Madhya Pradesh produce 52 per cent of India's copper. The Singbhum district of Jharkhand is also a leading producer of copper. The Khetri mines in Rajasthan are also famous.

Source: NCERT

**Q.3) Consider the following statements with respect to mica:**

1. Properties of mica is excellent di-electric strength and low power loss factor
2. Koderma Gaya-Hazaribagh belt of Jharkhand is the leading producer of mica

**Which of the following above statements is/are correct?**

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

**ANS: C**

**Explanation: Mica:**

- Mica is a mineral made up of a series of plates or leaves. It splits easily into thin sheets. These sheets can be so thin that a thousand can be layered into a mica sheet of a few centimeters high. Mica can be clear, black, green, red yellow or brown.
- Due to its excellent di-electric strength, low power loss factor, insulating properties and resistance to high voltage, mica is one of the most indispensable minerals used in electric and electronic industries.
- Mica deposits are found in the northern edge of the Chota Nagpur plateau. Koderma Gaya – Hazaribagh belt of Jharkhand is the leading producer. In Rajasthan, the major mica producing area is around Ajmer. Nellore mica belt of Andhra Pradesh is also an important producer in the country.

Source: NCERT

**Q.4) Consider the following statements Agro-based industries in India:**

1. The first successful textile mill was established in Gujarat in 1854
2. The first jute mill was set up near Kolkata in 1859

**Which of the following codes below given is/are correct?**

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

**ANS: B**

**Explanation: Agro-based industries in India**

- In ancient India, cotton textiles were produced with hand spinning and handloom weaving techniques. After the 18th century, power-looms came into use.
- Our traditional industries suffered a setback during the colonial period because they could not compete with the mill-made cloth from England.
- The first successful textile mill was established in Mumbai in 1854.
- The two world wars were fought in Europe, India was a British colony. There was a demand for cloth in U.K. hence; they gave a boost to the development of the cotton textile industry.
- The first jute mill was set up near Kolkata in 1859 at Rishra. After Partition in 1947, the jute mills remained in India but three-fourth of the jute producing area went to Bangladesh (erstwhile East Pakistan).

Source: NCERT

**Q.5) Consider the following elements of the earth's crust:**

1. Oxygen
2. Silicon
3. Aluminum
4. Iron

**Which of the following code is correct ascending order of elements of the earth's crust?**

- a) 1-2-3-4
- b) 2-3-4-1
- c) 4-3-2-1
- d) 3-2-4-1

**ANS: C**

**Explanation:**

- The earth is composed of various kinds of elements. These elements are in solid form in the outer layer of the earth and in hot and molten form in the interior.
- About 98 per cent of the total crust of the earth is composed of eight elements like oxygen, silicon, aluminium, iron, calcium, sodium, potassium and magnesium and the rest is constituted by titanium, hydrogen, phosphorous, manganese, sulphur, carbon, nickel and other elements.
- The Major Elements of the Earth's Crust Elements By Weight (%):
  - Oxygen- 46.60
  - Silicon- 27.72
  - Aluminum- 8.13
  - Iron- 5.00
  - Calcium- 3.63
  - Sodium- 2.83
  - Potassium- 2.59
  - Magnesium- 2.09
  - Others- 1.41

Source: GC Leong

**Q.6) Which of the following fossil fuel is called as "Buried Sunshine"?**

- a) Crude oil
- b) Natural gas
- c) Coal
- d) Mica

**ANS: C**

**Explanation:**

- Coal is the most abundantly found fossil fuel. It is used as a domestic fuel, in industries such as iron and steel, steam engines and to generate electricity.
- Electricity from coal is called thermal power. The coal which we are using today was formed millions of years ago when giant ferns and swamps got buried under the layers of earth. Coal is therefore referred to as Buried Sunshine.



**Q.7) Consider the following statements about Coal in India:**

1. Anthracite Coal is only found in the state of Jammu and Kashmir.
2. Largest reserves of coal are in the state of Chhattisgarh.
3. Talcher coalfields are in the state of Jharkhand.

**Which of the above given statement is/are not correct?**

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

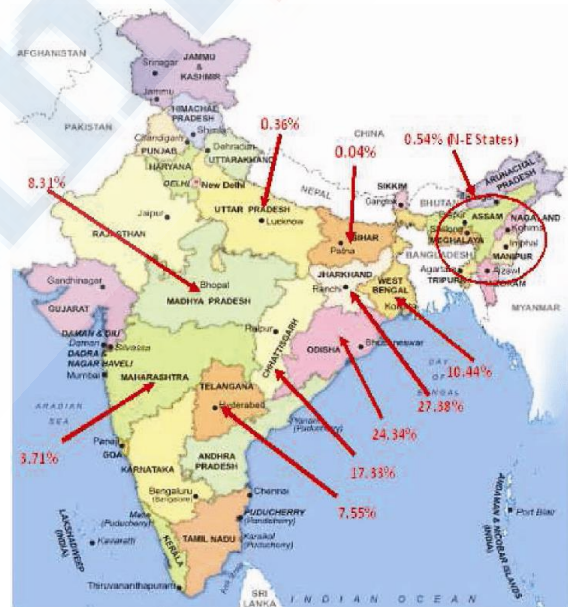
**ANS: B**

**Explanation:**

- Top 5 States in terms of total coal reserves in India are: Jharkhand > Odisha > Chhattisgarh > West Bengal > Madhya Pradesh. On the basis of carbon content it can be classified into following three types:
- Anthracite: It is the best quality of coal with highest calorific value and carries 80 to 95% carbon content. It ignites slowly with a blue flame and found in small quantities in Jammu and Kashmir.
- Bituminous: It has a low level of moisture content with 60 to 80% of carbon content and has a high calorific value. Jharkhand, West Bengal, Odisha, Chhattisgarh and Madhya Pradesh have deposits of Bituminous.
- Lignite carries 40 to 55% carbon content and is often brown in colour with high moisture content thus, gives smoke when burnt. Rajasthan, Lakhimpur (Assam) and Tamil Nadu has deposits of Lignite.
- Peat is the first stage of transformation from wood to coal with low calorific value and less than 40% carbon content.

Coal reserves are widely distributed across India

- The Damodar Valley Coalfield- It is the largest coal reserve in India. The coalfield area includes the states of Jharkhand and West Bengal. Jharia of Jharkhand is the largest coalfield of India. Most of the coking coal in India is obtained from here. Other coalfields in Jharkhand are Jayanti, Bokaro, Karanpura, Ramgarh, Giridh, Auranga, Hutar, Deltenganj and Deogarh. Major coalfields in West Bengal are Raniganj (oldest coalfield of India) and Dalingkot in Darjeeling district.
- The Son Valley Coalfield- The region of Madhya Pradesh and some areas of Uttar Pradesh are included in it. Prominent coalfields in the Son Valley are Singrauli, Sohagpur, Umaria, Pench, Ramkola and Tatapani.
- The Mahanadi Valley Coalfield- The areas of Chhattisgarh and Odisha are included in it. Major coal mining areas in Chhattisgarh are Korba, Jhilmil, Chirmiri, Vishrampur,





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Lakhanpur, Sonhat, Birampur and Sonhat. Talcher, Rampur-Himgir and Ib river coalfield is the prominent coalfields in Odisha.

- The Godavari Valley Coalfield- The region is in the states of Andhra Pradesh and Telangana. Major coalfields in the region are Singreni, Tandoor and Sasti.
- The Wardha Valley Coalfield- Kampti, Wunfield, Chandrapur, Yavatmal, Nagpur are major coal mining areas located in Maharashtra.
- The Satpura Coalfield- The region is in the Satpura range, south of the Narmada river. Major coal mining centres are Ghorbari, Mahapani and Patharkheda.
- The Rajmahal Coalfield- Major coal-mining centre in the Rajmahal range is Lalmatia where open-cast mining is practised.

Source: NCERT

**Q.8) Consider the following statements about coal:**

1. Anthracite coal is the best quality of coal.
2. 98% of India's total coal is found in Gondwana rocks of Moran region.

**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: C**

**Explanation:** There are four types of coal found in India:

- Anthracite (Best quality of coal found only in Jammu & Kashmir);
- Bituminous (Second best quality of coal);
- Lignite (Found in Tamil Nadu, Rajasthan, Gujarat and Jammu & Kashmir)
- Peat (first stage of formation of coal. It has high carbon content.)
- Coal accounts for approx. 67 % of total commercial energy produced in India and 98% of India's total account is found in Gondwana rocks of Moran region.
- The main regions of Gondwana rocks are found in West Bengal, Jharkhand and Odisha. The first effort made to extract coal with modern technology in India was at Ranigunj coal region in West Bengal.

Source: NCERT

**Q.9) Which of the following pair of coalfields and the state is correctly matched?**

State	Coalfields
1. Jharkhand	Jharia
2. Chattisgarh	Talcher
3. Madhya Pradesh	Singrauli

**Select the correct answer from given below codes:**

- a) One Pair only
- b) Two Pair only
- c) All Three pairs
- d) None

**ANS: B**

**Explanation:**

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- India is one the richest countries in mineral resources in the world.
- Since India's internal structure of earth is the product of ancient hard rock's therefore all types of mineral are found here. Gondawana rocks (Chhota Nagpur Plateau) are the richest mineral deposits in India. The table given below list major coal foelds:

State	Coal Field
West Bengal	Ranigunj (Oldest coal field in India)
Jharkhand	Jharia (Largest), Bokaro, Dhanbad, Giridih, Karanpura, Ramgarh, Daltonganj
Madhya Pradesh	Singrauli, Suhagpur, Johila, Umaria, Satpura coalfield
Odisha	Talcher, Himgiri, Rampur
Andhra Pradesh	Kantapalli, Singareni
Chhattisgarh	Korba, Bistrampur, Sonhat, Jhilmil, Hasdo-Arand
Assam	Makum, Najira, Janji, Jaipur
Meghalaya	Umralong, Darrangiri, Cherrapunji, Mawlong, Langrin
Arunachal Pradesh	Naqmchik-Namphuk

Source: NCERT

### **Q.10) In which of the following rocks are coal and petroleum found?**

- Sedimentary
- Igneous
- Metamorphic
- All of the above

**ANS: A**

#### **Explanation:**

- Sedimentary rocks are made due to weathering, erosion and deposition of sediments of igneous and metamorphic rocks.
- These rocks are layered rocks, so fossils are found in these type of rocks. Heat and pressure can convert the fossils of animals into petroleum and trees and plants convert into coal.
- The fossil fuel that we use is very old. We are mostly using coal and petroleum formed before 30 crore years ago in Carboniferous Period of Palaeozoic Era.

**Source:** NCERT