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# **PRE-Mix**

**(Compilations of the Multiple Choice Questions)**

**For the 2nd Week**

**Of**

**April  
2021**

**(5th April to 10th April)**

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## Table of Contents

|                               |    |
|-------------------------------|----|
| 1. Geography.....             | 1  |
| 2. History.....               | 6  |
| 3. Polity & Governance .....  | 9  |
| 4. Economy .....              | 13 |
| 5. Environment.....           | 18 |
| 6. Science & Technology ..... | 25 |

# 1. Geography

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

1. Tajikistan is bordered by which of the following countries?

1. Uzbekistan
2. China
3. Kyrgyzstan
4. Kazakhstan
5. Afghanistan
6. Pakistan

Select the correct answer using the code below -

- A. 1, 2, 3 and 5 only
- B. 1, 2, 3, 4 and 6 only
- C. 3, 4, 5 and 6 only

**Answer: A**

## Explanation

- Context - Recently, External Affairs Minister reached Tajikistan's capital to attend the 9th Heart of Asia - Istanbul Process ministerial conference on Afghanistan.
- The Heart of Asia - Istanbul Process (HoA-IP) is an initiative of Afghanistan and Turkey, which was officially launched at a conference hosted by Turkey in Istanbul in 2011.
- Since then, Afghanistan supported by 14 Participating Countries of the Heart of Asia Region, 16 Supporting Countries beyond the region and 12 Regional and International Organizations are leading and coordinating this Process.
- It is a platform for promoting regional security, economic and political cooperation centred on Afghanistan through dialogue and a set of Confidence Building Measures (CBMs).
- The Directorate General for Regional Cooperation of the Ministry of Foreign Affairs of Afghanistan is the De facto Secretariat.
- The geographical area covering the 15 Participating Countries of the HoA-IP is defined as the Heart of Asia Region.
- It is one of the biggest regions in the world with a collective geographical area covering around 27% of the land area of the Earth.
- As the lead country for Trade, Commerce and Investment Confidence Building Measure under HoA-IP, India has made concerted efforts for strengthening regional connectivity for the greater economic integration of Afghanistan with the region.

- A dedicated Air Freight Corridor between cities of India and Afghanistan and operationalisation of Chabahar Port in Iran are steps in that direction.
- External affairs minister also visited the Dushanbe-Chortut Highway Project and lauded the work being done by Border Roads Organisation under Indian grant assistance.



**2. Which of the following statements are correct regarding The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)?**

1. It is a regional organization comprising eleven Member States lying in the areas of the Bay of Bengal.
2. This organization came into being through the Bangkok Declaration.

Select the correct answer using the code below -

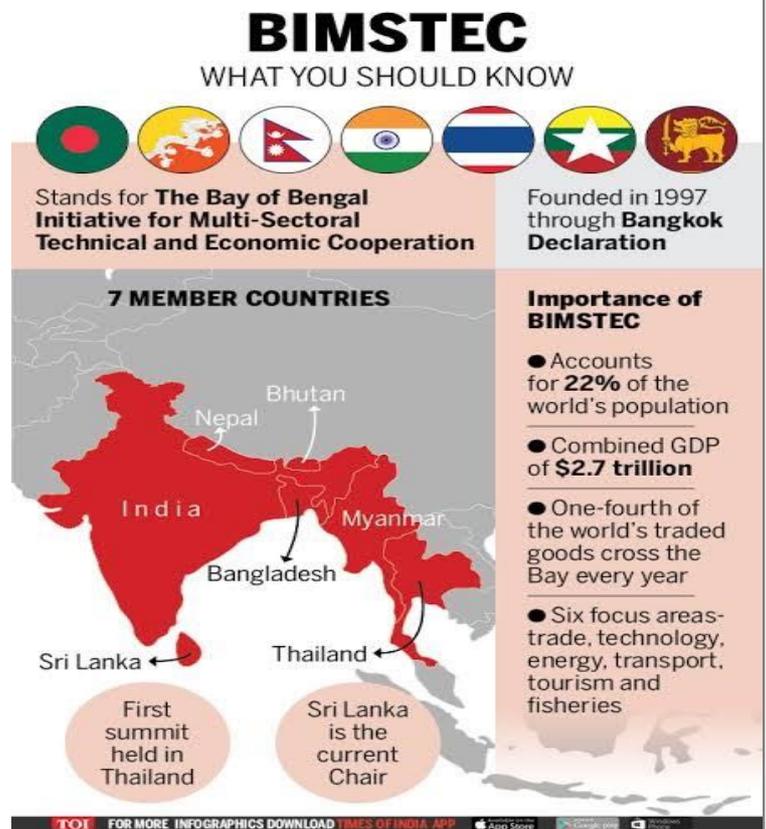
- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**Answer: B**

**Explanation**

- Context -17th BIMSTEC (Bay of Bengal Initiative for Multi- Sectoral Technical and Economic Cooperation) Ministerial meet, chaired by Sri Lanka, was held recently.
- The meeting drew participation from all the seven-member States, including Myanmar which is witnessing a large- scale crackdown against anti-military protesters.

- In an effort to integrate the region, the grouping was formed in 1997, originally with Bangladesh, India, Sri Lanka and Thailand, and later included Myanmar, Nepal and Bhutan.
- BIMSTEC, which now includes five countries from South Asia and two from ASEAN, is a bridge between South Asia and Southeast Asia. It includes all the major countries of South Asia, except Maldives, Afghanistan and Pakistan.
- Over one-fifth (22%) of the world's population live in the seven countries around it, and they have a combined GDP close to \$2.7 trillion.
- The Bay also has vast untapped natural resources. One-fourth of the world's traded goods cross the Bay every year.
- BIMSTEC connects not only South and Southeast Asia, but also the ecologies of the Great Himalayas and the Bay of Bengal.
- For India, it is a natural platform to fulfil our key foreign policy priorities of 'Neighborhood First' and 'Act East'.
- For New Delhi, one key reason for engagement is in the vast potential that is unlocked with stronger connectivity.
- Almost 300 million people, or roughly one-quarter of India's population, live in the four coastal states adjacent to the Bay of Bengal (Andhra Pradesh, Orissa, Tamil Nadu, and West Bengal).
- From the strategic perspective, the Bay of Bengal, a funnel to the Malacca straits, has emerged a key theatre for an increasingly assertive China in maintaining its access route to the Indian Ocean.
- As China mounts assertive activities in the Bay of Bengal region, with increased submarine movement and ship visits in the Indian Ocean, it is in India's interest to consolidate its internal engagement among the BIMSTEC countries.



**3. Which of the following statements correctly describes planetesimals ?**

- Smaller bodies which exists at an early stage of the planet formation.
- It is the study of planet's internal structure.
- It is a localised lumps of gas within a nebula.
- It refers to type of galaxies which contains a large number of planets.

**Answer: A**

**Explanation**

- Planetesimal, one of a class of bodies that are theorized to have coalesced to form Earth and the other planets after condensing from concentrations of diffuse matter early in the history of the solar system.
- According to the nebular hypothesis, part of an interstellar cloud of dust and gas underwent gravitational collapse to form a primeval solar nebula.
- Clumps of interstellar matter left behind in the midplane of the solar disk as it contracted toward its centre gradually coalesced, through a process of accretion, to form grains, pebbles, boulders, and then planetesimals measuring a few kilometres to several hundred kilometres across.
- These larger building blocks then combined under the force of gravity to form protoplanets, which were the precursors of most of the current planets of the solar system.

4. Consider the following statements with reference of variability of rainfall in India consider the following statements -

1. Although Western Ghats receive high rainfall there is no rainfall variability.
2. Although Rajasthan receives low rainfall, there is a high rainfall variability.

Choose the correct statement -

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

**Answer: B**

**Explanation**

- The monsoon of South Asia is among several geographically distributed global monsoons.
- There is great regional and temporal variation in the distribution of rainfall.
- Over 80% of the annual rainfall is received in the four rainy months of June to September.



- A characteristic feature of rainfall in India is its variability. The variability of rainfall is computed with the help of the following formula:
- $C.V. = (\text{Standard Deviation} / \text{Mean}) \times 100$ , where C.V. is the coefficient of variation.
- The values of coefficient of variation show the change from the mean values of rainfall.

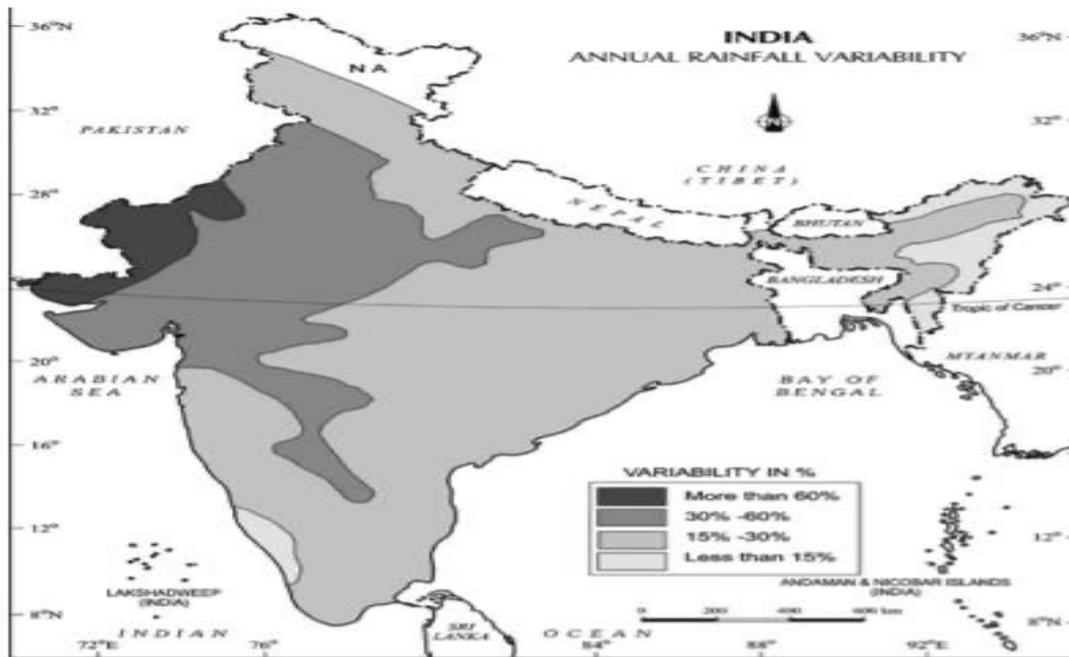


Figure 4.12 : India : Variability of Annual Rainfall

- The actual rainfall in some places deviates from 20-50 percent.
- The values of coefficient of variation show variability of rainfall in India.
- A variability of less than 25 percent exists on the western coasts,
- Western Ghats, northeastern Peninsula, Eastern Plains of the Ganga, northeastern India, Uttaranchal and Himachal Pradesh and south- western part of Jammu and Kashmir.
- These areas have an annual rainfall of over 100 cm.
- Availability of over 50 percent exists in the western part of Rajasthan, the northern part of Jammu and Kashmir and interior parts of the Deccan plateau.
- These areas have an annual rainfall of less than 50 cm. Rest of India have a variability of 25-50 percent and these areas receive an annual rainfall between 50 -100 cm.

**5. In relation to geomorphology of the Earth, diastrophism may lead to**

1. Formation of fold mountains.
2. Warping of a large part of earth's crust.
3. Minor Earthquakes.

**Choose the correct statements**

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

**Answer: A**

**Explanation**

- Diastrophism, also called tectonism, large-scale deformation of Earth's crust by natural processes, which leads to the formation of continents and ocean basins, mountain systems, plateaus, rift valleys, and other features by mechanisms such as lithospheric plate movement (that is, plate tectonics), volcanic loading, or folding.
- The study of diastrophism encompasses the varying responses of the crust to tectonic stresses.
- These responses include linear or torsional horizontal movements (such as continental drift) and vertical subsidence and uplift of the lithosphere (strain) in response to natural stresses on Earth's surface such as the weight of mountains, lakes, and glaciers.

## 2. History

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1. Regarding 'Atal Pension Yojana', which of the following statements is/are correct? (2016)

1. It is a minimum guaranteed pension scheme mainly targeted at unorganized sector workers.
2. Only one member of a family can join the scheme.
3. Same amount of pension is guaranteed for the spouse for life after subscriber's death.

Select the correct answer using the code below -

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

**Answer: C**

2. Consider the following statements -

1. Aadhaar card can be used as a proof of citizenship or domicile.
2. Once issued, Aadhaar number cannot be deactivated or omitted by the Issuing authority.

Choose the correct options

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

**Answer: D**

3. Consider the following statements -

1. Capital Adequacy Ratio is the amount that banks have to maintain in the form of their own funds to offset any loss that banks incur if the account-holders fail to repay dues.
2. CAR is decided by each individual bank.

Choose the correct statement

- A. 1 only
- B. 2 only
- C. Both 1 and 2

D. Neither 1 nor 2

**Answer: A**

4. The staple commodities of export by the English East Indian Company from Bengal in the middle of the 18th century were-

- A. Raw cotton, oil-seeds and opium
- B. . Sugar, salt, zinc and lead
- C. Copper, silver, gold, spices and tea
- D. Cotton, silk, saltpetre and opium

**Answer: D**

5. With reference to agricultural soils, consider the following statements:

1. A high content of organic matter in soil drastically reduces its water holding capacity.
2. Soil does not play any role in the sulphur cycle.
3. Irrigation over a period of time can contribute to the salinization of some agricultural lands.

Choose the correct statement -

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

**Answer: B**

## 3. Polity & Governance

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1. Which of the following statements are correct about tribal areas in India?

1. Schedule VI provides for creation of autonomous states for administration of tribal areas in states of Assam, Mizoram, Tripura and Meghalaya.
2. Schedule areas under inheritance, collect land VI allows for autonomy with regard to laws in respect of their jurisdiction, which cover the land, forest, cultivation, indigenous customs and traditions of tribals, etc. and also to revenues and certain other taxes.

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

**Answer: B**

### Explanation

- The Sixth Schedule was originally intended for the predominantly tribal areas (tribal population over 90%) of undivided Assam, which was categorised as “excluded areas” under the Government of India Act, 1935 and was under the direct control of the Governor.
- The Sixth Schedule of the Constitution provides for the administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram to safeguard the rights of the tribal population in these states.
  - ✓ This special provision is provided under Article 244(2) and Article 275(1) of the Constitution. The
  - ✓ Sixth Schedule provides for autonomy in the administration of these areas through Autonomous District Councils (ADCs).
  - ✓ Article 244 (A) empowers Parliament to enact a law for constituting an autonomous State within the State of Assam and also to provide the autonomous State with Legislature or a Council of Ministers or both with such powers and functions as may be defined by that law.
- These councils are empowered to make laws in respect of areas under their jurisdiction, which cover the land, forest, cultivation, inheritance, indigenous customs and traditions of tribals, etc. and also to collect land revenues and certain other taxes. ADCs have specific powers and responsibilities in respect of all the three arms of governance: Legislature, executive and judiciary.

2. Which of the following is correct about PMSVANidhi Scheme?

1. It is a microcredit facility plan to provide affordable loans to street vendors.
2. The Scheme is under the aegis of Ministry of Finance and implemented by the Small Industries Development Bank of India- SIDBI

3. The scheme is applicable to hawkers, vendors, rehriwalas, liphadwalas etc in urban areas, including those belonging to the surrounding peri-urban and rural areas.

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

**Answer: C**

**Explanation**

- Ministry of Housing & Urban Affairs launched a scheme PM Street Vendor's Atma Nirbhar Nidhi (PM SVANidhi) to empower Street Vendors by not only extending loans to them, but also for their holistic development and economic upliftment.
- Small Industries Development Bank of India (SIDBI) will be the implementation partner of the Ministry of Housing and Urban Affairs for scheme administration. SIDBI will leverage the network of lending Institutions including the SCBs, RRBs, SFBs, Cooperative Banks, NBFCs & MFIs for scheme implementation.
- The scheme intends to facilitate collateral free working capital loans of up to INR10,000/- of one-year tenure, to approximately 50 lakh street vendors, to help resume their businesses in the urban areas, including surrounding peri-urban/rural areas.

3. Which of the following statements are correct about the Military Farm Services?

1. Military Farms were established in 1889 at Allahabad by the British with the
  2. aim to ensure nutritious milk supply to the troops deployed in India.
  3. In collaboration with the Ministry of Agriculture, the Military Farms undertook 'Project Frieswal' one of the largest cross-cattle breeding programmes in the country
  4. In 2021 the Indian Army closed the Military Farms Service which administered the 130 military farms all across the country due to proliferation of dairy business in the country
- A. 1 only
  - B. 1 and 2 only
  - C. 1 and 3 only
  - D. All of the Above

**Answer: D**

**Explanation**

- The first Military Farm was established in 1889 at Allahabad by the British. The basic aim with which these farms were subsequently set up across the length and breadth of the country was to ensure nutritious milk supply to the troops deployed in India.

- Gradually, the role of Military Farms had expanded from only milk production to artificial insemination of cows too and the first pioneering steps in this regard were taken as early as in 1925. In collaboration with the Ministry of Agriculture, the Military Farms undertook 'Project Frieswal' one of the largest cross-cattle breeding programmes in the country.
- The project was launched by Military Farms in collaboration with the ICAR and the aim was to develop milch cattle by cross-breeding which would suit the tropical climate of countries like India. According to the Indian Army, its aim was "to produce and rear Holstein Friesian cross breed with Sahiwal breed for high milk productivity".
- It was in June 2013 that the Quarter Master General's branch of the Army Headquarters, under which Military Farms fell, issued a direction that the farms will be closed in a phased manner. The proliferation of dairy business in the country had ensured that fresh milk could be procured in every corner of the country and there was no longer any forced dependence on Military Farms. In 2016, a committee under Lt Gen DB Shekatkar (retd) submitted a report on reorganisation of several branches of the Army in which it was recommended that the Military Farms be closed down.
- In April 2021, the Indian Army formally closed the Military Farms Service which administered the 130 military farms all across the country.

**4. Consider the following statements about the Code of Ethics for digital media:**

- 1. OTT platforms, also called the publishers of online curated content will be follow Cable Television Networks Regulation Act that will classify its content**
- 2. The publishers of news on digital media would be required to observe Norms of Journalistic Conduct of the Press Council of India and the Programme Code under the Cable Television Networks Regulation Act 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

**Answer: B**

**Explanation**

- This Code of Ethics prescribes the guidelines to be followed by OTT platforms and online news and digital media entities that will be administered by the Ministry of Information and Broadcasting.
- To start with, OTT platforms, also called the publishers of online curated content in the rules, would have to self-classify the content into five age-based categories- U (Universal), U/A 7+, U/A 13+, U/A 16+, and A (Adult). Platforms would be required to implement parental locks for content classified as U/A 13+ or higher, and reliable age verification mechanisms for content classified as "A".
- On the other hand, publishers of news on digital media would be required to observe Norms of Journalistic Conduct of the Press Council of India and the Programme Code under the Cable Television Networks Regulation Act thereby providing a level playing field between the offline (Print, TV) and digital media.

**5. Which of the following statements are correct about RTI?**

- 1. Right to Information is a statutory and not fundamental right in India**
  - 2. Under the provisions of RTI Act, any citizen of India may request information from a "public authority" which is required to reply expeditiously or within thirty days**
  - 3. In case of matter involving a petitioner's life and liberty, the information has to be provided within 48 hours**
- A. 1 only  
B. 2 only  
C. 2 and 3 only  
D. All of the above

**Answer: C**

**Explanation**

- Right to Information (RTI) is an act of the Parliament of India which sets out the rules and procedures regarding citizens' right to information. The RTI Bill was passed by Parliament of India on 15 June 2005 and came into force with effect from 12 October 2005. The right to information has been recognised as a fundamental right under Part III of the Constitution by the Supreme Court (Subhash Chandra Agarwal case 2010) under Article 19 (1) of freedom of speech and expression.
- Under the provisions of RTI Act, any citizen of India may request information from a "public authority" (a body of Government or "instrumentality of State") which is required to reply expeditiously or within thirty days. In case of matter involving a petitioner's life and liberty, the information has to be provided within 48 hours.
- The Act also requires every public authority to computerize their records for wide dissemination and to proactively publish certain categories of information so that the citizens need minimum recourse to request for information formally. A PIO can refuse information on 11 subjects that are listed in section 8 of the RTI Act. These include information received in confidence from foreign governments, information prejudicial to security, strategic, scientific or economic interests of the country, breach of privilege of legislatures, etc.

## 4. Economy

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1. Which of the following statements are correct about Emergency Credit Line Guarantee Scheme (ECLGS)?
    1. The scheme was launched as part of the Aatmanirbhar Bharat Abhiyan package announced in May 2020 to mitigate the distress caused by coronavirus- induced lockdown, by providing credit to different sectors, especially Micro, Small and Medium Enterprises (MSMEs).
    2. 2 Loans and 100% guarantee coverage is being provided by the National Credit Guarantee Trustee Company
    3. The credit will be provided in the form of a Guaranteed Emergency Credit Line (GECL) facility
- A. 1 and 3 only  
B. 2 only  
C. 2 and 3 only  
D. 3 only

**Answer: A**

### Explanation

- The government has extended the ₹3-lakh-crore emergency credit line guarantee scheme by another three months till June 30 and also widened its scope to new sectors, including hospitality, travel and tourism.
- ECLGS 3.0 would involve extending credit of up to 40% of total credit outstanding across all lending institutions as on February 29, 2020.
- The tenor of loans granted under ECLGS 3.0 would be 6 years, including a moratorium period of 2 years.
- The scheme was launched as part of the Aatmanirbhar Bharat Abhiyan package announced in May 2020 to mitigate the distress caused by coronavirus-induced lockdown, by providing credit to different sectors, especially Micro, Small and Medium Enterprises (MSMEs).
- 100% guarantee coverage is being provided by the National Credit Guarantee Trustee Company, whereas Banks and Non Banking Financial Companies (NBFCs) provide loans.
- The credit will be provided in the form of a Guaranteed Emergency Credit Line (GECL) facility.
- No Guarantee Fee shall be charged by NCGTC from the Member Lending Institutions (MLIs) under the Scheme. Interest rates under the Scheme shall be capped at 9.25% for banks and FIs, and at 14% for NBFCs.

### Eligibility

- Borrowers with credit outstanding up to Rs. 50 crore as on 29th February, 2020, and with an annual turnover of up to Rs. 250 crore are eligible under the Scheme.

- On 1st August 2020, the government widened the scope of the Rs. 3 lakh crore-ECLGS scheme by doubling the upper ceiling of loans outstanding and including certain loans given to professionals like doctors, lawyers and chartered accountants for business purposes under its ambit.
- The scheme is expected to provide credit to the sector at a low cost, thereby enabling MSMEs to meet their operational liabilities and restart their businesses.
- By supporting MSMEs to continue functioning during the current unprecedented situation, the Scheme is also expected to have a positive impact on the economy and support its revival.

**2. Which of the following statements about Harmonized System of Nomenclature Code are incorrect?**

- 1. HS is a six-digit identification code. Of the six digits, the first two denote the HS Chapter, the next two give the HS heading, and the last two give the HS subheading.**
- 2. It is developed under flagship initiative of Ministry of Commerce and Industry to promote Ease of doing Business.**

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

**Answer: B**

**Explanation**

- It has been made mandatory for a GST taxpayer having a turnover of more than Rs 5 crore in the preceding financial year, to furnish 6 digits HSN Code (Harmonized System of Nomenclature Code).
- This comes into effect from April 1.
- HS is a six-digit identification code. Of the six digits, the first two denote the HS Chapter, the next two give the HS heading, and the last two give the HS subheading.
- Developed by the World Customs Organization (WCO).
- Called the “universal economic language” for goods.
- It is a multipurpose international product nomenclature.
- The system currently comprises of around 5,000 commodity groups.
- Over 200 countries use the system as a basis for their customs tariffs, gathering international trade statistics, making trade policies, and for monitoring goods.
- The system helps in harmonising of customs and trade procedures, thus reducing costs in international trade.

3. E9 initiative, recently heard in news, is related to which of the following?

- A. Customs
- B. Intellectual Property Rights
- C. WTO Reforms
- D. Education

**Answer: D**

**Explanation**

- Consultation meeting of Education Ministers of E9 countries on E9 initiative is scheduled to be held.
- The consultation is the first of a three-phased process to co-create an initiative on digital learning and skills, targeting marginalised children and youth, especially girls.
- E9 initiative aims to accelerate recovery and advance the Sustainable Development Goal 4 agenda by driving rapid change in education systems in three of the 2020 Global Education Meeting priorities:
  - ✓ Support to teachers
  - ✓ Investment in skills
  - ✓ Narrowing of the digital divide.
- Spearheaded by the UN, the E9 countries include Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria and Pakistan.
- The project is building on the established partnership of E9 countries allows these nine countries the opportunity to benefit from this global initiative and accelerate progress on digital learning and skills towards the achievement of Sustainable Development Goal 4 – Quality Education.

4. Which of the following statements are correct about Receivables Exchange of India?

1. It is a joint venture between Small Industries Development Bank of India (SIDBI) and National Stock Exchange of India Limited.
  2. It operates TReDS.
  3. It was the first entity to receive approval from RBI to launch the first TreDS Exchange of India.
- A. 2 and 3 only
  - B. 1 and 3 only
  - C. 1, 2 and 3
  - D. 1 and 2 only

**Answer: C**

**Explanation**

- RXIL is Receivables Exchange of India.

- Recently RXIL has become the first TReDS platform to cross monthly throughput of Rs 1000 crores.
- The transaction volume in the platform grew from Rs 69 crores in April 2020 to Rs 1,105 crores in March 2021.
- This shows economic recovery in the country. Also, it shows that the MSME sector that was badly hit during COVID-19 is getting revived.
- RXIL was incorporated in 2016.
  - ✓ It is a joint venture between Small Industries Development Bank of India (SIDBI) and National Stock Exchange of India Limited.
  - ✓ It operates TReDS.
  - ✓ It was the first entity to receive approval from RBI to launch the first TreDS Exchange of India.
- RXIL is an integrated provider of financial platform that supports growth and development of MSMEs.
- TReDS is an electronic platform that facilitates financing of MSMEs through multiple financiers.
- The main three participants in the TreDS are MSMEs (sellers), financiers and Corporate entities (buyers).
- According to RBI, only MSMEs can participate as sellers in TReDS.
  - ✓ TReDS can help the MSMEs unlock their working capital.
  - ✓ It ensures higher efficiency and capital management.
  - ✓ The RBI granted permission for the operation of TReDS in the country based on the guidelines under Payment and Settlement System Act, 2007.

**5. Women and Men in India report has been recently released by**

- A. The National Statistical Office
- B. Labour Bureau
- C. The National Statistical Commission
- D. Ministry of Health and Family Welfare

**Answer: A**

**Explanation**

- The National Statistical Office operating under Ministry of Statistics and Programme Implementation (MoSPI) recently released the Women and Men in India report.
- The report consolidates the crucial socio-economic indicators that portray gender situation in the country.
- This is the twenty second issue in its series. The report is published annually by the MoSPI. The projected population of India in 2021 is 136.13 crores.
- Sex ratio has increased from 933 in 2001 to 943 in 2011.

- Delhi recorded the highest increase in sex ratio followed by Chandigarh, Arunachal Pradesh. On the other hand, Daman and Diu had the highest decline in sex ratio.
- The Age Specific Fertility Rate for the females belonging to the age group 25-29 years was the highest at 146.4.
- The Infant Mortality Rate decreased from 39 in 2014 to 32 in 2018.
- The Maternal Mortality Rate decreased from 212 in 2007-09 to 113 in 2016-18.
- The Total Fertility Rate of rural India was 2.3 in 2018. It was 1.7 in urban areas in 2018. The Adolescent Fertility Rate declined from 13 in 2017 to 12.2 in 2018.

### Other important things to remember

- According to National Family Health Survey-5 (NFHS-5), almost 100% institutional delivery was observed in the states of Goa, Kerala, Lakshadweep.
- The HIV incidence per 1000 people decreased from 0.07 in 2017 to 0.05 in 2019.
- The literacy rate of India increased from 73 in 2011 to 77.7 in 2017.
- The Gender gap in literacy rates was the highest in Rajasthan, Bihar, UP.
- Only 8.3% of females of age 15 years had completed graduation. On the other hand, 12.8% of males of the same age had completed graduation.
- 8% of female students were pursuing education up to tenth standard.
- According to the Periodic Labour Force Survey, 2018-19, the worker population ratio in rural sector was 52.1 for males and 19 for females.
- In urban areas, it was 52.7 for males and 14.5 for females.
- The average wage per hour earned by female population in the age group of 15 years was highest in Andaman and Nicobar Islands (Rs 147 per hour).
- It was followed by Lakshadweep, Nagaland. The lowest was in the states/UTs of Daman and Diu, Odisha.
- The average wage per hour earned by male population in the age group of 15 years was the highest in Lakshadweep (Rs 121 per hour).
- The representation of women in the Central Council of Ministers is 9.26% in 2020.
- In 2019 Lok Sabha election, there were 437.8 million women electors. This is higher as compared to that of the 2014 election (397 million).
- Highest women participation in the Panchayati Raj institutions was observed in the states of Rajasthan, Uttarakhand and Chhattisgarh.

## 5. Environment

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1. Based on the following statements, identify the reserve

1. It is located in the Vindhya Hills of the Umaria district in Madhya Pradesh.
  2. It is known for the Royal Bengal Tigers.
  3. It was declared as a national park in 1968.
  4. Its name has been derived from the most prominent hillock of the area of Umaria.
  5. It consists of mixed vegetation ranging from tall grasslands to thick Sal forest.
  6. It resides on the extreme north eastern border of Madhya Pradesh and the northern edges of the Satpura mountain ranges.
- A. Pachmarhi Biosphere Reserve  
B. Bandhavgarh National Park  
C. Kanha National Park  
D. Madhav National Park

**Answer: B**

### Explanation

- The wildfire was reported a few days back in parts of the
- Bandhavgarh Tiger Reserve (BTR) located in Umaria district.
- Burning of leaves to collect Mahua flowers, lighting a fire to keep wild elephants away or a burning cigarette butt left by someone may have caused the recent blaze in Madhya Pradesh's Bandhavgarh Tiger Reserve.
- Bandhavgarh National Park is spread at Vindhya hills in Madhya Pradesh.
- It is known for the Royal Bengal Tigers.
- The density of the Tiger population at Bandhavgarh is the highest known in India.
- Bandhavgarh National Park consists of mixed vegetation ranging from tall grasslands to thick Sal forest and so is the perfect habitat of variety of animals and birds.
- Bandhavgarh was declared a national park in 1968 and then became Tiger Reserve in 1993.
- The word Bandhavgarh is a combination of two words: Bandhav+ Garh where Bandhav means brother and Garh means Fort.
- The name Bandhavgarh given to the reserve is due to the presence of an ancient fort in the hillock of the Vindhya ranges of Umaria.
- It has been believed that Lord Rama gifted this amazing fort to his younger brother Lakshmana.

- In the 2019 census Madhya Pradesh state recorded the most number of estimated tigers at 526, thus earning the title “Tiger State”.
2. Which of the following hold true about the criterion to declare a protected area as a Biosphere Reserve?
1. A site must contain a protected and minimally disturbed buffer area of value of nature conservation.
  2. Core area must be a bio-geographical unit and should be large enough to sustain a viable populations representing all trophic levels.
  3. The involvement of local communities and use of their knowledge in biodiversity preservation.
  4. Areas potential for preservation of traditional tribal or rural modes of living for harmonious use of the environment.
- A. 1,2 and 3 only  
B. 1 and 4 only  
C. 2, 3 and 4 only  
D. 1, 2, 3 and 4

**Answer: C**

**Explanation**

- The Odisha government has proposed a second biosphere reserve in the southern part of the state at Mahendragiri, a hill ecosystem having rich biodiversity.
- The 5,569-square kilometre Similipal Biosphere Reserve is Odisha’s first such reserve and was notified May 20, 1996.
- Mahendragiri Biosphere Reserve is around 470,955 hectares and is spread over Gajapati and Ganjam districts in the Eastern Ghats.
- The hill ecosystem acts as a transitional zone between the flora and fauna of southern India and the Himalayas, making the region an ecological estuary of genetic diversities.
- Mahendragiri is inhabited by the Soura people, a particularly vulnerable tribal group as well as the Kandha tribe.
- Biosphere Reserve (BR) is an international designation by United Nations Educational, Scientific and Cultural Organization (UNESCO) for representative parts of natural and cultural landscapes extending over large areas of terrestrial or coastal/marine ecosystems or a combination of both.
- Biosphere Reserves tries to balance economic and social development and maintenance of associated cultural values along with the preservation of nature.
- The concept of Biosphere Reserves was launched in 1971 as a, part of United Nations Educational, Scientific and Cultural Organization (UNESCO)’s ‘Man and Biosphere Programme’.

## Aim of Biosphere Reserve

- conservation of genetic resources, species, and ecosystems; scientific research and monitoring; and
- Promoting sustainable development in communities of the surrounding region.

## Zonation:

- Core Areas:

✓ Includes protected areas-these act as reference points on the natural state of the ecosystems represented by the biosphere reserves

✓ non-destructive research and other low-impact activities(such as ecotourism) are generally undertaken

- Buffer Zone:

✓ Surrounds or is contiguous to the core area.

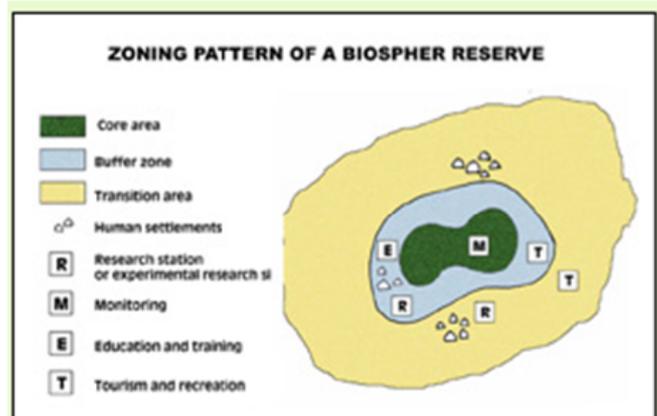
✓ Activities are organized so they do not hinder the conservation objectives of the core area, but rather help to protect it.

✓ It is used for cooperative activities compatible with sound ecological practices Human activities are less intensive than that in the transition zone

- Transition Zone or Area of Cooperation:

✓ May contain a variety of agricultural activities, settlements and other uses and in which local communities, management agencies, scientists, NGOs, and other stakeholders work together to manage and sustainably develop the area's resources.

✓ The term 'area of cooperation' underscores the role of cooperation as the main tool to achieve the objectives of the biosphere reserve.



### 3. National Wildlife Genetic Resource Bank is located in

1. Goa
2. Chennai
3. Dehradun
4. Hyderabad

**Answer: D**

**Explanation**

- National Wildlife Genetic Resource Bank was inaugurated at Centre for Cellular and Molecular Biology's (CCMB) Laboratory of Conservation of Endangered Species (LaCONES) facility in Hyderabad, Telanagana.
- It is India's first genetic resource bank where genetic material will be stored for posterity which will further the cause of conservation of endangered and protected animals.
- It is equipped with sophisticated equipment to preserve the genetic resources that could be utilised to virtually resurrect an animal species in case it goes extinct.
- It will cryopreserve living cell lines, gametes and embryos of endangered wild animal species in India.
- For cryogenic preservation, researchers at CCMB-LaCONES will use liquid Nitrogen that is cooled down to as low as minus 195 degrees Celsius.
- It will aid wild life conservation efforts by taking up artificial reproduction, conducting studies in evolution biology and wildlife medicine.
- Thus, it will also help in protecting India's biodiversity and environment.
- So far this bank has collected and preserved genetic resources of 23 species of Indian wild animals.

#### 4. Which of the following statements about REDD+ are correct

1. It is a mechanism developed by Parties to the United Nations Framework Convention on Climate Change (UNFCCC).
  2. It creates an ecological value for the carbon stored in forests by offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development.
  3. Developing countries receive results-based payments for results-based actions.
- A. 1 and 2 only  
B. 2 and 3 only  
C. 1 and 3 only  
D. 1, 2 and 3

**Answer: C**

#### **Explanation**

- A new study by Delhi-based non-profit Centre for Science and Environment (CSE) has revealed that Reducing Emissions from Deforestation and Forest Degradation (REDD+), the programme initiated by the United Nations in 2005 to mitigate climate change through enhanced forest management in developing countries, has largely failed to achieve its objectives. (news from 2018)
- Large-scale finance for REDD+ has been a major issue as carbon markets have not materialised and international funding commitments for REDD+ have been much lower than expected.
- REDD+ implementation costs have been high and benefits for local communities from REDD+ projects have been minimal.

- There is need to rethink the REDD+ mechanism based on these experiences and the findings emerging from new research on the potential of forests to mitigate climate change.
- India's REDD+ strategy Complying with the UNFCCC decisions on REDD+, India has prepared its National REDD+ Strategy.
- The Strategy builds upon existing national circumstances which have been updated in line with India's National Action Plan on Climate Change, Green India Mission and India's Nationally Determined Contribution (NDC) to UNFCCC.
- The strategy report has been prepared by Indian Council of Forestry Research & Education (ICFRE), Dehradun.

### REDD+

- In simple terms, REDD+ means "Reducing Emissions from Deforestation and forest Degradation", conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks in developing countries.
- REDD+ is a mechanism developed by Parties to the United Nations Framework Convention on Climate Change (UNFCCC).
- It creates a financial value for the carbon stored in forests by offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development.
- Developing countries would receive results-based payments for results-based actions.
- REDD+ goes beyond simply deforestation and forest degradation and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.
- Since its formalisation in 2006, REDD+ had emerged as the most prominent global mechanism to integrate the role of forests in climate change.
- It was touted as a win-win situation for biodiversity conservation, carbon sequestration and local livelihoods.
- More than 300 REDD+ initiatives have taken off since 2006.
- The mechanism has been enshrined in the Paris Agreement of 2015, and its implementation is transitioning from smaller, isolated projects to larger, jurisdictional programmes with support from bilateral and multilateral agencies.

### 5. Consider the following

1. Left Tributaries – Burhner , Banjar, Sher, Shakkar, Dudhi, Tawa, Ganjal, Kundi, Goi, Karjan
2. Right Tributaries – Hiran , Tendoni, Barna, Kolar, Man, Uri , Hatni, Orsang
3. It is bounded by - the Vindhya on the north, the Maikala range on the east, the Satpuras on the south, the Arabian Sea on the west.

### Identify the river

- A. Chambal

- B. Narmada
- C. Betwa
- D. Godavari

**Answer: B**

**Explanation**

- Narmada is the largest west flowing river of the peninsular India.
- Narmada basin lies in the states of Madhya Pradesh, Gujarat, Maharashtra and Chhattisgarh.
- The total area of this river basin is 98,796 Sq.km. It is bound by -
  - ✓ the Vindhyas on the north,
  - ✓ the Maikala range on the east,
  - ✓ the Satpuras on the south
  - ✓ the Arabian Sea on the west.
- It rises from Maikala range near Amarkantak in Anuppur district of Madhya Pradesh. Narmada drains into the Arabian Sea through the Gulf of Khambhat.
- The major part of basin is covered with agriculture accounting to 56.90%.



**Left Tributaries**

- The Burhner
- The Banjar
- The Sher
- The Shakkar
- The Dudhi

- The Tawa
- The Ganjal
- The Kundi
- The Goi
- The Karjan

### **Right Tributaries**

- The Hiran
- The Tendoni
- The Barna
- The Kolar
- The Man
- The Uri
- The Hatni
- The Orsang

The major Hydro Power Project in the basin are Indira Sagar, Sardar Sarovar, Omkareshwar, Bargi & Maheshwar.

- Dams in Narmada river -
  - ✓ Sardar Sarovar Dam- Gujarat
  - ✓ Indira Sagar Dam – Madhya Pradesh
  - ✓ Omkareshwar Dam – Madhya Pradesh
  - ✓ Maheshwar Dam – Madhya Pradesh
  - ✓ Bargi Dam – Madhya Pradesh
  - ✓ Maan Dam – Madhya Pradesh
  - ✓ Jobat Dam – Madhya Pradesh
  - ✓ Tawa Dam – Madhya Pradesh

## 6. Science & Technology

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

1. Which of the following is/are correct about Xenobots?

1. These are living robots created from the stem cells of humans
2. They are created using CRISPR Cas9

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

**Answer: D**

### Explanation

- Statement 1 is incorrect: Xenobots are living robots created from stem cells of frogs and are capable of healing themselves and recording memories
- Statement 2 is incorrect: They are created by microengineering amphibian eggs with RNA

### Additional Information

- They are used to detect diseases and deliver drugs to specific areas of the body
- Capable of joining up together to act collectively
- They can move small objects by harnessing their cellular energy for a maximum of 10 days

2. Which of the following is/are correct about the Ingenuity Helicopter

1. It is developed by Japan Aerospace Exploration Agency to study Mars
2. Surviving temperatures as low as  $-130$  deg F is a major challenge for it
3. It is powered by solar energy

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

**Answer: D**

### Explanation

- Statement 1 is incorrect: It is developed by NASA and has been dropped on the surface of Mars by the Perseverance rover. It is a technology demonstration of powered flight in another planet

- Statement 2 is correct : In fact the helicopter has survived the temperatures.
- Statement 3 is correct : Solar energy will power the helicopter and also keep it warm during night.

**3. Which of the following are true regarding Chaff Technology**

1. It is used worldwide to guard border terrains that are difficult to be guarded by the armed forces
2. Idea of using Chaff technology developed during the second World War

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

**Answer: B**

**Explanation**

- Statement 1 is incorrect: It is used in naval ships to self-defend against enemy radar and radio frequency missile seekers.
- Statement 2 is correct: Originally called Window, the idea to develop Chaff originated during the Second World War.

**Additional Information**

- DRDO has developed three variants of the Advanced Chaff Technology which uses very less chaff material to deflect enemy missiles.
- Technology is now ready to mass production.

**4. 'Shantir Ogroshena' is related to which of the following**

- A. Military exercise
- B. New plant species
- C. Paramilitary force of Bangladesh
- D. Island in Bay of Bengal

**Answer: A**

**Explanation**

- It is a multinational military exercise to commemorate the birth centenary of Bangabandhu Sheikh Mujibur Rahman
- Countries like Sri Lanka, Bhutan including India are participating along with observers such as UK, USA, Saudi Arabia etc.

5. An Anti-microbial Protein has been extracted from \_\_\_\_\_ which can be used as an alternative to antibiotics

- A. Pangolin
- B. Echidna
- C. Armadillo
- D. Sloth

**Answer: B**

**Explanation**

- Anti-microbial protein (AMP) is identified in the milk secreted by the anteater or Echidna.
- This protein creates punctures in the cell membranes of multiple bacterial species, thus warding off threat to the young ones.
- Ways to produce AMP in large quantities using E coli has also been found.



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