



**Sleepy Classes**  
Free. Regular. Quality.

---

# **PRE-Mix**

*(Compilations of the Multiple Choice Questions)  
For the 1st Week*

Of

**April  
2021**

*(29th March to 3rd April)*

---

Visit our website [www.sleepyclasses.com](http://www.sleepyclasses.com) or

our [YouTube channel](#) for entire GS Course **FREE** of cost

Also Available: Prelims Crash Course || Prelims Test Series

## Table of Contents

1. Geography.....	1
2. History.....	5
3. Polity & Governance .....	10
4. Economy .....	14
5. Environment.....	19
6. Science & Technology .....	26

# 1. Geography

Click [here](#) to watch the following questions on YouTube

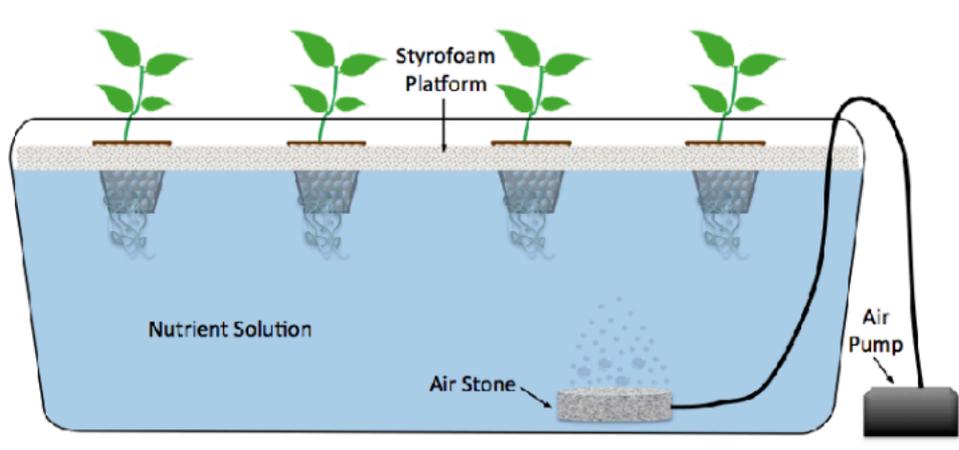
1. Which of the following is true about hydroponics?

1. It is a method of growing plants without water.
2. Plants grown hydroponically grow faster and healthier as compared to normal methods.

- A. 1 only  
B. 2 only  
C. 1 and 2 only  
D. Neither 1 nor 2

**Answer: B**

**Explanation**



## Hydroponics

- Hydroponics is a method of growing plants, usually crops, without soil. In this method, the crops/plants are grown on water, rich in essential nutrients.
- According to studies, plants grown hydroponically grow faster and healthier than plants in the soil since they are being provided with required nutrients directly to their roots through the water.

## Benefits

- Less water
- Bigger harvest + Lack of pests & diseases
- Clear and healthier foods + less chemicals
- all the year round + fights climate change
- Proximity + Less space+ indoors

**2. Choose the correct statements:**

1. Low-pressure systems are usually associated with an abundance of cloud and precipitation.
  2. The atmosphere in this circumstance is said to be unstable.
- A. Only 1  
B. Only 2  
C. Both 1 and 2  
D. Neither 1 nor 2

**Answer: C**

**Explanation**

- The stability of air in the atmosphere depends on the temperature of rising air relative to the temperature of the stationary surrounding air that it passes through, which varies from place to place and with changing atmospheric conditions.
- If the temperature of the surrounding air falls more quickly with increasing altitude, the packet of air will continue to rise. The atmosphere in this circumstance is said to be unstable.
- Low-pressure systems are usually associated with an abundance of cloud and precipitation.
- If the temperature of the surrounding air does not fall as quickly with increasing altitude, the air packet will quickly become colder than the surrounding air, lose its buoyancy, and sink back to its original position. In this case the atmosphere is said to be stable.

**3. Port Said is located in which of the following ?**

- A. Red Sea  
B. Gulf of Aqaba  
C. Mediterranean Sea  
D. Indian Ocean

**Answer: C**

**Explanation**





- The canal extends from the northern terminus of Port Said to the southern terminus of Port Tewfik at the city of Suez.

4. With reference to the management of minor minerals in India, consider the following statements:

1. Sand is a 'minor mineral' according to the prevailing law in the country.
2. State Governments have the power to grant mining leases of minor minerals, but the powers regarding the formation of rules related to the grant of minor minerals lie with the Central Government.
3. State Government have the power to frame rules to prevent illegal mining of minor minerals.

Which of the statements given above is/are correct?

- A. 1 and 3 only
- B. 2 and 3 only
- C. 3 only
- D. 1,2 and 3

Answer: A

Explanation

- Sand is a minor mineral, as defined under section 3(e) of the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act).
- State Governments have been empowered to frame rules in respect of minor minerals for regulating the grant of quarry leases, mining leases or other mineral concessions in respect of minor minerals and for purposes connected therewith

5. Which of the following statements are incorrect about Marrakech Compact on Migration?

1. It is an intergovernmental negotiated agreement, prepared under the auspices of the United Nations, that describes itself as covering "all dimensions of international migration in a holistic and comprehensive manner".
  2. It is a legally binding agreement with India being the latest signatory to it.
- A. Only 1  
B. Only 2  
C. Both 1 and 2  
D. Neither 1 nor 2

**Answer: B**

**Explanation**

- The GCM is a voluntary, non-binding document that introduces no additional obligations to states. It is a global agreement setting out a common framework, shared principles and best practices on international migration.
- As the Compact is not an international treaty, it will be non-binding under international law.

## 2. History

Click [here](#) to watch the following questions on YouTube

1. Newspaper "Sambad Prabhakar" was published by -

- A. Ishwar Chandra Gupta
- B. Raja Ram Mohan Roy
- C. Keshari Nath Tripathi
- D. Debashis Chakraborty

**Answer: A**

**Explanation**

**Ishwar Chandra Gupta**

- Sambad Prabhakar was a Bengali daily Newspaper founded by Ishwar Chandra Gupta.
- It began as weekly newspaper in 1831 and became a daily eight year later in 1839.
- It was the first Bengali Daily Newspaper.
- It covered news on India and abroad and out forward its views on religion, politics, society and literature.
- It was influential in the Bengali Renaissance and in building public sentiment leading to Indigo revolt.
- He was a Bengali Sanskrit pundit, educator, social reformer, writer and philanthropist one of the greatest intellectuals and activists of the 19th century.
- He was bestowed the title of Vidyasagar in 1839 for his mastery over Sanskrit and philosophy.
- At the age of twenty one, Ishwar Chandra joined the Fort William College as the head of the Sanskrit department.
- Michael Madhusudan - famous Bengali poet gave him the title of Dayasagar.

**Ishwar Chandra Vidyasagar**

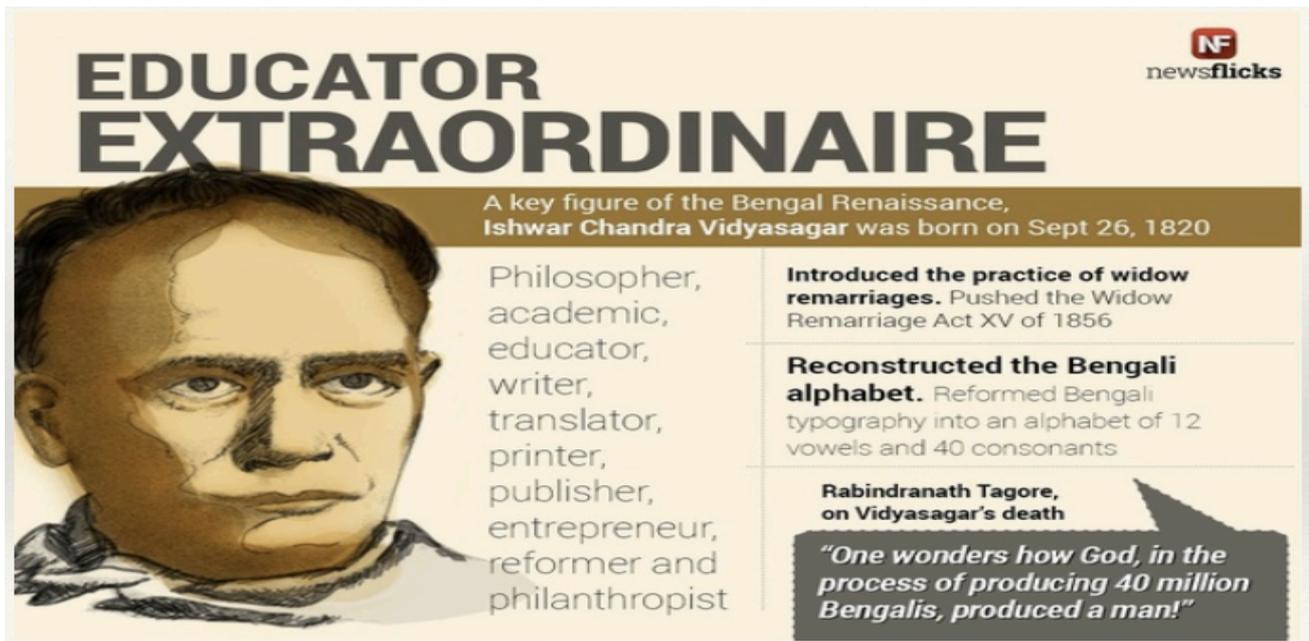
- Principal of Sanskrit College from 1851 to 1858, and he believed that Vidyasagar strongly believed that everyone irrespective of caste or gender, had the right to education and thus opened the premises for lower caste.
- Principal of Sanskrit College from 1851 to 1858, and he believed that Vidyasagar strongly believed that everyone irrespective of caste or gender, had the right to education and thus opened the premises for lower caste.
- He brought about a revolution in the Bengali education system by changing the way Bengali language was written and taught.
- Credited with reconstructing the Bengali Alphabet and wrote a book - "Borno Porichoy" meaning introduction to the letter for the same.

### Ishwar Chandra Vidyasagar, As a Social Reformer

- Actively worked towards changing the status of Women in India.
- Result of his untiring struggle that the then Government of India passed the Widow Remarriage Act in 1856.
- One unique feature - He sought to reform the society from within.
- Fought for women education and battled against the practice of Child Marriage determined battle against the then prevailing social custom of Kulin Brahmin polygamy.
- He was a man that was beyond his times.

### Ishwar Chandra Vidyasagar, Significant Works

- Wrote a number of biographical notes - Betaal Panchavinsati (1847), Banglar Itihaas (1848), Jivancharita (1849), Shakuntala (1854), Mahabharata (1860), Seetar Vanavas (1860), Bhrantivilaas (1869), Oti Alpa Hoilo (1873), Aabaar Oti Alpa Hoilo (1873), Brajavilaas (1884), Ratnopariksha (1886).
- Works on Social Reforms - 'Bidhobabivah' on widow's right to remarry (1855), 'Bahubivah' on banning of polygamy (1871) and Balyabivah on the flaws of child marriage.



**EDUCATOR EXTRAORDINAIRE**

**newsflicks**

A key figure of the Bengal Renaissance, Ishwar Chandra Vidyasagar was born on Sept 26, 1820

Philosopher, academic, educator, writer, translator, printer, publisher, entrepreneur, reformer and philanthropist

**Introduced the practice of widow remarriages.** Pushed the Widow Remarriage Act XV of 1856

**Reconstructed the Bengali alphabet.** Reformed Bengali typography into an alphabet of 12 vowels and 40 consonants

**Rabindranath Tagore, on Vidyasagar's death**

*"One wonders how God, in the process of producing 40 million Bengalis, produced a man!"*

2. Festival Shigmo is associated with which of the following states ?

- A. Manipur
- B. Mizoram
- C. Goa
- D. Andhra Pradesh

Answer: C

Explanation

## Shigmo Festival

- Shigmo is a colored festival celebrated by Hindu Community in Indian state Goa in the month of “Falgun” (March month) as per Saka Calendar. It is five-day festival of colours considered as the spring festival of Goa. Its celebrations begin with the Holi, the festival of colours celebrated across the country.



- The festival commemorates the homecoming of the warriors who had left their homes and families at the end of Dussera to fight the invaders.
- During Shigmo festival ripening of the winter crop is also included as a reason for the festivities. Artists display the martial dances like ‘Ghode- morni’ or the horse dance, with main figures in display of legendary rulers of the area like the Rashtrakuts, Kadambas, Portuguese etc.
- The themes are mostly from Hindu scriptures. Sita-haran ; Draupadi’s vastraharan and Lord Krishna coming to her help; Luv-Kush taking on Lord Rama by trying to tame the horse after the Ashwamedh Yajna; the conquest of Ravana’s Lanka; etc.
- There are two variants of Shigmo festival: Dhakto Shigmo (“small Shigmo”) and Vhadlo Shigmo (“big Shigmo”).
- Dhakto Shigmo is generally celebrated by farmers, the labour class and the rural population, while Vhadlo Shigmo is of greater consequence and is celebrated by everyone together.

### 3. Which of the following statements about Kondane cave art is/ are correct ?

1. They are pictorial depictions of Jataka stories.
2. The Buddhist rock-cut architecture found in these caves belongs to the Mahayan phase of Buddhism.

#### Choose the correct option

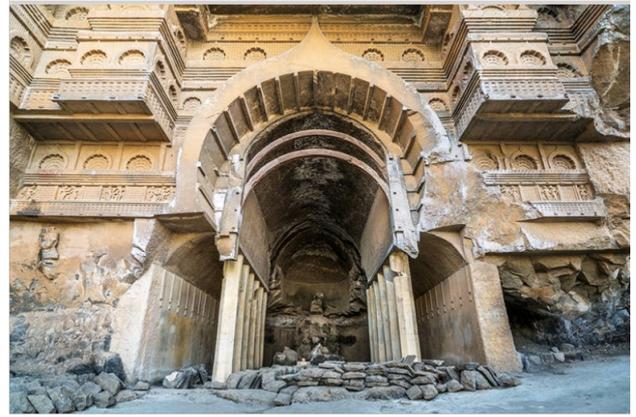
- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. None of the above

**Answer: A**

#### Explanation

- Kondane cave art depicts myth and daily life. ● Archaeologists discovered around 40 rock paintings in Kondane caves in Raigarh district in Maharashtra a few years ago.

- These paintings include a hunter standing with a bow and arrow, a Barasingh, footprints, palm impressions and some trees.
- The images were found in both natural caverns and man-made caves.
- The man-made caves also feature Buddhist architecture such as a 'chaitya' (prayer hall) and a monastery.
- A striking image found was that of a mythical figure, perhaps a demon. Other paintings reflected everyday life and occupations such as hunting deer.
- The Buddhist rock-cut architecture found in these caves belongs to the Hinayana phase of Buddhism.



**4. Which of the following pairs have been correctly matched**

1. Hindi - Devangiri
2. Nastaliq - Kashmiri
3. Kalinga - Oriya
4. Vatteluttu - Konakni

**Choose the correct Option**

- A. 1, 2 and 3 only
- B. 3 and 4 only
- C. 2 and 3 only
- D. 2 and 4 only

**Answer: A**

**5. Which of the following statements are Nayanars are correct?**

1. The Nayanars were a group of 63 saints living in Tamil Nadu during the 3rd to 8th centuries CE who were devoted to the Hindu god Vishnu.
2. The names of the Nayanars were first compiled by Sundarar.

**Choose the correct answer**

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. None of the above

**Answer: B**

### **Explanation**

#### **Nayanars**

- The Nayanars were a group of 63 saints living in Tamil Nadu during the 3rd to 8th centuries CE who were devoted to the Hindu god Shiva.
- Along with the Alvars, their contemporaries who were devoted to Vishnu, they influenced the Bhakti movement in early medieval South India.
- The names of the Nayanars were first compiled by Sundarar.
- The list was expanded by Nambiyandar Nambi during his compilation of material by the poets for the Tirumurai collection, and would include.
- In the 10th century, king Raja Raja Chola I collected the volumes of Tevaram after hearing excerpts of the hymns in his court.
- His priest Nambiyandar Nambi began compiling the hymns into a series of volumes called the Tirumurai.
- He arranged the hymns of three saintpoets Sambandar, Appar and Sundarar as the first seven books which he called the Tevaram.
- He compiled Manikkavasakar's Tirukovayar and Tiruvasakam as the eighth book, the 28 hymns of nine other saints as the ninth book, the Tirumandiram of Tirumular and 40 hymns by 12 other poets as the tenth book.
- The Nayanars were from various backgrounds, including Channars, Vanniyar, Vellalas, Idayars, Kurumbar, Thevars, oilmongers, Brahmins, Washermen, Harijan, and nobles.
- Along with the twelve Vaishnava Alvars, they are regarded as the important Hindu saints from South India.

### 3. Polity & Governance

Click [here](#) to watch the following questions on YouTube

1. Which of the following statements are correct about the GNCTD Amendment Act 2021?

1. It changes the number of members of the legislative assembly of Delhi.
  2. It clarifies that the term 'government' in law with reference to Delhi means the Council of Ministers headed by CM
  3. It renders void legislative committees made on administrative issues
- A. 2 Only  
B. 3 only  
C. Both 1 and 2  
D. Both 2 and 3

**Answer: B**

#### Explanation

- The Government of National Capital Territory of Delhi (Amendment) Act, 2021 modifies the Government of National Capital Territory of Delhi Act, 1991.
- The Amendment Act clarifies that the expression "Government" in the context of legislation to be passed by the Legislative Assembly of Delhi to "mean the Lieutenant Governor" as consistent with the status of Delhi as a Union Territory.
- The amendment prohibits the Legislative Assembly from making any rule to enable itself or its Committees to:
  - ✓ consider the matters of day-to-day administration of the NCT of Delhi and
  - ✓ conduct any inquiry in relation to administrative decisions.

Further, the amendment provides that all such rules and committees made before its enactment will be void.

2. Which of the following is correct about the electoral bonds scheme?

1. The Electoral bonds" as interest-free bearer instruments that will be available for purchase from the State Bank of India within a designated window of 10 days in every quarter of the financial year.
2. It allows individuals and domestic companies to present these bonds – issued in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh, and Rs 1 crore – to political parties of their choice.
3. The beneficiary political party is not required to reveal the identity of the entity that has given it the bond(s) nor do buyers have to fulfil KYC details.

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. All of the Above

**Answer: A**

#### **Explanation**

- The Finance Bill, 2017 introduced “Electoral bonds” as interest-free bearer instruments (like Promissory Notes) that will be available for purchase from the State Bank of India within a designated window of 10 days in every quarter of the financial year.
- The scheme, which was notified on January 2, 2018, allows individuals and domestic companies to present these bonds – issued in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh, and Rs 1 crore – to political parties of their choice, which have to redeem them within 15 days.
- There is no limit on the number of bonds an individual or company can purchase. SBI deposits bonds that a political party hasn’t encashed within 15 days into the Prime Minister’s Relief Fund.
- Buyers of the bonds have to submit full KYC details at the time of buying. But the beneficiary political party is not required to reveal the identity of the entity that has given it the bond(s).
- Before the introduction of electoral bonds, political parties had to disclose details of all its donors, who have donated more than Rs 20,000. According to transparency activists, the change infringes the citizen’s ‘Right to Know’ and makes the political class even more unaccountable.

### **3. Which of the following are correct with respect to the Bihar Police Bill?**

- 1. The Bill renames the Bihar Military Police as the Bihar Special Armed Police, and gives the force more teeth, on the lines of the Central Industrial Security Force.**
  - 2. The Bill allows the Special Armed Police officers to carry out searches and arrests without a warrant for security of notified premises only.**
- A. 1 only
  - B. 2 only
  - C. Both 1 and 2
  - D. Neither 1 nor 2

**Answer: C**

#### **Explanation**

- According to the Bihar government’s press statement on the legislation, it “aims to develop the Bihar Military Police into a well-trained and fully equipped armed police force with multi-domain expertise to cater to the development needs and the larger interest of the state.”
- The new Bill renames the Bihar Military Police as the Bihar Special Armed Police, and gives the force more teeth, on the lines of the Central Industrial Security Force (CISF), so it can better secure the

commercial and industrial assets of the state.

- The press statement says the mandate of the force will be the “maintenance of public order, combating extremism, ensuring the better protection and security of specified establishments in such manner as may be notified and perform such other duties, as may be notified.”
- The Bill allows the Special Armed Police officers to carry out searches and arrests without a warrant. This is on par with CISF, which can arrest people, including on suspicion, “without any order from a magistrate and without a warrant”, according to The Central Industrial Security Force Act, 1968.
- The powers of search and arrest without warrant are already available to the district police (in their jurisdiction) in all states as per provisions of section 41, 165 etc. of the Code of Criminal Procedure, 1973.
- This Act however gives such powers of search and arrest without warrant to the Special Armed Police Officers only for the purposes of security of notified premises.” The government statement also adds that provisions of the Code of Criminal Procedure, 1973 relating to searches will apply under the new legislation, ensuring that the “rights of citizens remain fully protected.”

**4. Which of the following are correct about the anti-defection law in India?**

- 1. The law specifies that within six months of being nominated to the House, they can choose to join a political party, after which joining any party will lead to disqualification due to defection.**
  - 2. For defection, the changing a party or joining another does not have to be a formal act but can also be interpreted through an MP’s actions, on a case-by-case basis.**
- A. 1 only  
B. 2 only  
C. Both 1 and 2  
D. Neither 1 nor 2

**Answer: C**

**Explanation**

- In 1985 the Tenth Schedule, popularly known as the anti-defection law, was added to the Constitution. The law specifies the circumstances under which changing of political parties by MPs invite action under the law.
- The law covers three types of scenarios with respect to an MP switching parties. The first is when a member elected on the ticket of a political party “voluntarily gives up” membership of such a party or votes in the House contrary to the wishes of the party.
- The second possibility is when an MP who has won his or her seat as an independent candidate after the election joins a political party. In both these instances, the MP lose the seat in the House on changing (or joining) a party.
- The third scenario relates to nominated MPs. In their case, the law specifies that within six months of being nominated to the House, they can choose to join a political party.

- The time is given so that if a nominated MP is not a member of a political party, they can decide to join one if they want. But if they don't join a political party during the first six months of their tenure, and join a party thereafter, then they lose their seat in Parliament.
- In 2021, nominated MP Swapan Dasgupta resigned from Rajya Sabha after he was fielded as BJP candidate for Tarakeswar constituency in the West Bengal Assembly elections.

**5. Which of the following is correct with respect to Original Jurisdiction of the Supreme Court of India?**

1. It includes any dispute between the Indian Government and one or more States, between the Indian Government and one or more States on one side and one or more States on the other side or between two or more States.
2. Article 32 of the Constitution provides original jurisdiction to the SC for matters regarding the enforcement of Fundamental Rights.
3. The Arbitration and Conciliation Act, 1996 gives SC the authority to initiate international commercial arbitration which is also its original jurisdiction.

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. All of the above

**Answer: D**

**Explanation**

- Original jurisdiction of a court refers to a matter for which the particular court is approached first. In the case of the Supreme Court in India, its original jurisdiction is covered under Article 131. It involves the following cases:
  - ✓ Any dispute between the Indian Government and one or more States, between the Indian Government and one or more States on one side and one or more States on the other sides or between two or more States.
  - ✓ Article 32 of the Constitution provides original jurisdiction to the SC for matters regarding the enforcement of Fundamental Rights. The SC can issue writs, directions, or orders including writs in the nature of mandamus, habeas corpus, quo warranto, prohibition and certiorari.
  - ✓ The SC also has the power to direct the transfer of a criminal or civil case from the High Court in one State to the High Court in another State. It can also transfer cases from one subordinate court to another State High Court.
  - ✓ If the SC deems that cases involving the same questions of law are pending before it and one or more High Courts, and that these are significant questions of law, it can withdraw the cases before the High Court or Courts and dispose off all these cases itself.
  - ✓ The Arbitration and Conciliation Act, 1996 gives SC the authority to initiate international commercial arbitration.

## 4. Economy

Click [here](#) to watch the following questions on YouTube

1. Which of the following statements regarding National Bank for Financing Infrastructure and Development Bill, 2021 are correct?

1. The bill seeks to establish a National Bank for Financing Infrastructure and Development to support 'infrastructure financing' across the country.
2. NBFID will be set up as a corporate statutory body.
3. NBFID will be answerable to Parliament.

- A. 1 only
- B. 1 & 2 only
- C. 2 only
- D. All of the above

**Answer: D**

### Explanation

- Parliament passed "National Bank for Financing Infrastructure and Development Bill, 2021" (NBFID Bill)
- The bill seeks to establish a National Bank for Financing Infrastructure and Development to support 'infrastructure financing' across the country.
- NBFID would work as a principal development financial institution (DFIs).
- It includes development of bonds and derivatives markets which are required for infrastructure financing.
- NBFID will be set up as a corporate statutory body.
- It will have the authorized share capital of one lakh crore rupees along with financial and developmental objectives.
- It will act as a catalyst for the ecosystem of infrastructure funding.
- NBFID will be answerable to Parliament.
- It will be managed by chairman & board nominated professionals who will be appointed by Government.
- Shares of NBFID can be held by central government, financial institutions, pension funds, insurers, multilateral institutions, Banks, sovereign wealth funds, and other institution prescribed by central government.
- Financial objectives of NBFID - to lend, invest or pull investments directly or indirectly for infrastructure projects entirely or partly in India.

- Developmental objectives include- to facilitate development of market for bonds, loans and derivatives to finance the infrastructure.
- DFIs are set up to provide long-term finance for those segments of economy where risks involved are beyond acceptable limits of commercial banks and other financial institutions.
- DFIs do not accept deposits from people.
- Instead, they source funds from market, government and multi-lateral institutions. They are often supported by government guarantees.

**2. Based on the following statements identify the type of fund settlement system:**

1. It is a funds transfer system that allows for the instantaneous transfer of money and/or securities.
2. It is the continuous process of settling payments on an individual order basis without netting debits with credits across the books of a central bank.
3. Once completed, payments under this system are final and irrevocable.
4. There is no upper limit on the value of funds that can be transferred via this system.

- A. National Electronic Funds Transfer
- B. Real Time Gross Settlement System
- C. Immediate Payment Service
- D. Cheque truncation system

**Answer: B**

**Explanation**

- Governor of Reserve Bank of India has called for effective regulation which should help innovation in fintech space.
- According to RBI Governor, Real-Time Gross Settlement (RTGS) has multi-currency capabilities. So, there is scope to explore if it can be expanded beyond India.

**Real-Time Gross Settlement (RTGS)**

- Real Time Gross Settlement systems are specialist funds transfer systems in which transfer of money or securities is done from one bank to another bank in “real-time” and on a “gross” basis.
- It is the fastest possible money transfer system among the banking channel. Real-Time Settlement means a payment transaction is not subjected to ‘waiting period’.
- In such system, transactions are settled as and when they are processed.
- While, the “Gross settlement” means transaction is settled on one-to-one basis. RTGS System is used for high-value transactions.
- Banks are also free to use balances maintained under cash reserve ratio (CRR) and intra-day liquidity (IDL) to be supplied by central bank, to meet any eventuality arising out of this payment system.
- RBI also fixed IDL limit for banks to three times their net owned fund.

- This system is monitored by RBI which has stopped levying any charges on transactions made through RTGS from July 2019.

**3. Which of the following statements regarding currency options is/are correct ?**

1. Currency options give investors the right, but not the obligation, to buy or sell a particular currency at a pre-specific exchange rate before the option expires.
2. They allow market to hedge currency risk or to speculate on currency moves.

- A. 1 only  
B. 2 only  
C. Both 1 and 2  
D. None of the above

**Answer: C**

**Explanation**

- A currency option (also known as a forex option) is a contract that gives the buyer the right, but not the obligation, to buy or sell a certain currency at a specified exchange rate on or before a specified date. For this right, a premium is paid to the seller.
- Currency options are one of the most common ways for corporations, individuals or financial institutions to hedge against adverse movements in exchange rates.
- Investors can hedge against foreign currency risk by purchasing a currency put or call.
- Currency options are derivatives based on underlying currency pairs.
- Trading currency options involves a wide variety of strategies available for use in forex markets.
- The strategy a trader may employ depends largely on the kind of option they choose and the broker or platform through which it is offered.
- The characteristics of options in decentralized forex markets vary much more widely than options in the more centralized exchanges of stock and futures markets.

**4. Pillars of Financial Inclusion include:**

1. Public Finance
  2. Financial Education
  3. Investment Instruments
  4. Tax Planning Instruments
  5. Consumer Protection
  6. Distribution Channe
- A. 1, 3, 5 only

- B. 2, 4 and 5 only
- C. 1, 3 and 4 only
- D. All of the above

**Answer: D**

**Explanation**



5. A situation where import duty on finished goods is low compared to the import duty on raw materials that are used in the production of such finished goods is known as:
- A. Protective duty
  - B. Special additional duty
  - C. Inverted duty structure
  - D. True countervailing duty

**Answer: C**

**Explanation**

- Inverted duty structure is a situation where import duty on finished goods is low compared to the import duty on raw materials that are used in the production of such finished goods.
- For example, suppose the tariff (import tax) on the import of tyres is 10% and the tariff on the imports of natural rubber which is used in the production of tyres is 20%; this is a case of inverted duty structure.
- When the import duty on raw materials is high, it will be more difficult to produce the concerned good domestically at a competitive price. Several industries depend on imported raw materials and components.
- High tax on the raw materials compels them to raise price.
- On the other hand, foreign finished goods will be coming at a reduced price because of low tax advantage.

- In conclusion, manufactured goods by the domestic industry becomes uncompetitive against imported finished goods.
- It discourages the local production of goods using the imported raw materials as the price of imported finished goods may seem more attractive.
- The disadvantage of the inverted duty structure increases with the increased use of imported raw materials. An inverted duty structure discourages domestic value addition.
- For India, there are several examples of inverted duty structure especially after the signing of the India- ASEAN FTA.

## 5. Environment

Click [here](#) to watch the following questions on YouTube

1. Which of the following statements are correct about Sabarmati River?

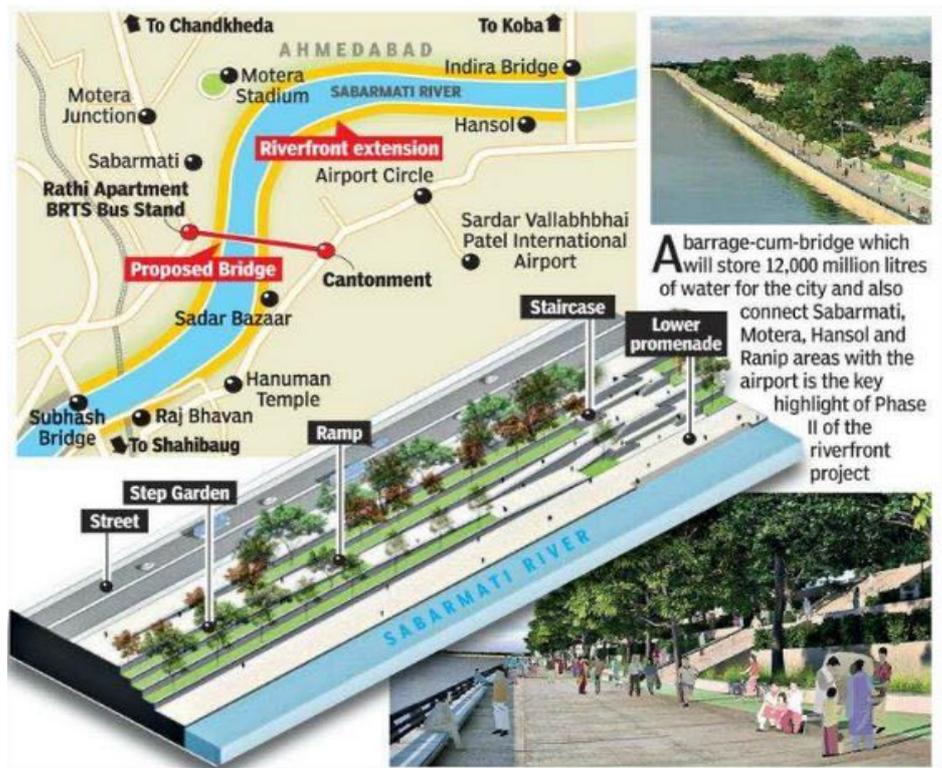
1. It Originates from Aravalli hills near Tepur village in Gujrat.
2. It flows through South East direction.
3. Kakrapar Project is built on this river.

- A. 1 and 2 only  
 B. 2 and 3 only  
 C. 1 and 3 only  
 D. None of the above

**Answer: D**

### Explanation

- The Ahmedabad Municipal Corporation, in its draft budget for 2021-22, has set aside Rs 1050 crore for the Sabarmati River Front Development phase 2, work on which is to begin soon.
- Sabarmati Riverfront Development Project.
- The SRDP is an environmental improvement, social uplift and urban rejuvenation project that will renew Ahmedabad.
- The project is being developed by the Sabarmati Riverfront Development Corporation Ltd. (SRFDCL), a company wholly owned by the Ahmedabad Municipal Corporation.
- The project will reclaim approximately 200 hectares of land from the riverbed.
- To reclaim the land, protect low lying developments from floods, and prevent erosion of the river banks, retaining walls have been built on both sides of the river.



- Since Sabarmati is a seasonal river, water is channelled into the river from the Narmada canal, which intersects the river upstream from Ahmedabad and is retained in the river using the Vasna Barrage which is located downstream.
- The project has won Prime Minister's National Award for Excellence in Urban Planning and Design in the year of 2003.

### Sabarmati River

- It is one of the west flowing rivers along with Narmada and Tapi.
- It Originates from Aravalli hills near Tepur village in Udaipur Dist of state Rajasthan. It flows through South West direction.
- Mouth of the river : Gulf of Cambey ( Khambhat)
- Ahmedabad city is located along the bank of this river.

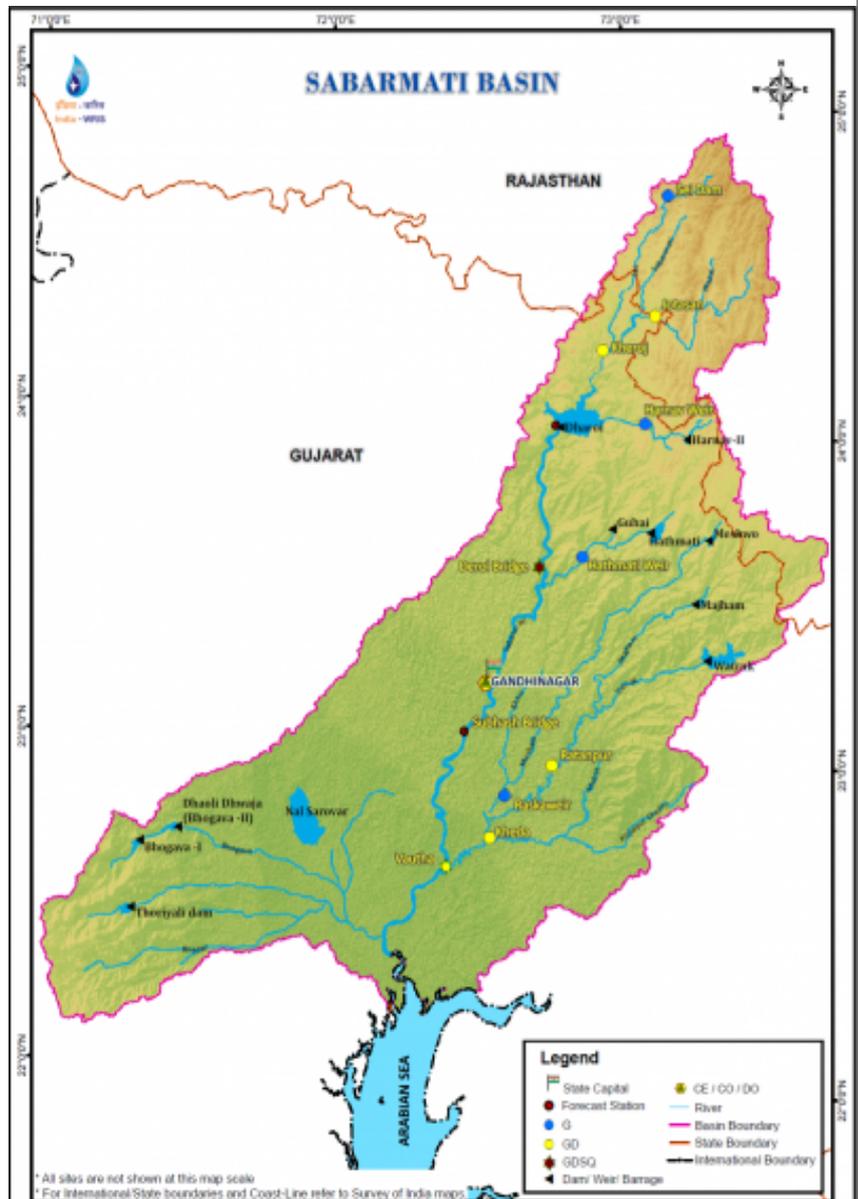
### Tributaries

- Right Tributaries :

- ✓ Sei
- ✓ Siri
- ✓ Dhamni

- Left Tributaries

- ✓ Wakal
- ✓ Harnav
- ✓ Hathmati
- ✓ Khari
- ✓ Watrak



- The river runs through two states Rajasthan and Gujarat .
- The basin is bounded by: Aravalli hills on the north and North East, Rann of Kutch on the west ,Gulf of Khambhat on the south.
- The river basin is roughly triangular in shape.
- Most of its tributaries rises from Aravalli hills and joins with Sabarmati river at different points .
- Harnav river rises at Kulalia hills in the state of Rajasthan.
- Watrak River rises at Panchara hills in the state of Rajasthan
- Dharoi Dam is located on the Main Sabarmati River .

- Other Dams
  - ✓ Hathmati Dam
  - ✓ Harnav Dam
  - ✓ Guhai Dam
  - ✓ Meshvo Reservoir
  - ✓ Mazam Dam
  - ✓ Watrak Dam.

## 2. Asia's Largest Tulip Garden is situated in

- A. Uttarakhand
- B. Jammu Kashmir
- C. Himachal Pradesh
- D. Sikkim

**Answer: B**

### Explanation

- Asia's largest Tulip Garden in Srinagar, Jammu & Kashmir, is scheduled to be opened for general public and tourists from March 25, 2021.
- Tulip flowers have blossomed in the lap of Zabarwan Hills along the banks of Dal Lake in Srinagar city.
- Around 15 lakh flowers of more than 64 varieties are in full bloom nowadays in the garden
- Indira Gandhi Memorial Tulip Garden : The garden was previously known as Model Floriculture Center. It is the largest tulip garden in Asia spread over an area of 74 acres.
- It is situated on the foothills of Zabarwan Range in Dal Lake of Srinagar.
- Tulip garden was inaugurated in 2007 with the aim of boosting floriculture and tourism in Kashmir Valley.
- It is built on a sloping ground in terraced fashion comprising of seven terraces.
- Many other species of flowers like daffodils, hyacinths, and ranunculus have also been added to the garden.
- Tulip festival is an annual celebration that showcase the range of flowers in tulip garden as a part of tourism efforts by the state Government.
- Festival is organized on the onset of spring season in Kashmir valley.
- Tulips are a genus of spring-blooming perennial herbaceous bulbiferous geophytes.
- Tulips are generally large, showy and brightly coloured.

- They have a different coloured blotch at the base of their tepals internally. The flower is a member of lily family called Liliaceae.

### Zabarwan Range

- It is a 32 km long sub-mountain range between Pir Panjal and Great Himalayan Range located in central part of Kashmir Valley. It borders central part of Kashmir Valley to the east.
- It is surrounded specifically by Sind Valley in North, Lidder Valley in south, Zaskar Range in east and Jehlum Valley in west.
- Shankaracharya Temple is built on edge of the central part of Zabarwan Range.
- Highest peak of the range is Mahadev Peak.

### 3. The term “Phumdis” is related to which of the following lakes

- A. Sangetsar Lake
- B. Loktak Lake
- C. Umiam Lake
- D. Palak Lake

**Answer: B**

### Explanation

Loktak lake

- It is the largest freshwater lake in North -East India and is famous for the phumdis (heterogeneous mass of vegetation, soil and organic matters at various stages of decomposition) floating over it.
- Keibul Lamjao is an integral part of the lake and is the only floating national park in the world.
- It is located near Moirang in Manipur.
- The etymology of Loktak is Lok = “stream” and tak = “the end”.
- The largest of all the phumdis covers an area of 40 km<sup>2</sup> (15 sq mi) and is situated on the southeastern shore of the lake.
- This ancient lake plays an important role in the economy of Manipur.
- It serves as a source of water for hydropower generation, irrigation and drinking water supply.
- The lake is also a source of livelihood for the rural fishermen who live in the surrounding areas and on phumdis and catch their fish by using various nets and indigenous traps.
- Human activity has led to severe pressure on the lake ecosystem.
- There are 55 rural and urban hamlets around the lake which have a population of about 100,000 people.
- There have been rising urbanisation and land-use change over the years in and around the Loktak Lake.

- The lake has become a dump-yard for the city's municipal waste, ranging from plastic refuse to chemical runoff from farming.
- The situation worsens during years of floods.
- Though the Loktak Lake is yet to see worrying levels of pollution, early signs suggest that there is a need to be wary.
  - ✓ Major Pollutant Instead of Carbon Dioxide, Nitrogen is a major pollutant in the lake.
  - ✓ pH of the lake: The pH of the lake, as per measurements so far, varies from 6.8-7.2 (ideally the pH of a healthy lake should be slightly below 7).
- However, studies of ocean acidification have shown that even a 0.1 increase in pH can cause (harmful) decalcification.

### Calcium anomalies

- There are signs of calcium anomalies in some of the mollusc and other aquatic life in the lake.
- This is similar to the phenomenon of coral bleaching in oceans, where rising sea surface temperature cause organisms that live on corals to disengage, thereby killing the corals themselves.

### Effect on Phumdis

- The health of the lake also affects the Phumdis (the unique 'floating islands') of the Loktak lake.
- These islands are made of a mix of vegetation and soil.
- These coalesce to form a thick mat that, for centuries, have hosted huts and fishing settlements.
- Considering the ecological status and its biodiversity values, the lake was initially designated as a wetland of international importance under the Ramsar Convention on 23 March 1990.
- It was also listed under the Montreux Record on 16 June 1993.
- Montreux Record is a record of Ramsar sites where changes in ecological character have occurred, are occurring or are likely to occur.

### 4. State of the Global Climate report is released by

- A. United Nations Environment Programme
- B. The International Union for Conservation of Nature
- C. United Nations Framework Convention on Climate Change
- D. World Meteorological Organization

**Answer: D**

### Explanation

- The World Meteorological Organization(WMO) releases the annual State of Global Climate Report to keep a track of global warming.

### Key Highlights from the 2020 report

- Hottest Year: 2020 will be one of the three hottest years just behind 2016 and 2019.
- Rise in Global Temperature: The global mean surface temperature for January-October 2020 was 1.2 degree Celsius higher than the pre-industrial baseline (1850-1900).For that period, 2020 is the second- warmest year on record.
- High Temperature over Ocean Surfaces: 80% of ocean areas have experienced at least one marine heat wave (MHW) so far in 2020.
- Global sea-level rise was also similar to 2019 value.This was mainly due to the increased melting of the ice sheets in Greenland and Antarctica.
- Consequences: Extreme weather events such as tropical cyclones, floods, heavy rainfall and droughts were the consequence of global warming that impacted many parts of the world.
- World Meteorological Organization(WMO):
  - ✓ It is an intergovernmental organization established by the ratification of the WMO Convention in 1950.
  - ✓ Members: 193 Member States and Territories.
  - ✓ Significance: It is a specialized agency of the United Nations (UN).
  - ✓ Headquarters: Geneva, Switzerland.

### 5. Which of the following statements are correct about Zero Budget Natural Farming (ZBNF) ?

1. Mulching is associated with ZBNF.
2. Vermicomposting is an integral part of ZBNF.

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**Answer: A**

#### Explanation

- Zero Budget Natural Farming (ZBNF) is a type of chemical-free farming where the total cost of growing and harvesting plants comes out to be zero (taking into consideration the costs incurred by the farmers are recovered through inter-cropping) .
- The topic, 'Zero Budget Natural Farming,' gained prominence when Finance Minister mentioned it in her 2019 budget speech, speaking of it as a source of doubling farmers' income.
- Subash Palekar (Indian Agriculturist and Padma Shri Recipient) is the father of Zero Budget Natural Farming.
- He developed it in the mid-1990s as an alternative to the Green Revolution methods.

- Jeevamrutha' is applied in farming. Jeevamrutha is the mixture of:
  - ✓ Fresh desi cow dung
  - ✓ Aged desi cow urine
  - ✓ Jaggery
  - ✓ Pulse flour Water and Soil
- It helps in the addition of nutrients in the soil and also in catalysing the microbial activities in the soil.
- A mixture called 'Bijamrita' ('Bija' stands for seed) is used for the treatment of seeds while another mixture of neem leaves and pulp, tobacco and green chillies is used as an insecticide
- Acchadana is Mulching, associated with Zero Budget Natural Farming while Whapasa is a condition where there is a presence of both air molecules and water molecules in the soil.
- Whapasa helps in reducing irrigation requirements.
- Apart from the least cost incurred in this type of farming, the Zero Budget Natural Farming also promotes:
  - ✓ Soil aeration
  - ✓ Minimal watering
  - ✓ Intercropping
  - ✓ Bunds and
  - ✓ Topsoil mulching
- Intensive irrigation and deep ploughing is not promoted in Zero Budget Farming.
- Vermicomposting which is a method of using earthworms as a means to enhance organic waste conversion; is not supported in Zero Budget Natural Farming.
- Palekar mentioned that European Red Wiggler (Most common composting Earthworm) that are used in vermicomposting absorb toxic metal and poison the soil.

## 6. Science & Technology

Click [here](#) to watch the following questions on YouTube

1. Which of the following statements about NISAR are correct?

1. NASA will provide one of the radars for the satellite, a high- rate communication subsystem for science data, GPS receivers and a payload data subsystem.
2. SAR here refers to the synthetic aperture radar that NASA will use to measure changes in the surface of the Earth.

Select the correct code.

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**Answer: C**

**Explanation**

- Context: NASA and ISRO are collaborating on developing a satellite called NISAR.

**About NISAR**

- The satellite will be launched in 2022 from the Satish Dhawan Space Center in Sriharikota, India, into a near-polar orbit.
- It will scan the globe every 12 days over the course of its three-year mission of imaging the Earth's land, ice sheets and sea ice to give an "unprecedented" view of the planet.
- It will detect movements of the planet's surface as small as 0.4 inches over areas about half the size of a tennis court.
- NASA will provide one of the radars for the satellite, a high-rate communication subsystem for science data, GPS receivers and a payload data subsystem.
- ISRO will provide the spacecraft bus, the second type of radar (called the S-band radar), the launch vehicle and associated launch services.
- NISAR will be equipped with the largest reflector antenna ever launched by NASA and its primary goals include tracking subtle changes in the Earth's surface, spotting warning signs of imminent volcanic eruptions, helping to monitor groundwater supplies and tracking the rate at which ice sheets are melting.

**Synthetic aperture radar**

- The name NISAR is short for NASA-ISRO-SAR.
- SAR here refers to the synthetic aperture radar that NASA will use to measure changes in the surface of the Earth.

- Essentially, SAR refers to a technique for producing high-resolution images.
- Because of the precision, the radar can penetrate clouds and darkness, which means that it can collect data day and night in any weather.

## 2. Which of the following statements are incorrect about Coronal Mass Ejections (CMEs)?

1. The ejections from the Sun are technically called Coronal Mass Ejections (CMEs).
2. The plasma is released into the solar wind, and can not be observed by any means possible even today

### Select the correct code

- A. 1 only
- B. 2 only
- C. None of the above
- D. All of the above

**Answer: B**

### Explanation

- Context: Scientists have developed a new technique for tracking the huge bubbles of gas threaded with magnetic field lines that are ejected from the Sun, disrupting space weather and causing satellite failures, geomagnetic storms, and power outages.
- The ejections from the Sun are technically called Coronal Mass Ejections (CMEs).
- These cause several disturbances to the space environment and thus forecasting their arrival time is very crucial.
- A coronal mass ejection (CME) is a significant release of plasma and accompanying magnetic field from the solar corona. They often follow solar flares and are normally present during a solar prominence eruption. The plasma is released into the solar wind, and can be observed in coronagraph imagery. The forecasting accuracy is however hindered by limited CME observations in interplanetary space.

### Computer Aided CME Tracking Software (CACTus)

- Computer Aided CME Tracking Software (CACTus) is a software-based on computer vision algorithm that was so far used to detect and characterize such eruptions automatically in the outer corona where these eruptions cease to show accelerations and propagate with an almost constant speed.
- However, due to the vast acceleration experienced by these eruptions, this algorithm could not be applied to the inner corona observations. This problem limited the capability to track the eruptions as CMEs accelerate in the lower corona.
- In addition to this, with the advancement in space technology, there has been a tremendous increase in the amount of data obtained from spacecraft.
- Thus, it can become a tedious task to identify and track the solar eruptions in a huge number of images if done manually.

**3. Roop pur Nuclear Power Plant is being developed by India and**

- A. Nepal
- B. Sri Lanka
- C. Bangladesh
- D. Bhutan

**Answer: C**

**Explanation**

- Context: Recently, India signed a deal with Bangladesh where Indian companies will develop the transmission lines of Bangladesh Rooppur Nuclear power plant. Some facts about Rooppur Nuclear power plant.
- It is an under-construction 2.4 GWe nuclear power plant in Bangladesh.
- It is being constructed at Rooppur (Rupppur) in the Pabna District of Bangladesh, on the bank of Padma River.
- There are two units of plants which are expected to be completed in 2022 and 2024 respectively. Each will produce 1200MW of electricity.
- It has significance as it will be the Bangladesh's first nuclear power plant.
- The Rooppur project is the first initiative under the Indo-Russian deal to undertake atomic energy projects in third countries.
- A tripartite Memorandum of Understanding (MoU) in March 2018, was signed at Moscow, Russia between Russia, Bangladesh and India for the Rooppur Nuclear Power Project.
- It is to be built by the Russian Rosatom State Atomic Energy Corporation.
- In June 2018, Infrastructure major, Hindustan Construction Company Ltd. (HCC) was given contract for Rooppur Nuclear Power Plant.
- The Russian side is making the project on "turnkey" basis which says, the contractor will be liable for any problems that arise in the plant.
- It will be for the first time when any Indian company will be involved in any nuclear project out of the country. Since India is not a Nuclear Supplier group (NSG) member, it cannot participate directly in construction of Atomic power reactors.

**4. Based on the following statements identify the INS.**

- 1. It was commissioned to the Indian Coast Guard recently**
- 2. It is sixth in series of seven Off shore Patrol Vessel and is constructed by M/s Larsen & Toubro Ltd**
- 3. It has been designed to carry one twin-engine helicopter and four high speed boats.**
- 4. It can be used in Search & Rescue operations, Law Enforcement and Maritime Patrol.**
- 5. The ship is also capable of carrying Pollution Response Equipment for oil spill response at Sea.**

6. It will be deployed to conduct surveillance in exclusive economic zones of Indian Coastal region.

- A. INS Vajra
- B. ICGSVikram
- C. INS Samatha
- D. INS Sarthak

**Answer: A**

### Explanation

Context: Indian Coast Guard Ship Vajra was commissioned to the Indian Coast Guard,

- INS Vajra was sixth in series of seven Offshore Patrol Vessel and was constructed by M/s Larsen & Toubro Ltd at Kattupalli.
- It is a 98-meter ship and is fitted with state-of-the-art Navigation & Communication Equipment, machinery and Sensors.
- It has been designed to carry one twin-engine helicopter and four high speed boats.
- It also carries two Rigid Hull Inflatable Boats for swift Boarding Operations.
- Vajra is based at Tuticorin under the Operational and Administrative Control of Coast Guard District (Tuticorin).
- INS Vajra can be used in Search & Rescue operations, Law Enforcement and Maritime Patrol.
- The ship is also capable of carrying Pollution Response Equipment for oil spill response at Sea.
- It will be deployed to conduct surveillance in exclusive economic zones of Indian Coastal region.
- EEZ is prescribed by United Nations Convention on the Law of the Sea, 1982.
- It is an area of sea in which sovereign state enjoys special or 'sovereign' rights of exploring & using marine resources and producing energy from water & wind.
- EEZ stretches from baseline to 200 nautical miles (nmi) from the coast of the state.
- It is also called as maritime continental margin.
- It does not include territorial sea or continental shelf beyond 200 nmi.
- United Nations Convention on the Law of the Sea (UNCLOS) is an international agreement signed during third United Nations Conference on Law of the Sea during 1973 and 1982.
- The Convention defines rights and responsibilities of nations regarding the use of world's oceans, environment, establishing guidelines for businesses and management of marine natural resources.
- It came into effect in 1994.
- 167 countries and European Union have joined this Convention, as of 2016.

5. Which of the following statements about La Perouse are correct?

1. It is the France-led naval war game.
2. It will be organised in Bay Of Bengal.
3. India will be participating in it first time ever.

Select the correct code

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. All of the above

**Answer: D**

**Explanation**

- Context: India to participate in the France-led naval war game “La Perouse” for the first time in the Bay of Bengal.
- Australia, Japan and the US will also participate in La Perouse, but India’s first-ever participation is seen as a significant step. The exercise is scheduled between April 5 and 7.
- After La Perouse, another important naval exercise, the India-French Varuna exercise, will also take place.
- This time, it will also include the United Arab Emirates
- This will take place in the last week of April in the Western Indian Ocean
- India’s maritime diplomacy involves naval exercises with several friendly countries keeping in mind China’s increasing influence in the Indian Ocean Region.
- The inclusion of more navies in exercises is part of a similar diplomatic outreach of several nations in wake of Chinese aggression in the waters and increasing forays in the Indian Ocean Region.
- In the Malabar Exercise, last November, navies of all the Quad nations -India, US, Japan and Australia were participating.
- After the Malabar Exercise, the Indian Navy carried out war games with the navies of Singapore and Thailand in the Andaman Sea.
- As part of maritime cooperation, the Indian and Vietnamese navies carried out a Passage Exercise in the South China Sea in December 2020. Besides improving inter-operability between the friendly navies, the joint drills are aimed at strengthening mutual confidence and develop common understanding and procedures towards enhancing the overall maritime security.