



VISIONIAS

www.visionias.in

TEST-17

Geography - II

Economic and Human Geography - World

- Economic Geography of the world: primary, secondary, tertiary, quaternary and quinary activities
- Human Geography of world
- World Population, Distribution & Density, Races & Tribes, Settlement & Migration

Economic and Human Geography - India

- Agriculture
 - Land Resources
 - Water Resources
 - Mineral and Energy Resources
 - Industries
 - Transport and Communication
 - Foreign Trade
 - Population, Migration, Settlements
- + Current Affairs (October 2021)

World Economic and Human Geography

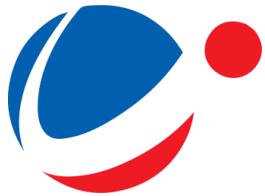
- Natural resources and mineral resources and distribution of key natural resources across the world
- Agriculture and agro-climatic regions
- Industry and location factors
- Infrastructure
- World Population, density & distribution, races & tribes, settlements & migration
- **Map Based Questions from World** (Location of state, city, minerals, industries etc.)

Indian Geography

- Agriculture typology and major Crops grown in India
- Agro-Climatic Regions
- Land Reforms and Land use pattern
- Animal Husbandry, Fisheries and Aquaculture

2022

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO



VISIONIAS

www.visionias.in

Test Booklet Series

TEST BOOKLET

C

GENERAL STUDIES (P) 2022 – Test – 3486

Time Allowed: Two Hours

Maximum Marks: 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS BOOKLET DOES **NOT** HAVE ANY UNPRINTED OR TURN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C OR D** AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE ANSWER SHEET.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **Do NOT** write anything else on the Test Booklet.
4. This Test Booklet contains **100** items (Questions). Each item is printed in **English**. Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response with you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided. See direction in the answers sheet.
6. All items carry equal marks. Attempt all items. Your total marks will depend only on the number of **correct responses** marked by you in the answer sheet. For **every incorrect** response **1/3rd of the allotted marks** will be deducted.
7. Before you proceed to mark in the Answer sheet the response to various items in the Test booklet, you have to fill in some particulars in the answer sheets as per instruction sent to you with your Admission Certificate.
8. After you have completed filling in all responses on the answer sheet and the examination has concluded, you should hand over to Invigilator only the answer sheet. You are permitted to take away with you the Test Booklet.
9. Sheet for rough work are appended in the Test Booklet at the end.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO

1. Consider the following statements with reference to the distribution of nuclear fuels:
1. Thorium is more abundant than uranium in the Earth's crust.
 2. Canada is the largest producer of uranium in the world.
- 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
2. With reference to land types, consider the following statements:
1. Current fallow land refers to any piece of land without cultivation for one or less than one agricultural year.
 2. Culturable wasteland refers to land without cultivation for more than a year but less than five years
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
3. Which of the following is/are common to both Dengue and Malaria diseases?
1. Both are viral infections.
 2. Both are transmitted to humans through the bites of infected female Aedes aegypti mosquito.
 3. Mosquirix is the only vaccine that provides protection against both diseases.
- Select the correct answer using the code given below.
- (a) 1 and 2 only
(b) 2 only
(c) 3 only
(d) None

4. Which one of the following organisations has launched the Geospatial Energy Map of India?
- (a) NITI Aayog
(b) Ministry of Power and all Distribution Companies (DISCOMs) in India
(c) Department of Science
(d) Ministry of Electronics and Information Technology
5. Which of the following is the correct description of India's population pyramid?
- (a) It is bottom heavy and tapered at top.
(b) It is bell-shaped with a flat top.
(c) It is a triangular shaped with a wide base.
(d) It has a wide base, narrow centre and wide top.
6. Consider the following statements:
1. India alone accounts for more than 50% global raw cotton production.
 2. India is having the largest area under cotton cultivation in the world.
- 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
7. The people of this African origin ethnic tribe were brought to India as slaves by the Arabs. The people are mostly confined to Gujarat, Karnataka and areas of Pakistan. They are considered as descendants of Bantu people of East Africa.
- The above passage describes which of the following tribes?
- (a) Himba
(b) Siddis
(c) Chenchu
(d) Angami

8. Identifying the following States arrange the following given states/UTs from east to west:

1. State with highest population density among the states
2. State with highest population.
3. State having lowest population density among states

Select the correct answer using the code given below.

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

9. Consider the following pairs:

Island	Country
---------------	----------------

- | | | |
|--------------------|---|---------|
| 1. La Palma | : | Spain |
| 2. Island of Crete | : | Greece |
| 3. White Island | : | Uruguay |

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

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

10. Shaphari scheme, recently seen in the news is related to:

- (a) Aquaculture products
- (b) Tribal Welfare
- (c) Silviculture
- (d) Honey Production

11. With reference to Coal in India, consider the following statements:

1. Odisha has the largest reserves of coal in India.
2. India is the third-largest coal producer in the world.

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

12. Dholi Sadiya (Bhupen Hazarika) bridge and the proposed Dhubri Phulbari bridges connect Assam with which of the following states respectively?

- (a) Tripura and Arunachal Pradesh
- (b) Nagaland and Arunachal Pradesh
- (c) Arunachal Pradesh and Meghalaya
- (d) Meghalaya and Nagaland

13. Which of the following statements is/are correct regarding road transport in India?

1. India has the second largest road network in Asia.
2. Gujarat has the highest density of National Highways in the country.
3. It handles more than 85% of passenger traffic in the country.

Select the correct answer using the code given below.

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

14. Consider the following statements about the Lavender plant:

1. It is a perennial flowering aromatic herb.
2. It is a temperate plant that can tolerate drought and frost conditions.
3. At present large-scale lavender cultivation is limited to the Western Ghats.

Which of the statements given above are correct?

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

15. Consider the statements regarding Joint Comprehensive Plan of Action (JCPOA) often seen in the news:

1. It is endorsed by United States to prevent Iran from developing nuclear weapons.
2. It prohibits Iran from undertaking civilian nuclear power programme.

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

16. In which of the following regions can one expect the presence of clustered rural settlements?

1. Fertile alluvial plains
2. Places with a scarcity of water
3. Regions facing security risks

Select the correct answer using the code given below.

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

17. Consider the following statements regarding the AMRUT 2.0 scheme:

1. Its objective is to provide 100% coverage of water supply to all rural and urban households in India.
2. It seeks to protect the pollution of freshwater bodies in order to make natural resources sustainable.
3. It has been mandated for all cities to take up Public-private Partnership (PPP) projects worth minimum of 10 percent of their total project fund allocation.

Which of the statements given above is/are correct?

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

18. Which one of the following cities is *not* the part of Diamond Quadrilateral Project?

- (a) Hyderabad
- (b) Bengaluru
- (c) Kolkata
- (d) Ahmedabad

19. At present, India is at which of the following stages of demographic transition?

- (a) High death and birth rates, low growth rates.
- (b) Low death and birth rates, low growth rates.
- (c) Rapid decline in birth rate, continued decline in death rate, growth rate begins to decline.
- (d) Rapid decline in death rate, continued high birth rate, very high growth rate.

20. Recently, the Financial Action Task Force (FATF), has added Turkey, along with Jordan and Mali, in its revised list of “jurisdictions under increased monitoring”.

In this context, consider the following statements regarding the Financial Action Task Force (FATF):

1. It was formed on the initiative of the World Bank to counter money laundering.
2. Its mandate includes countering the financing of the proliferation of weapons of mass destruction.

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

21. Headquarters of which of the following Railway zones is located easternmost?
- East Central Railway
 - North Eastern Railway
 - Eastern Railway
 - South Eastern Railway
22. Puga and Chumathang are important locations associated with:
- the development of solar energy
 - favourable conditions for wind energy
 - geothermal fields along with the presence of hot springs and geysers
 - nuclear power generation
23. With reference to the urban settlements of the human population, consider the following statements:
- A conurbation is an urban settlement resulting from the merger of originally separate towns or cities.
 - The first urban settlement to reach a population of one million was New York.
 - In India, Mumbai and Chennai are the only megacities.
- Which of the statements given above is/are correct?
- 1 only
 - 2 and 3 only
 - 3 only
 - 1 and 2 only
24. Arrange the following regions of the world in decreasing order of population growth rate:
- Asia
 - Europe
 - North America
 - Oceania
- Select the correct answer using the code given below.
- 4-2-1-3
 - 4-1-3-2
 - 1-3-2-4
 - 1-2-3-4
25. Which one of the following is *not* an indicator of the Global Multidimensional Poverty Index?
- Child Mortality
 - Learning outcome
 - Cooking Fuel
 - Electricity
26. Despite the tremendous population pressure on India's Land resources, India is a leading producer of various agricultural commodities. In this context, India is a leading producer in which of the following commodities?
- Rice
 - Pulses
 - Groundnut
 - Banana
 - Milk
- Select the correct answer using the code given below.
- 1, 2 and 3 only
 - 1, 3, 4 and 5 only
 - 2, 4 and 5 only
 - 3, 4 and 5 only
27. Consider the following statements with reference to the Platinum Group of Metals (PGM):
- There is no proven platinum group of metals deposited in India.
 - In India, platinum is used in making catalytic converters in automobiles for emission controls.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2

28. Consider the following pairs:

Tribes	Shelter
1. Bindibu	: Wurlies
2. Gobi Mongols	: Zeriba
3. Eskimos	: Igloos
4. Tuaregs	: Yurts

Which of the pairs given above are **not** correctly matched?

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

29. Consider the following statements regarding Nobel Prize:

- 1. Since their beginning from 1901, the Nobel Prizes have been awarded every year.
- 2. A maximum of three persons can be rewarded for the work jointly produced by them.

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

30. Recently seen in the news, Sinho Commission is best related to which one of the following?

- (a) Identification of Economically and Weaker Sections (EWS) for government welfare schemes
- (b) Monetary Policy after the COVID-19 lockdown
- (c) Impact of climate change of islands of India
- (d) Upliftment of Particularly Vulnerable Tribal Groups (PVTG)

31. Consider the following pairs:

Tribes	Region
1. Veddas	: India
2. Lhop	: Bhutan
3. Kalmuk	: Mongolia
4. Kikuyu	Kenya

Which of the pairs given above are correctly matched?

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

32. Recently the Ministry of Power has mandated electricity distribution companies to undertake Energy Accounting on a periodic basis. In this context Energy Accounting

- (a) includes renewable energy generation but excludes energy consumption by the end consumers.
- (b) includes renewable energy generation and open access consumers, as well as energy consumption by the end consumers.
- (c) includes open access consumers, and energy consumption by the end consumers but excludes renewable energy generation.
- (d) excludes renewable energy generation and energy consumption by the end consumers.

33. Consider the following pairs with respect to major urban settlements of India and their location along the rivers:

Urban settlement	River
1. Jabalpur	: Narmada
2. Ludhiana	: Ravi
3. Madurai	: Cauvery

Which of the pairs given above are **not** correctly matched?

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

34. Consider the following statements regarding the Indian Space Association (ISPA):
- It is an autonomous body under the Department of Space.
 - It will act as a commercial arm of ISRO for the production of Polar Satellite Launch Vehicle (PSLV) and Small Satellite Launch Vehicle (SSLV) through the industry.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
35. In the context of economic geography, which of the following best describes 'isochrones'?
- Lines drawn on a map to join places equal in terms of the time taken to reach them.
 - Lines where the increase in transportation cost is exactly offset by the savings from cheaper labour.
 - Lines joining the points of additional equal transport costs of Raw material to the cheap labour centre.
 - None of the above
36. Pantanal Wetlands were recently in news due to unusually active forest fires which were not very natural. Which of the following countries are associated with Pantanal Wetlands?
- Brazil
 - Bolivia
 - Paraguay
 - Argentina
 - Peru
- Select the correct answer from the code given below.
- 3, 4 and 5 only
 - 1, 2 and 3 only
 - 1, 2 and 4 only
 - 1, 2, 3, 4 and 5

37. Which of the following statements is *not* correct about racial groups of India?
- There is no race in India which is completely pure.
 - The Mediterranean and the Nordic races constitute the tribal population.
 - People of Mongoloid racial ancestry are mainly found in North-Eastern India.
 - The Proto-Austroloid is also known as the Pre-Dravidian race.
38. Consider the following statements regarding distribution of mineral resources in South American region:
- Chile and Peru are leading producers of copper.
 - Mineral oil is found in Venezuela and Peru only.
 - Tin and diamond deposits are rarely found in South America.
- Which of the statements given above is/are correct?
- 1 only
 - 1 and 3 only
 - 1, 2 and 3
 - 2 only
39. Consider the following pairs:
- | Industrial Region | Major Industry |
|--------------------------|------------------------|
| 1. Rhine | : Iron and steel |
| 2. Mid-Lake Region | : Electrical machinery |
| 3. New England Region | : Textiles |
- Which of the pairs given above is/are correctly matched?
- 1 only
 - 1 and 3 only
 - 3 only
 - 1, 2 and 3

40. Consider the following pairs:

Major Coalfields	Country
1. Appalachian	: USA
2. Bowen Basin	: Germany
3. Shanxi	: China

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

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

41. Consider the following pairs of Horticulture Cluster identified recently identified under the Horticulture Cluster Development Programme (CDP):

Cluster Region	Horticultural Product
1. Shopian	: Apple
2. Lucknow	: Mango
3. Nasik	: Turmeric
4. West Jaintia Hills	: Pineapple

Which of the pairs given above are correctly matched?

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

42. Which of the following statements is correct about the Particularly Vulnerable Tribal Groups (PVTGs)?

- (a) They are mainly concentrated in Andaman Nicobar Islands and north-Eastern India.
- (b) Uttar Pradesh has no tribes under PVTG category.
- (c) Population density is one of the criteria for identification of PVTGs.
- (d) They were created as a separate category by Dhebar Commission.

43. Arrange the following major ports of India from North to south:

- 1. Mormugao
- 2. Jawaharlal Nehru Port Trust (JNPT)
- 3. Vishakhapatnam
- 4. Ennore

Select the correct answer using the code given below.

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

44. Consider the following pairs:

<i>Disputed Territories</i>	<i>Countries associated</i>
1. Nogorno-Karabakh	: Armenia-Azerbaijan
2. Crimea	: Russia-Ukraine
3. Kuril Islands	: Japan-China
4. Mingino Islands	: Kenya-Sudan

Which of the pairs given above are correctly matched?

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

45. Which of the following statements is correct with reference to the literacy in India?

- (a) Four out of every five males and two out of every three females in the country are literate.
- (b) Bihar has the lowest female literacy rate.
- (c) Among all states and UTs Kerala holds the first rank in the country in male literacy.
- (d) Except Assam all north-eastern States have literacy rate higher than national average.

46. National Waterway-4 passes through which of the following states?
- Andhra Pradesh
 - Karnataka
 - Maharashtra
 - Tamil Nadu
- Select the correct answer using code given below.
- 1 and 4 only
 - 1 and 2 only
 - 2, 3 and 4 only
 - 1, 2, 3 and 4
47. Which of the following best describes the Malthusian theory of population growth?
- Any rise or fall in the optimum level of population of a region will diminish the income per head of the population.
 - The number of people would increase faster than the food supply leading to population crash.
 - The population growth rate of the world is directly proportional to the levels of literacy.
 - The theory describes the three-stage demographic transition of a country from rural agrarian to urban industrial.
48. It is a Burmese minority ethnic group famous for elongated necks. The women wear heavy brass rings around their necks, forearms, and shins. The ethnic group was recently in news for an armed struggle against the military Junta which ousted the elected government of Myanmar.
- Which of the ethnic group is being described in the above passage?
- Karen
 - Jarai
 - Kalash
 - Tambanuo

49. With reference to Quantum technologies, consider the following statements regarding Quantum Key Distribution (QKD):
- Unlike classical encryption, QKD is resistant to physical man-in-the-middle attacks.
 - In India, ISRO has made a breakthrough demonstration of free-space Quantum Key Distribution (QKD).
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
50. Consider the following statements regarding the CRISP-M tool:
- It has been launched jointly by the Ministry of Science and Technology and Ministry of Earth Sciences.
 - It will help embed climate information in the GIS-based planning and implementation of the Mahatma Gandhi National Rural Employment Guarantee Act.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
51. Which of the following bauxite-producing areas of India lie below the Tropic of Cancer?
- Katni
 - Amarkantak
 - Bilaspur
 - Koraput
 - Maikal Hills
- Select the correct answer using the code given below.
- 1 and 2 only
 - 1, 2, 3 and 5 only
 - 4 and 5 only
 - 2, 3, 4 and 5 only

52. Onshore oil fields refer to the stock of oil existing on the land. In this context, which of the following are the onshore oil fields in India?

1. Naharkatia oil field
2. Mangala Area oil field
3. Kalol oil field
4. Bassein oil field

Select the correct answer using the code given below.

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

53. The Great Lakes are vast inland freshwater seas that provide water for consumption, transportation, power, recreation, and a host of other uses. They are a dominant part of the physical and cultural heritage of North America. Arrange the following water bodies which constitute the "The Great Lakes" from West to East.

1. Lake Ontario
2. Lake Superior
3. Lake Erie
4. Lake Michigan
5. Lake Huron

Select the correct answer from the code given below.

- (a) 2-3-4-5-1
- (b) 5-4-3-1-2
- (c) 1-2-3-4-5
- (d) 2-4-5-3-1

54. With reference to Commercial Livestock Rearing, consider the following statements:

1. It is a specialised activity in which a wide variety of animals are reared simultaneously.
2. Rearing of animals in ranching is organised on a scientific basis.
3. Commercial Livestock Rearing is mainly practised in the Mediterranean basin.

Which of the statements given above is/are correct?

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

55. Which of the following is the correct definition of 'a literate' in India?

- (a) A person who has the ability to both read and write a simple message with understanding in any language.
- (b) A person who have received any formal education or acquired minimum educational standard upto 5th Class.
- (c) A person who can at least read with understanding in any language.
- (d) A person aged seven and above, who can both read and write with understanding in any language.

56. Consider the following statements with reference to the internal migration in India as per the Census 2011:

1. West Bengal is the largest source of inter-state migrants.
2. The intra-state movement accounted for more than two-thirds of all internal migration.
3. Delhi received more internal migrants than Maharashtra.

Which of the statements given above is/are correct?

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

57. Which of the following are the International Airports in India?

1. Amritsar
2. Srinagar
3. Kozhikode
4. Nagpur
5. Kushinagar

Select the correct answer using the code given below.

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

58. This spice is known as the queen of aromatic spices. It grows well in hot climates ranging from 15°C-32°C and with humidity around 150-300 cm. Well-drained forest loams, red and laterite soils with plenty of humus are ideal for its growth. It is a shade-loving plant and is grown under shady trees. In India, it is produced mainly in three states viz., Kerala, Karnataka, and Tamil Nadu.

The above-mentioned paragraph refers to which of the following crops?

- (a) Ginger
- (b) Pepper
- (c) Cardamom
- (d) Chillies

59. With reference to the religious composition of Indian population according to the 2011 census, consider the following statements:

1. The Christian population is widely distributed in the hill states of north east India.
2. Muslims account for less than 15% of the total population in India.
3. Hindus have the lowest fertility rate among India's major religious groups.

Which of the statements given above is/are correct?

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

60. Arrange the following mineral and energy sources as you would encounter them while going from Kashmir to Kanyakumari:

1. Bhandara iron ore mine
2. Narora Atomic power station
3. Neyveli Coal mines
4. Nellore mica belt

Select the correct answer using the code given below.

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

61. In the context of India, Bhukia, Huttī, Kunderkoch, and Parasi are famous mines of which of the following minerals?

- (a) Diamond
- (b) Copper
- (c) Gold
- (d) Lithium

62. Extensive commercial grain cultivation is practised in which of the following regions?

1. Eurasian steppes
2. Canadian and American Prairies
3. Amazon Basin
4. Canterbury Plains of New Zealand

Select the correct answer using the code given below.

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

63. Consider the following statements with reference to the sex ratio in India:
1. Kerala has a higher number of females than males.
 2. All north-eastern states of India have a higher sex ratio than the national average.
 3. In the 2011 Census, India recorded lowest child sex ratio since Independence.
- Which of the statements given above is/are correct?
- (a) 3 only
 - (b) 1 and 3 only
 - (c) 1 and 2 only
 - (d) 1, 2 and 3
64. Dry Point settlements are associated with:
- (a) Deserts
 - (b) Wetland and Marshes
 - (c) Tropical Rainforests
 - (d) Grasslands
65. What is common to places known as Le Creusot, Donetsk and Tienstin?
- (a) Iron and Steel Industries
 - (b) Water Reservoirs
 - (c) Shale deposits
 - (d) Biosphere Reserves
66. Consider the following statements with reference to the population growth and density of India:
1. The north-eastern and the Himalayan States are the only States which have lower population density than the national average.
 2. All Union Territories have very high population density.
 3. The decadal population growth rate has never been negative since 1911.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only
 - (b) 3 only
 - (c) 1 and 2 only
 - (d) None

67. In the context of economic geography, consider the following statements regarding 'technopolies':
1. These are high-tech industries that are regionally concentrated, self-sustained and highly specialised.
 2. White-collar workers make up a large share of the total workforce.
- 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
68. It is grouped under flux and construction minerals and is important for iron & steel and Ferro-alloys industries. It is a rock containing 40-45 percent of magnesium carbonate. The mineral is also used in fertilizer, glass, alloy steel, and other industries such as paint, refractory, The mineral mining fall in an ecological corridor connecting the Kanha and Bandhavgarh tiger reserves
- Which of the following mineral is being described in the above passage?
- (a) Magnesite
 - (b) Limestone
 - (c) Rock Phosphate
 - (d) Dolomite
69. Which of the following statements is *not* correct with respect to the atomic minerals in India?
- (a) The production of Uranium is confined to the mines of Kadapa district of Andhra Pradesh
 - (b) India possesses the world's largest monazite reserves which is the principal source of thorium
 - (c) The beach sands of Kerala in Palghat and Quilon districts contain rich deposits of monazite
 - (d) Uranium is found in igneous and metamorphic rocks in India

70. Consider the following statements:
1. Ruhr fields in Germany are responsible for 80% of World's total steel production.
 2. Port Talbot is the major inland riverine port in the Ruhr region.

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

71. Which of the following are the major advantages of Vertical farming?
1. Less water intensive than traditional agricultural methods.
 2. High productivity throughout the year.
 3. High pollination rates

Select the correct answer using the code given below.

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

72. Consider the following statements with reference to the road network in India:
1. The State Highways has the largest share in road networks in India.
 2. The National Highway 44 (NH 44) is the longest-running National Highway in India.
 3. The Golden Quadrilateral connects Kochi and Delhi.

Which of the statements given above is/are correct?

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

73. Consider the following statements regarding Territorial Army in India:
1. It was raised after the Parliament attack in 2001.
 2. It works under the Ministry of Home Affairs.
 3. One of its objectives is to assist Civil Administration in dealing with natural calamities.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 only
- (c) 3 only
- (d) None

74. Consider the following statements with reference to primary economic activities:
1. These activities are directly tied to the extraction of the earth's natural resources.
 2. Primary activities include mining and quarrying.
 3. People engaged in primary activities are called blue-collar workers.

Which of the statements given above is/are correct?

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

75. Consider the following statements with respect to ports and their locations:
1. V. O. Chidambaram port is located in Gulf of Mannar.
 2. Kandla port is located on the Gulf of Khambatt.
 3. The port of Krishnapatnam is located on the eastern coast.

Which of the statements given above are correct?

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

76. Arrange the following group of Islands of the Indian ocean in order of increasing distance from Cape Comorin.

1. Reunion Islands
2. Chagos Archipelago
3. Cocos (Keeling) Islands
4. St. Paul Islands

Select the correct answer from the code given below.

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

77. Consider the following statements regarding the PM Ayushman Bharat Health Infrastructure Mission:

1. It is the largest pan-India scheme for the creation and improvement of long-term public healthcare infrastructure.
2. It seeks to establish comprehensive surveillance of infectious diseases.
3. It seeks to create comprehensive diagnostics and treatment facilities.

Which of the statements given above are correct?

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

78. With reference to the Medical Termination of Pregnancy (Amendment) Act, 2021 and subsequent rules, consider the following statements:

1. The upper limit for termination of a pregnancy has been increased from 24 to 28 weeks for certain categories of women.
2. A state-level Medical Board will be set up to decide if pregnancy may be terminated after 24 weeks in cases of foetal malformation.
3. Both married and unmarried women can terminate pregnancy up to 20 weeks in case of failure of contraceptive method.

Which of the statements given above are correct?

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

79. In the context of copper deposits in India, consider the following pairs

**Copper-producing State
region**

- | | | |
|----------------|---|----------------|
| 1. Agnigundala | : | Telangana |
| 2. Balaghat | : | Madhya Pradesh |
| 3. Chitradurg | : | Karnataka |

Which of the pairs given above are correctly matched?

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

80. Which of the following statements is/are correct regarding Market gardening and horticulture?

1. It involves specialising in the cultivation of high-value crops solely for the urban markets.
2. It is both labour and capital intensive.

Select the correct answer using the code given below.

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

81. The Cape Town Convention and Protocol is related to which of the following sectors?

- (a) Disaster Management
- (b) Aviation
- (c) Shipping and Marine Pollution
- (d) Railways

82. Consider the following statements regarding the United Nations Human Rights Council (UNHRC):

1. The members of the Council shall serve for a period of one year.
2. The members shall not be eligible for immediate re-election after two consecutive terms.
3. All permanent members of the UNSC are also permanent members of UNHRC.

Which of the statements given above is/are correct?

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

83. This freshwater lake has been recently in news due to disrupted natural cycles and extreme water lows. The lake witnesses the annual kokanee salmon festival which was canceled this year due to low water levels which have cut the migration routes of the salmons. It occupies the fault basin on the California-Nevada border and is drained by the Truckee River.

Identify the Lake from the passage given above.

- (a) Lake Sakakawea
- (b) Lake Tahoe
- (c) Great Salt Lake
- (d) Lake Cree

84. Consider the following pairs:

Mineral	Leading Producer
----------------	-------------------------

- | | | |
|--------------|---|-----------|
| 1. Chromite | : | Odisha |
| 2. Lead | : | Rajasthan |
| 3. Limestone | : | Gujarat |

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

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

85. Which of the following may be considered as principles of Zero Budget Natural Farming?

1. Intensive irrigation
2. Minimal Disturbance of Soil
3. Intercropping
4. Vermicomposting

Select the correct answer using the code given below.

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

86. Consider the following pairs:

<i>City</i>	<i>Country</i>
1. Glasgow	Sweden
2. Havana	Cuba
3. Abidjan	Namibia

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

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

87. Recently seen in the news, Tsugaru Strait connects which of the following water bodies?

- (a) Black Sea and the Sea of Marmara
- (b) Black Sea and the Aegean Sea
- (c) Red Sea and the Gulf of Aden
- (d) Sea of Japan and the Pacific Ocean

88. With reference to the Livestock of India consider the following statements:

- 1. Livestock census in India is generally held once every ten years.
- 2. The livestock population of India as per the latest census is more than a billion.
- 3. Uttar Pradesh has the highest Buffalo population of all states.

Which of the statements given above is/are correct?

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

89. Consider the following pairs of Geographical Tags (G.I tags) and the states:

<i>G.I. Tag</i>	<i>State</i>
1. Edayur Chilli	: Telangana
2. White Onion	: Maharashtra
3. Karuppur	: Andhra Pradesh

kalamkari paintings

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

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

90. Consider the following statements regarding the One Sun, One World and One Grid (OSOWOG) initiative:

- 1. The idea of OSOWOG was floated at the first assembly of the International Solar Alliance.
- 2. It aims to build a global ecosystem of interconnected renewable energy resources to meet the targets of the Paris Agreement.

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

91. Which of the following factors are responsible for seasonal and circular migration?

- 1. Tourism
- 2. Pandemic
- 3. Crop and livestock management
- 4. Social Security
- 5. Rise in sea levels of coastal areas

Select the correct answer from the code given below.

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

92. With reference to Natural Gas exploration in India, consider the following statements:

1. There are no exclusive reserves of natural gas as it is obtained along with oil in all the oilfields.
2. The Gas Authority of India Limited is a public sector Maharatna undertaking to transport and market natural gas.

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

93. India has been a regular exporter of iron ore due to the presence of fairly abundant resources of iron ore. In this context, consider the following pairs:

<i>Iron Ore</i>	<i>Port of Export Area</i>
1. Bailadila Range	: Vishakhapatnam Port
2. Kudremukh Mines	: Haldia Port
3. Ratnagiri District	: New Mangalore Port

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

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

94. Which of the following statements is/are correct regarding distribution of tribal population in India?

1. Madhya Pradesh has the largest population of Scheduled Tribes.
2. In Andaman and Nicobar Islands more than 50% population are Scheduled Tribes.
3. Among all the UTs in India only Puducherry has no notified Scheduled Tribes.

Select the correct answer using the code given below.

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

95. The Srikakulam Angul Pipeline (SAPL) Natural Gas Pipeline would pass through which of the following states of India?

1. Chhattisgarh
2. Odisha
3. West Bengal
4. Andhra Pradesh

Select the correct answer using the code given below.

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

96. With reference to Deep-ocean polymetallic nodules, consider the following statements:

1. Polymetallic nodules primarily consist of precipitated iron oxyhydroxides and manganese oxides.
2. Nodules have been found in all the oceans.

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

97. Sardar Sarovar Dam often called as the lifeline of Gujarat also serves the need of which of the following states?

1. Maharashtra
2. Rajasthan
3. Madhya Pradesh
4. Punjab

Select the correct answer using the code given below.

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

98. The services that focus on the creation, rearrangement and interpretation of new and existing ideas, data interpretation and the use and evaluation of new technologies are involved in which of the following activities?

- (a) Tertiary
- (b) Quaternary
- (c) Secondary
- (d) Quinary

99. Which of the following cities are famous industrial centres for leather and leather products, in India?

1. Kolkata
2. Kanpur
3. Agra
4. Ranipet

Select the correct answer using the code given below.

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

100. Consider the following statements:

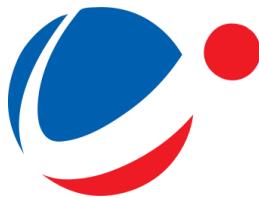
1. Open-cast mines are sedimentary ores lying close to the surface.
2. Majority of mines are open-cast mines.
3. Underground mining is relatively safer than open-cast mines.

Which of the statements given above is/are correct?

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

Copyright © by Vision IAS

All rights are reserved. No part of this document may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission of Vision IAS.



ANSWERS & EXPLANATIONS GENERAL STUDIES (P) TEST – 3486 (2022)

Q 1.A

- Nuclear energy has emerged as a viable source in recent times. Important minerals used for the generation of nuclear energy are uranium and thorium.
- Uranium is a relatively common element in the crust of the Earth. It is a metal approximately as common as tin or zinc, and it is a constituent of most rocks and even of the sea. **Thorium is about 3.5 times more common than uranium in the Earth's crust. Hence, statement 1 is correct.**
- **In 2020 Kazakhstan produced the largest share of uranium from mines (41% of world supply), followed by Australia (13%) and Canada (8%).** Over two-thirds of the world's production of uranium from mines is from Kazakhstan, Canada and Australia. **Hence, statement 2 is not correct.**
- Present knowledge of the distribution of thorium resources is poor because of the relatively low key exploration efforts arising out of insignificant demand. India and Australia are believed to possess about 300,000 tonnes each; i.e. each country possessing 25% of the world's thorium reserves.

Q 2.A

- Different types of lands are suited to different uses. Land-use records are maintained by the land revenue department. Some of the land-use categories as maintained in the Land Revenue Records are as follows:
 - **Current fallow:** This is the land which is left without cultivation for one or less than one agricultural year. Fallowing is a cultural practice adopted for giving the land rest. The land recoups the lost fertility through natural processes. **Hence statement 1 is correct.**
 - **Fallow other than Current Fallow:** This is also a cultivable land that is left uncultivated for more than a year but less than five years. If the land is left uncultivated for more than five years, it would be categorized as a culturable wasteland.
 - **Culturable wasteland:** Any land which is left fallow (uncultivated) for more than five years is included in this category. It can be brought under cultivation after improving it through reclamation practices. **Hence statement 2 is not correct.**
 - **Barren and Wastelands:** The land which may be classified as a wasteland such as barren hilly terrains, desert lands, ravines, etc., and that normally cannot be brought under cultivation with the available technology.

Q 3.D

- **Recently dengue has been in news due to the increasing number of cases in India and the first and, to date only, vaccine shown to have the capability of significantly reducing malaria, and life-threatening severe malaria has been endorsed by the World Health Organisation.**
- Dengue is a **mosquito-borne viral infection**, found in tropical and sub-tropical climates worldwide, mostly in urban and semi-urban areas.
 - The virus responsible for causing dengue is called **dengue virus (DENV)**.
 - There are four DENV serotypes, meaning that it is possible to be infected four times.
- Malaria is an acute febrile illness caused by **Plasmodium parasites**. **Hence statement 1 is not correct.**
 - There are 5 parasite species that cause malaria in humans, and 2 of these species, P. falciparum and P. vivax pose the greatest threat.
 - P. falciparum is the deadliest malaria parasite and the most prevalent on the African continent.
 - P. vivax is the dominant malaria parasite in most countries outside of sub-Saharan Africa.
- Dengue virus is transmitted by **female mosquitoes mainly of the species Aedes aegypti** and, to a lesser extent, **Ae. albopictus**.
 - These mosquitoes are also vectors of **chikungunya, yellow fever and Zika viruses**.

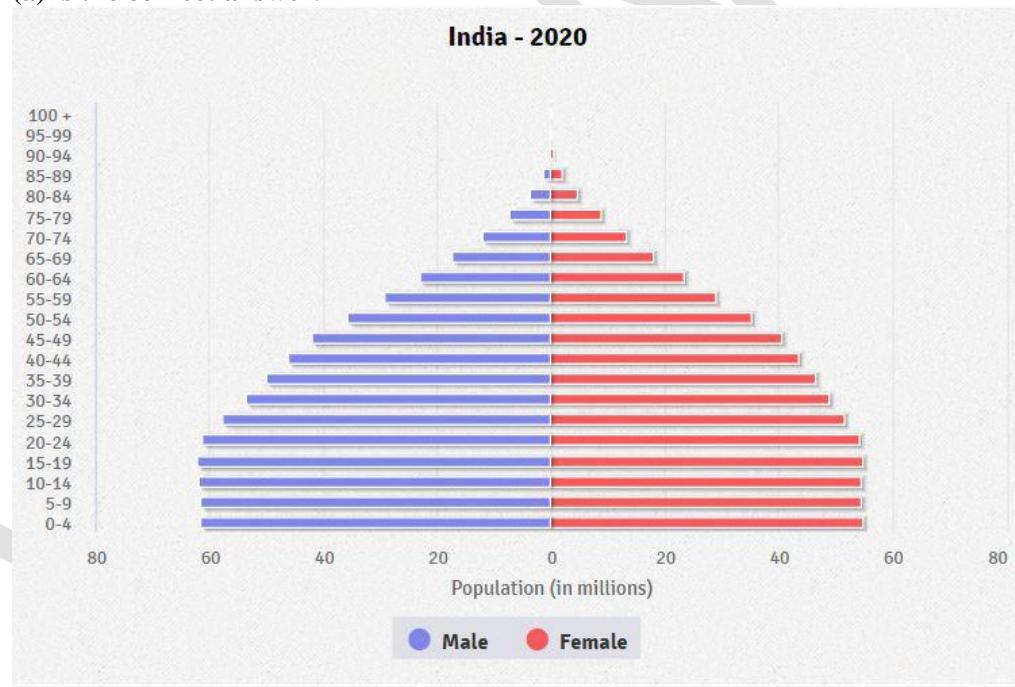
- Malaria spreads to people through the bites of **infected female Anopheles mosquitoes**. Hence statement **2 is not correct**.
- RTS,S/ASO1 (RTS,S), trade name Mosquirix**, which was endorsed by the **World Health Organisation (WHO)**, is the first and, to date only, vaccine shown to have the capability of significantly reducing malaria, and **life-threatening severe malaria**, in tests on young African children. Hence statement **3 is not correct**.

Q 4.A

- NITI Aayog** has recently launched a **Geographic Information System (GIS)-based Energy Map of India (Geospatial Energy Map of India)**.
- NITI Aayog in collaboration with the **Indian Space Research Organisation (ISRO)** has developed a comprehensive Geographic Information System (GIS) Energy Map of India with the support of **Energy Ministries of Government of India**.
- The GIS map provides a holistic picture of all energy resources of the country which enables visualisation of energy installations such as conventional power plants, oil and gas wells, petroleum refineries, coal fields and coal blocks, district-wise data on renewable energy power plants and renewable energy resource potential through 27 thematic layers.
- Hence option (a) is the correct answer.**

Q 5.A

- A population pyramid illustrates the age and sex structure of a country's population and may provide insights about political and social stability, as well as economic development.
- The population is distributed along the horizontal axis, with males shown on the left and females on the right. The male and female populations are broken down into 5-year age groups represented as horizontal bars along the vertical axis, with the youngest age groups at the bottom and the oldest at the top.
- The shape of the population pyramid gradually evolves over time based on fertility, mortality, and international migration trends. India's population pyramid is bottom heavy and tapered top. **Hence option (a) is the correct answer.**

**Q 6.B**

- Cotton is the crop of tropical and sub-tropical areas and requires uniformly high temperature varying between 21°C and 30°C. The growth of cotton is retarded when the temperature falls below 20°C.
- Cotton textile industry has three sub-sector i.e. **handloom, powerloom and mill** sectors. Handloom sector is labour-intensive and provides employment to semi-skilled workers. It requires small capital investment.
- Cotton textile manufacturing requires good quality cotton as raw material.
 - India, China, U.S.A, Pakistan, Uzbekistan, Egypt** produce more than half of the world's raw cotton. The top cotton producing countries include China, India and the United States respectively. The approximate percentage contribution of some countries are India (25 per cent), China (22 per cent), USA (15 per cent) and Brazil (10 per cent). **Hence statement 1 is not correct.**

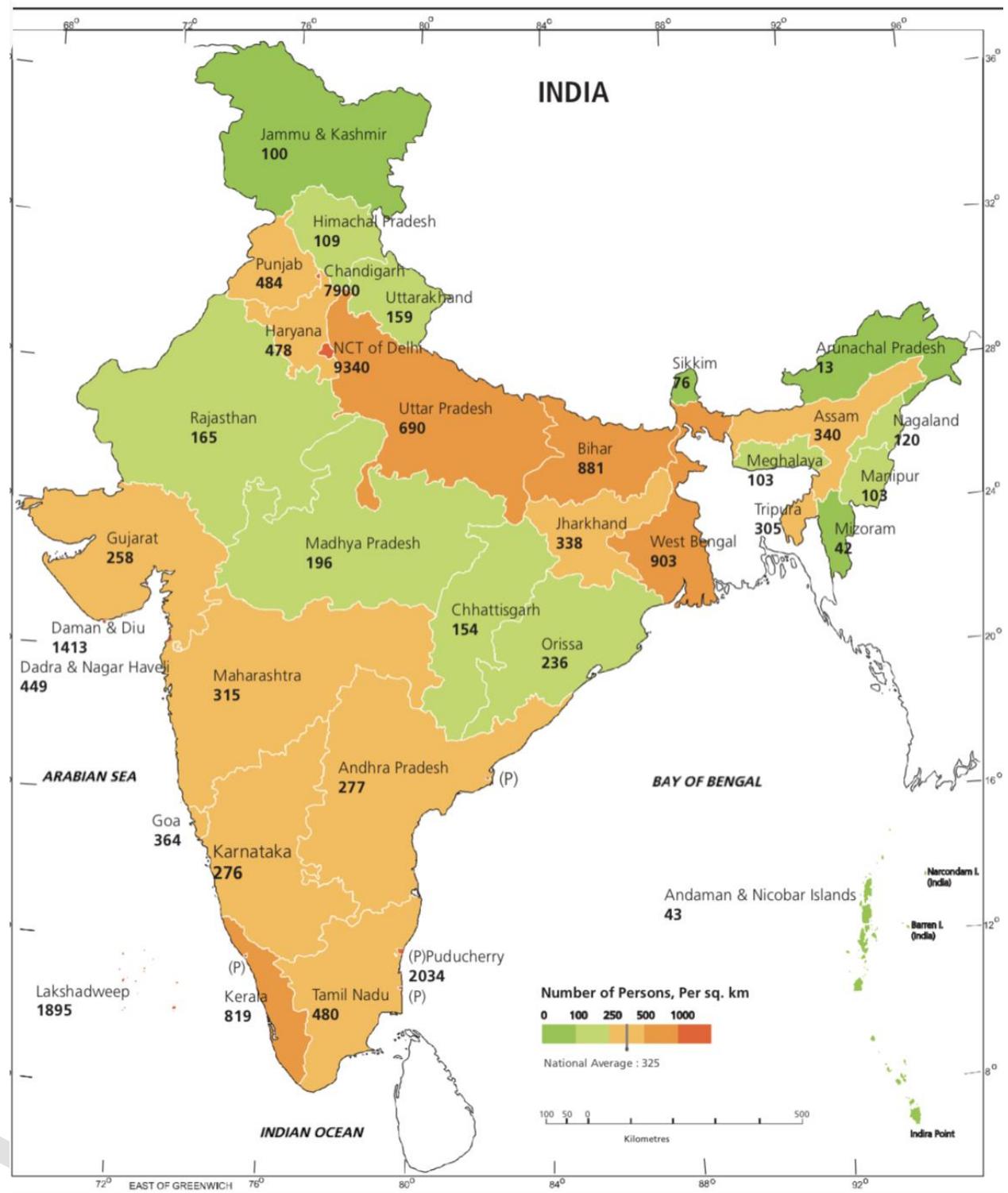
- The U.K, NW European countries and Japan also produce cotton textile made from imported yarn.
- **Europe** (not North America) alone accounts for nearly half of the world's cotton imports.
- India is one of the largest producer of cotton in the world accounting for about **26%** of the world cotton production. The yield per kgs hectare which is presently 459 kgs/ha is still lower against the world average yield of about 757 Kgs kgs /ha.
 - India is having the **largest area under cotton cultivation in the world** which is about 42% of the world area under cotton cultivation between 12.5 million hectares to 13.5 million hectares. **Hence statement 2 is correct.**
 - India is the second largest producer of cotton in the world after China.

Q 7.B

- The **Siddi** also known as the Sheedi, Sidi, Siddhi are an ethnic group inhabiting **India and Pakistan**. Members are mostly descended from the Bantu peoples of Southeast Africa, along with Habesha immigrants. Some were merchants, sailors, indentured servants, slaves and mercenaries. The Siddi population is currently estimated at around 850,000 individuals, with Karnataka, Gujarat and Hyderabad in India and Makran and Karachi in Pakistan as the main population centres. Siddis are primarily Muslims, although some are Hindus and others belong to the Catholic Church. The first Siddis are thought to have arrived in India in 628 AD at the Bharuch port. Several others followed with the first Arab Islamic conquest of the subcontinent in 712 AD. The latter group are believed to have been soldiers with Muhammad bin Qasim's Arab army, and were called Zanjis. **Hence option (b) is the correct answer**
- The **Chenchus** are a Dravidian tribe, a designated Scheduled Tribe in the Indian states of **Andhra Pradesh, Telangana, Karnataka and Odisha**. They are an aboriginal tribe whose traditional way of life has been based on hunting and gathering. The Chenchus speak the Chenchu language, a member of the Dravidian language family. In general, the Chenchu relationship to non-tribal people has been largely symbiotic. Some Chenchus have continued to specialize in collecting forest products for sale to non-tribal people. Many Chenchus live in the sparse and deciduous Nallamala forest of Andhra Pradesh.
- The **Himba** are an indigenous people with an estimated population of about 50,000 people living in **northern Namibia, in the Kunene Region** (formerly Kaokoland) and on the other side of the Kunene River in southern Angola.
- The **Angamis** are a major Naga ethnic group native to the state of Nagaland in North-East India. The Angami Nagas are predominantly settled in Kohima District and Dimapur District of Nagaland and are also recognized as one of the ethnic groups in the state of Manipur. The Angamis are divided into four regions namely Chakhrong Angami, Northern Angami, Southern Angami and Western Angami. The now separated Chakhesangs were previously known as the Eastern Angamis.

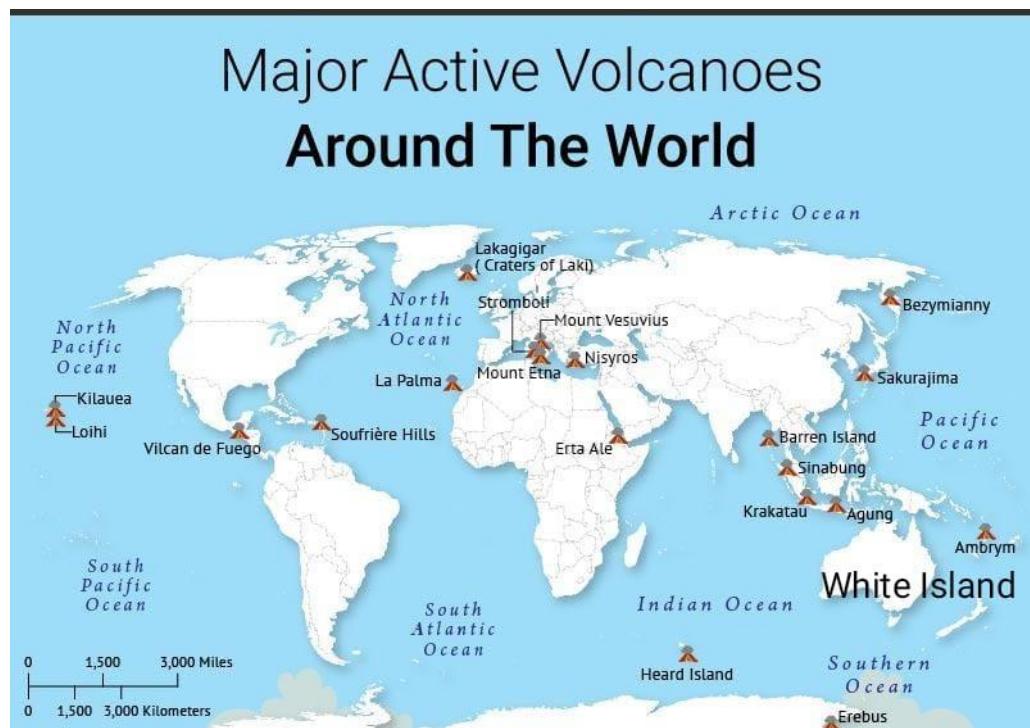
Q 8.C

- **Density of population**, is expressed as number of persons per unit area. It helps in getting a better understanding of the spatial distribution of population in relation to land. **The density of population in India (2011) is 382 persons per sq km**. There has been a steady increase of more than 200 persons per sq km over the last 50 years as the density of population increased from 117 persons/ sq km in 1951 to 382 persons/sq km in 2011.
- Among the states **Bihar** has become the **most densely populated States with 1102 persons/sq.km** and **Arunachal Pradesh the least** densely populated State with 17 persons/sq.km.
- Among the UTs, NCT of Delhi continues to head the UTs, while **Andaman and Nicobar Islands brings up the rear with respect to the population density**.
- As per consensus of India 2011, the population of India is 1,210,193,422. **Uttar Pradesh is the most populous state** (199,812,341) and Sikkim is the least populous state in India.
- **Hence option (c) is the correct answer.**



Q 9.B

- **White Island, an island in the Bay of Plenty, 43 miles west of Cape Runaway, eastern North Island, New Zealand.** An active volcano, it is the top of a submarine vent at the northern end of the Taupō-Rotorua Volcanic Zone. **Hence pair 3 is not correctly matched.**
 - A powerful 6.3-magnitude earthquake struck off the Greek island of Crete recently. **Crete is the largest and most populous of the Greek islands.** The island is mostly mountainous, and its character is defined by a high mountain range crossing from west to east. It includes Crete's highest point, Mount Ida, and the range of the White Mountains. **Hence pair 2 is correctly matched.**
 - **La Palma is one of Spain's Canary Islands**, off northwestern Africa. Its rugged, forested terrain is dotted with volcanoes like Teneguía and Cumbre Vieja. Recently the island witnessed mass migration due to repetitive volcanic eruptions. **Hence pair 1 is correctly matched.**

**Q 10.A**

- **Marine Product Exports Development Authority (MPEDA)** has developed a **certification scheme for aquaculture products called ‘Shaphari’**. It is a Sanskrit word meaning the superior quality of fishery products suitable for human consumption and it is based on UN Food and Agriculture Organization’s (FAO) technical guidelines on aquaculture certification. It will have two Components:
 - Certification of Hatcheries for quality of seeds
 - Approving shrimp farms
 - Certification of hatcheries will help farmers easily identify good quality seed producers by making the entire certification process digital. **Frozen Shrimp is India’s largest exported seafood item**. India exported frozen shrimp worth almost \$5 billion in 2019-20, with the U.S. & China its biggest buyers. Andhra Pradesh, West Bengal, Odisha, Gujarat, and Tamil Nadu are major shrimp-producing States & around 95% of the cultured shrimp produce is exported.
 - The scheme also aims to address challenges faced by the shrimp sector in exporting such as White Feces Disease & Running Mortality Syndrome diseases that impact the profitability of shrimp farming in India, Inadequate storage capacity in India, etc.

Q 11.D

- **The Ministry of Coal has finalized an Agenda Document for the year 2021-22** which broadly focuses on the four areas of coal sector reforms, coal transition and sustainability, Institution building and futuristic agenda.
- Jharkhand has the largest reserves of coal in India and Odisha has the second-largest reserve of coal in India. **Hence statement 1 is not correct**.
- India has the fifth-largest coal deposits and the **second-largest coal producer** with cumulative coal reserves of 319.02 billion tonnes and 36 billion tonnes of lignite. **Hence statement 2 is not correct**.

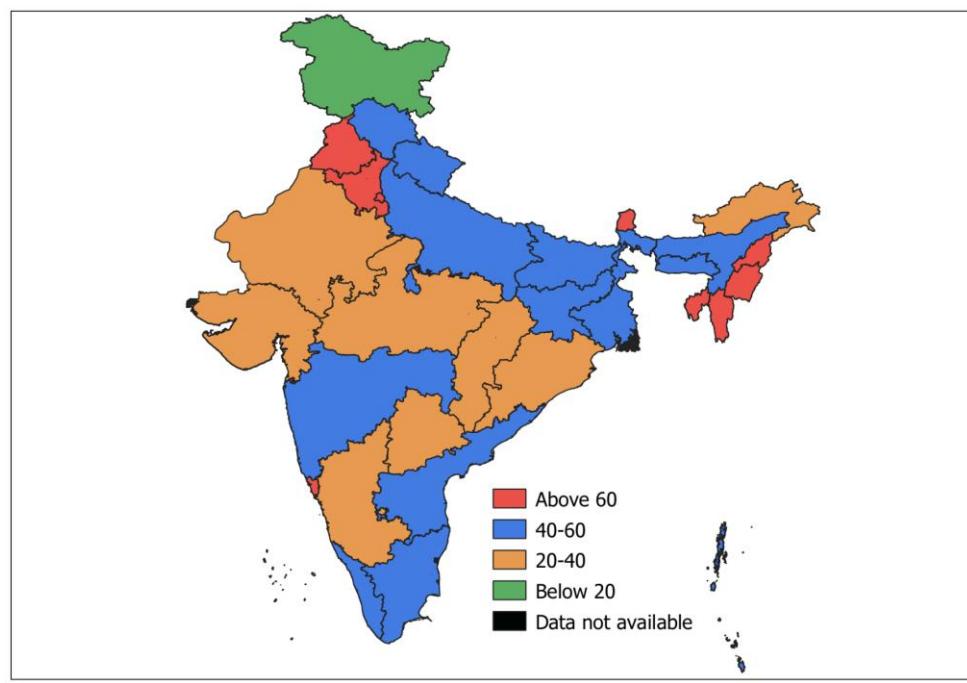
Q 12.C

- **The Dhubri - Phulbari Bridge** is an under construction bridge over the **Brahmaputra River between Assam and Meghalaya in North-East India**. The Dhubri - Phulbari bridge would be India's longest bridge over water and would span more than 19 km. This proposed bridge, close to the Bangladesh border, will connect Assam's Dhubri with Meghalaya's Phulbari which is also a missing link of National Highway 127B. This is being funded by Japan International Cooperation Agency.
- **The Bhupen Hazarika Setu**, also referred to as **the Dhola-Sadiya Bridge**, is a beam bridge in India, connecting the northeast states of **Assam and Arunachal Pradesh**. The bridge spans the Lohit River, a major tributary of the Brahmaputra River, from the village of Dhola (Tinsukia District) in the south to Sadiya to the north. The bridge is the first permanent road connection between the northern Assam and eastern Arunachal Pradesh.
- **Hence option (c) is the correct answer.**

**Q 13.C**

- India has the second-largest road network in the world after USA, and largest in Asia, spanning a total of 5.89 million kilometres (kms). This road network transports 64.5% of all goods in the country and 90% of India's total passenger traffic uses road network to commute. Road transportation has gradually increased over the years with improvement in connectivity between cities, towns and villages in the country. **Hence statement 1 is not correct and statement 3 is correct.**
- The share of transport sector in the GVA for FY 2019 was 4.6% of which share of road transport is the largest at 3.06%.
- Private sector has emerged as a key player in the development of road infrastructure in India. With the Government permitting 100% Foreign Direct Investment (FDI) in the road sector, several foreign companies have formed partnerships with Indian players to capitalise on the sector's growth.
- The density of National Highways is highest (above 60 Kms per 1000 sq Km of area) in Punjab, Haryana, Goa, Sikkim, Tripura, Manipur, Mizoram and Nagaland. Whereas density of National highways in Gujarat is 20-40 Kms/1000 sq Km of area and in Maharashtra, it is 40-60Kms. **Hence statement 2 is not correct.**

Map 1: State/ UT-wise density of National Highways (NH) as on 01.03.2019
(in Kms per 1,000 SQ Km of Area)



Source: NHAI website.

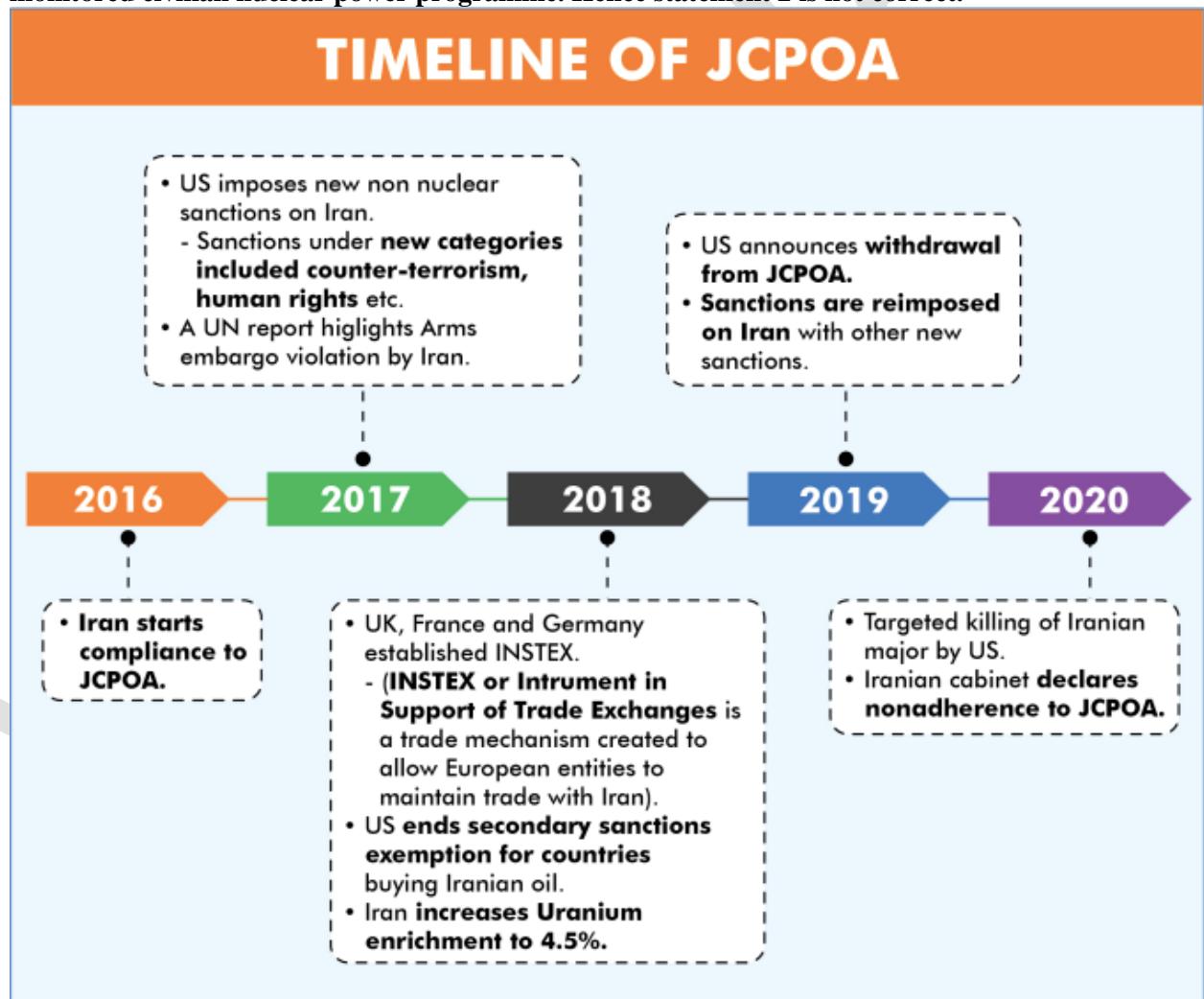
Q 14.A

- The government of India has launched Aroma Mission in 2016 to boost the cultivation of plants like lavender which has aromatic medicinal properties. In February 2021 CSIR-IIIM-Jammu announced Aroma Mission phase 2 after the success of the first phase. Lavender plants have aromatic medicinal properties. There are various healthcare products made from lavender dried leaves & plant essential oils. Lavender water, which separates from lavender oil, is used to make incense sticks. It is also used to make soaps and room fresheners.

- The commercial cultivation of Lavender on large scale is highly profitable for example-Lavender oil sells for at least Rs 10,000 per liter, according to scientists from CSIR. Its cultivation also provides better employment opportunities, especially to women farmers.
- Statement 1 is correct:** It is a perennial flowering aromatic herb grown in light well-aerated dry and calcareous soils rich in organic matter.
- Statement 2 is correct:** It is a temperate plant that can tolerate drought and frost conditions but it is overly sensitive to waterlogging.
- Statement 3 is not correct:** At present, large-scale lavender cultivation is limited to low rainfall regions and hill slopes of **Jammu and Kashmir**. States like Himachal Pradesh & Arunachal Pradesh are also encouraging their farmers to take up lavender. It gives a higher yield when cultivated at higher altitudes with good sunshine.

Q 15.D

- Recently, Iran has made 6.5 kg of uranium enriched to up to 60% which is in violation of Joint Comprehensive Plan of Action (JCPOA).
- The Joint Comprehensive Plan of Action (JCPOA) known commonly as the **Iran nuclear deal or Iran deal**, is an agreement on the Iranian nuclear program reached in Vienna on 14 July 2015, between Iran and the P5+1 (the five permanent members of the United Nations Security Council—China, France, Russia, United Kingdom, United States—plus Germany) together with the European Union. In 2019, the USA withdrew from this accord.
- It intended to prevent Iran from developing nuclear weapons while granting it an internationally monitored civilian nuclear power programme. Hence statement 2 is not correct.



- The High Representative of the European Union for Foreign Affairs and Security Policy were part of it and UNSC endorsed it through United Nations Security Council Resolution 2231. Hence statement 1 is not correct.
- The objective of the deal was to cut off Iran's ability to pursue a nuclear weapon and reverse economic sanctions by through various steps.

Strict Limitations on Iran Nuclear Programme	Extensive monitoring of Nuclear Facilities	Relief to Iran from Sanctions
 <ul style="list-style-type: none"> • Cap on Enrichment at 3.67%. • Reduce stockpiles of enriched uranium to 300kg. • Reduce the number of installed centrifuges with limitations on R&D activities. 	 <ul style="list-style-type: none"> • Allow inspection of nuclear facilities by IAEA. • Investigation of past activities by IAEA. 	 <ul style="list-style-type: none"> • End of trade and financial sanctions by USA. • End of Oil embargo by EU and allow Iran access to Swift electronic banking system.

Q 16.D

- Types of the settlement are determined by the extent of the built-up area and inter-house distance. In India compact or **clustered village** of a few hundred houses is a rather universal feature, particularly in the **northern plains**.
- The **Clustered rural settlement** is a compact or closely built-up area of houses. In this type of village, the general living area is distinct and separated from the surrounding farms, barns, and pastures. The closely built-up area and its intervening streets present some **recognizable pattern or geometric shape**, such as rectangular, radial, linear, etc.
- Such settlements are generally found in
 - **fertile alluvial plains** and in the northeastern states.
 - Sometimes, people live in **compact villages for security or defense reasons**, such as in the Bundelkhand region of central India and in Nagaland.
 - In Rajasthan, **scarcity of water** has necessitated compact settlement for maximum utilization of available water resources.
- **Hence option (d) is the correct answer.**

Q 17.C

- Recently, the Prime Minister of India has launched the second phase of Atal Mission for Rejuvenation and Urban Transformation (AMRUT) that is **AMRUT 2.0**.
- Originally AMRUT was launched as the first water-focused Mission in 2015, with a total Mission outlay of ₹1,00,000 crore.
 - The Mission caters to 500 major cities covering 60% of the urban population.
- AMRUT2.0 aims to make around **4,700 towns/cities' water secure**.
- It will build upon the progress of AMRUT to address water needs, **rejuvenate water bodies, better manage aquifers, reuse treated wastewater**, thereby promoting a circular economy of water.
- The Objective of AMRUT 2.0 is to provide **100% coverage of water supply to all households in around 4,700 ULBs**, by providing 2.68 crore urban household tap connections, thereby benefitting around 10.7 crores people. **Hence statement 1 is not correct.**
- It will provide 100% coverage of sewerage and septage in 500 AMRUT cities, by providing 2.64 crore sewer connections/ septage connections, thereby benefitting around 10.6 crores people.
- Under the Mission, **freshwater bodies will be protected** from getting polluted to make natural resources sustainable. **Hence statement 2 is correct.**
- It will promote a **circular economy of water through the formulation of the City Water Balance Plan for each city**, focusing on recycling/reuse of treated sewage, rejuvenation of water bodies and water conservation.
- The digital economy will be promoted through being a **Paperless Mission**.
- Pey Jal Survekshan will be conducted in cities to ascertain the equitable distribution of water, reuse of wastewater and mapping of water bodies w.r.t. quantity and quality of water through a challenge process.
- Technology Sub-Mission for water will leverage the latest global technologies in the field of water.
- The AMRUT-2.0 Mission will promote **Public-Private Partnership (PPP)**.
- It has been mandated for cities having the **million-plus population to take up PPP projects** worth a minimum of 10 per cent of their total project fund allocation which could be on the Annuity/ Hybrid Annuity / BOT Model. **Hence statement 3 is not correct.**

Q 18.B

- The Diamond Quadrilateral railway project is to develop high speed rail network across several metros of India. This quadrilateral railway network connects major metro cities in India, i.e. **Delhi, Chennai, Mumbai, Ahmedabad, Kolkata Hyderabad and Chennai**. This project is similar to Golden Quadrilateral which is roadway project of India which connects four metros by express ways, the project falls under National Highways Development Project which has supported for better road transport in India. **Hence option (b) is the correct answer.**
- The Indian government aims to reduce the travel time between Metro cities by half with the introduction of high speed trains, which runs at about 300kmph. Mumbai- Ahmedabad sector will be the first corridor of this ambitious project connecting about 543 kilometers

Q 19.B

- Demographic transition is the process of change in population of a society. It consists of the following four stages:
 - **Stage 1.** High death and birth rates, low growth rate.
 - **Stage 2.** Rapid decline in death rate, continued high birth rate, very high growth rate.
 - **Stage 3.** Rapid decline in birth rate, continued decline in death rate, growth rate begins to decline.
 - **Stage 4.** Low death and birth rates, low growth rate.
- The story of population growth in India is fairly in tune with the classical theory of demographic transition. During most of the nineteenth century India witnessed a fluctuating but ultimately more or less a stagnant growth of population, which drifted into the twentieth century until 1921. Thereafter, country passed through successively all the phases of **demographic transition and is now widely believed to have entered the final phase which is normally characterised by rapidly declining fertility**. It is yet to be seen as to how long will this phase extend and when India will achieve a stable population. **Hence option (b) is the correct answer.**

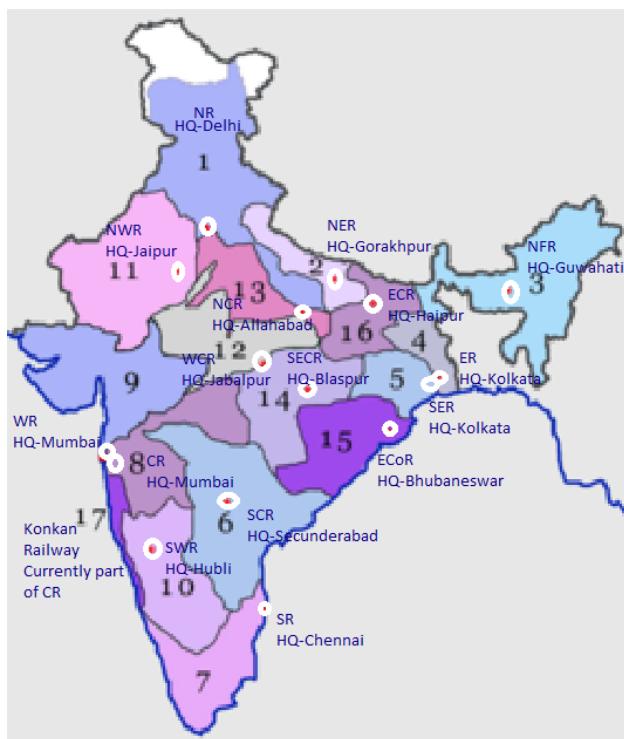
Q 20.B

- The FATF is an inter-governmental body that works to “set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system”.
- The Financial Action Task Force (FATF) was **established in July 1989 by a Group of Seven (G-7) Summit in Paris**, initially to examine and develop measures to combat money laundering. **Hence statement 1 is not correct.**
- In October 2001, the FATF expanded its mandate to incorporate efforts to combat terrorist financing, in addition to money laundering.
- In April 2012, it added **efforts to counter the financing of proliferation of weapons of mass destruction**. **Hence statement 2 is correct.**

Q 21.C

- Indian Railways is geographically organized into zones. At present there are 17 Zonal Railways (including Metro Railway, Kolkata).

Railway Zones	Headquarters
Eastern Railways	Kolkata
North Eastern Railways	Gorakhpur
South Eastern Railways	Kolkata
East Central Railways	Hajipur



- Hence option (c) is the correct answer.

Q 22.C

- When the magma from the interior of earth, comes out on the surface, tremendous heat is released. This heat energy can successfully be tapped and converted to electrical energy. Apart from this, the hot water that gushes out through the geyser wells is also used in the generation of thermal energy. **It is popularly known as Geothermal energy.**
- This energy is now considered to be one of the key energy sources which can be developed as an alternate source. The hot springs and geysers are being used since medieval period. **In India, a geothermal energy plant has been commissioned at Manikaran in Himachal Pradesh.**
- Puga and Chumathang are deemed as the most promising geothermal fields in India. These areas were discovered in 1970s and initial exploratory efforts were made in the 1980s by Geological Survey of India (GSI).** Hence option (c) is the correct answer
- In these important locations of Ladakh, the geothermal power plant would soon be developed which would be first geothermal power plant for Ladakh. The energy would be tapped from the natural geysers dotting the areas of Puga.

Q 23.A

- Rapid urban growth is a recent phenomenon. Until recent times, few settlements reached the population size of more than a few thousand inhabitants. **The first urban settlement to reach a population of one million was the city of London by around. A.D. 1810** By 1982 approximately 175 cities in the world had crossed the one million population mark. Presently 54 percent of the world's population lives in urban settlements compared to only 3 percent in the year 1800. **Hence statement 2 is not correct.**
- Conurbations** are coined by Patrick Geddes in 1915 in his book 'Cities in evolution'. **Conurbation (i.e. continuous urbanization) is a region comprising a number of cities, large towns, and other urban areas that through population growth and physical extension, have merged to form one continuous urban and industrial developed area.** A Conurbation can capture several townships, suburbs, satellite towns, and may connect two or more megacities. This presents a picture of tremendous urban growth along the arterial lines of urban autonomy. They are part of urban ecology, as functionally integrated with the megalopolis or the larger urban centers. They are characterized by fused growth patterns and fillups. They represent the horizontal urban sprawl, massive building structures, hypermarkets, residential colonies, and intervening slums adjacent to the industrial sectors. **Hence statement 1 is correct.**
- A mega city or megalopolis is a general term for cities together with their suburbs with a population of more than 10 million people.** New York was the first to attain the status of a mega city by 1950 with a total population of about 12.5 million.
- Currently, India has six major megacities. New Delhi, Mumbai, Kolkata, Bengaluru, Hyderabad and Chennai. **Hence statement 3 is not correct.**

Q 24.B

- The population growth or population change refers to the change in the number of inhabitants of territory during a specific period of time. This change may be positive as well as negative. It can be expressed either in terms of absolute numbers or in terms of percentage. Population change in an area is an important indicator of economic development, social upliftment, and the historical and cultural background of the region.

Continents by population						
Rank	Continent	Population		Share (%)	Growth (2021)	
		2020	2021		Net change	rate (%)
1	Asia	4,641,054,786	4,679,660,580	59.42	38,605,794	0.83
2	Africa	1,340,598,113	1,373,486,472	17.44	32,888,359	2.45
3	Europe	747,636,045	747,747,396	9.50	111,351	0.01
4	North America	592,072,204	596,591,192	7.58	4,518,988	0.76
5	South America	430,759,772	434,260,138	5.51	3,500,366	0.81
6	Oceania	42,677,809	43,219,954	0.55	542,145	1.27
World		7,794,798,729	7,874,965,732		80,167,003	1.03

- Hence option (b) is the correct answer

Q 25.B

- Recently, the global **Multidimensional Poverty Index (MPI), 2021** produced by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative has been released.
 - According to it, the top 3 countries living in multidimensional poverty are India, Nigeria and Pakistan.
 - It has the following Dimensions and their indicators:
 - Health:**
 - Nutrition: Any adult under 70 years of age or any child for whom there is nutritional information is undernourished.
 - Child mortality:** Any child under the age of 18 years has died in the family in the five-year period preceding the survey.
 - Education:**
 - Years of schooling: No household member aged ‘school entrance age + six years or older has completed at least six years of schooling.
 - School attendance: Any school-aged child is not attending school up to the age at which he/she would complete class eight.
 - Standard of living:**
 - Cooking Fuel:** The household cooks with dung, wood, charcoal or coal.
 - Sanitation:** The household’s sanitation facility is not improved (according to SDG guidelines) or it is improved but shared with other households.
 - Drinking-Water:** The household does not have access to improved drinking water (according to SDG guidelines) or improved drinking water is at least a 30-minute walk from home, round trip.
 - Electricity:** The household has no electricity.
 - Housing:** At least one of the three housing materials for roof, walls and floor are inadequate: the floor is of natural materials and/or the roof and/or walls are of natural or rudimentary materials.
 - Assets:** The household does not own more than one of these assets: radio, television, telephone, computer, animal cart, bicycle, motorbike or refrigerator, and does not own a car or truck.
- Hence option (b) is the correct answer.

Q 26.C

- Rice**
 - China is the leading producer of rice in the world (**produced nearly 150 million metric tonnes in 2019-2020**). **India occupies second place in the production of rice with a production of nearly 120 million metric tonnes.**
- Pulses**
 - India is the leading producer of pulses in the world. The estimated pulses production in 2020-21 is at 24.42 million tonnes.**

- **Groundnut**
 - China is the largest producer as well as consumer of groundnut in the world with 166.24 lakh tonnes followed by India (68.57 lakh tonnes), Nigeria (30.28 lakh tonnes), and the United States (25.78 lakh tonnes).
- **Banana**
 - **India is the leading producer of bananas in the world. During the year 2020, the volume of bananas produced across India accounted for around 32 million metric tonnes.**
- **Milk**
 - **India is the leading producer of milk in the world, with 22 percent of global production, followed by the United States of America, China, Pakistan, and Brazil. Milk production in 2019-20 was 198 million tonnes.**
- **Hence, option (c) is the correct answer.**

Q 27.B

- **Platinum Group of Metals (PGM) is a family comprised of 6 metals - platinum, palladium, rhodium, iridium, osmium, and ruthenium.** They have similar physical and chemical properties and tend to occur together in the same mineral deposits.
- **These six elements are classified into two groups with reference to the specific gravity of gold (19.2).**
- The elements, Ru, Rh, Pd (sp. gr. 12- 12.4) are lighter, while the other three elements, Os, Ir, and Pt are heavier than gold with sp. gr. in the range of 21.0-21.5.
- Platinum is an extremely rare metal occurring at a concentration of only 0.005 ppm in the earth's crust.
- **China and India** are moving forward with large-scale plans **to reduce the amount of carbon emission in their respective countries.** Currently, more **than half of platinum and palladium mineral goes into making catalytic converters in automobiles.** Automobiles that run on diesel predominantly use platinum for catalytic conversion. **Hence statement 2 is correct.**
- India is meeting its demand entirely by imports. The demand for PGEs is expected to touch 120 tonnes by 2025, as per the Report of the Sub-group for the 12th Plan period.
- By state, **Odisha alone accounts for 90% of the country's reserves/resources of PGE** followed by Karnataka (10%) & negligible amount by Uttar Pradesh
- **Boula - Nausahi, a 3 km-long belt, 170 km NE of Bhubaneswar, Odisha is the only proven Platinum Group of Metals (PGM) deposit in the country.** Hence the statement 1 is not correct.

Q 28.B

- **Igloos are temporary winter homes or hunting-ground dwellings of Canadian and Greenland Inuit (Eskimos).** The term igloo, or iglu, from Eskimo igdlu ("house"), is related to Iglulik, a town. The igloo, usually made from blocks of snow and dome-shaped, is used only in the area between the Mackenzie River delta and Labrador in the summer. **Hence pair 3 is correctly matched**
- **The Bindibu or Aborigines of Australia** are skilled trackers and some of them use wooden throwing sticks or boomerangs and spears. They also domesticate the dingo, a wild dog that assists them in tracking down kangaroos, rabbits, and birds. The women gather grass, roots, seeds, berries, moles, and insects, to supplement their diet. The Bindibu move in family groups in search of fresh hunting grounds. **They live in wurlies, simple shelters made of branches and tufts and grass.** Hence pair 1 is correctly matched
- **The Tuareg people are a large Berber ethnic group that principally inhabit the Sahara** in a vast area stretching from far southwestern Libya to southern Algeria, Niger, Mali, and Burkina Faso. Traditionally nomadic pastoralists, small groups of Tuareg are also found in northern Nigeria. They are camel riders and dwell in grass shelters called *zeriba*. **Hence pair 4 is not correctly matched**
- **Gobi Mongols** represent an advanced group of desert dwellers who pursue a livestock economy. They ride on horses to herd their yaks and live in portable tents called *yurts*. **Hence pair 2 is not correctly matched.**

Q 29.B

- **Recently the Nobel Prizes for physics, chemistry and medicine have been awarded.**
- On 27 November 1895, Alfred Nobel signed his last will and testament, giving the largest share of his fortune to a series of prizes in **physics, chemistry, physiology or medicine, literature and peace**, the Nobel Prizes.
- In 1968, Sveriges Riksbank (Sweden's central bank) established **The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel**.
- Since the start, in 1901, **there are some years when the Nobel Prizes have not been awarded.**

- The total number of times are 49. Most of them during World War I (1914-1918) and II (1939-1945). **Hence statement 1 is not correct.**
- In the statutes of the Nobel Foundation it says: “If none of the works under consideration is found to be of the importance indicated in the first paragraph, the prize money shall be reserved until the following year. If, even then, the prize cannot be awarded, the amount shall be added to the Foundation’s restricted funds.”.
- The statutes of the Nobel Foundation says that a prize amount may be **equally divided between two works**, each of which is considered to merit a prize.
- If a work that is being rewarded has been produced by **two or three persons, the prize shall be awarded to them jointly.**
- **In no case may a prize amount be divided between more than three persons. Hence statement 2 is correct.**

Q 30.A

- **Recently, the Sinho Commission report of 2010, has been cited by Centre has been citing as the basis for its legislation to grant 10 per cent reservation to the Economically Weaker Sections (EWS).**
- The three-member commission, headed by Major Gen (retd) S R Sinho, was instituted by the UPA government and had submitted its report in July 2010.
- The Sinho Commission had recommended welfare measures for EWS including easy access to existing schemes in the areas of housing, healthcare, sanitation, skill development, and ensuring that EWS women in General Category avail jobs under NREGA and such children get special scholarships to pursue their education.
- **Hence option (a) is the correct answer.**

Q 31.C

- **Lhop: A small tribe of southwest Bhutan,** The Lhop or Doya people are said to be the aboriginal inhabitants of the country. They trace their descent matrilineally and marry their cross cousins. Currently 2,500 in number, the tribe speaks the Tibeto-Burmese language. Their religion is Tibetan Buddhism mixed with animism and they embalm their deceased who are then placed in a foetal position in a circular adorned coffin, above the ground. **Hence pair 2 is correctly matched.**
- **Veddas:** ‘The Forest People’ or Veddas are indigenous to Sri Lanka. Their language Vedda is now extinct and the tribe speaks Sinhala and Tamil. They practice the religion of animism, worshipping the spirit of nature. The area’s last cave dwellers worship dead ancestors, called Nae Yaku. The hunt gatherers also have a peculiar deity unique to them named Kande Yakka, the spirit of the mountain or rock. **Hence pair 1 is not correctly matched.**
- **Kikuyu, also called Gikuyu or Agikuyu, are Bantu-speaking people who live in the highland area of south-central Kenya,** near Mount Kenya. In the late 20th century the Kikuyu numbered more than 4,400,000 and formed the largest ethnic group in Kenya, approximately 20 percent of the total population. Their own name for themselves is Gikuyu or Agikuyu. **Hence pair 4 is correctly matched.**
- **The Kalmyk or Kalmuks are a branch of the Oirat Mongols,** whose ancient grazing-lands spanned present-day parts of Kazakhstan, Russia, **Mongolia**, and China. They used to wander and travel over long distances in the temperate continental grasslands. They used to domesticate animals from which they obtained milk, meat, hides, etc, **Hence pair 3 is correctly matched.**

Q 32.B

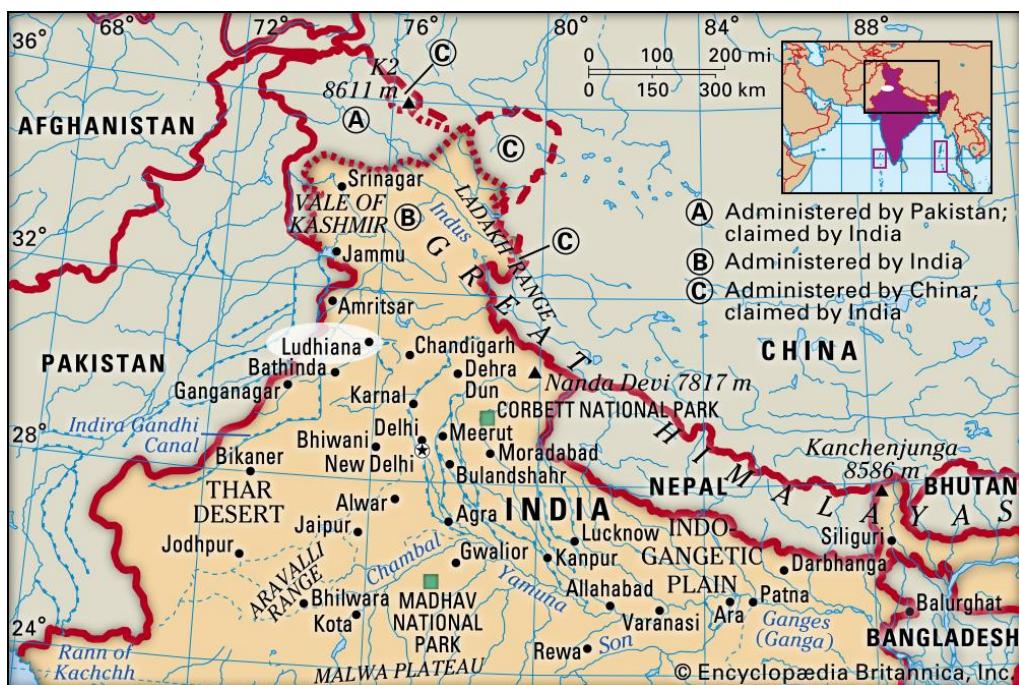
- The Ministry of Power mandated electricity distribution companies to undertake **energy accounting on a periodic basis.**
- Regulation in this regard was issued by the Bureau of Energy Efficiency (BEE) with the approval of the Ministry of Power, under the provisions of Energy Conservation (EC) Act, 2001.
- Energy Accounting prescribes accounting of **all energy inflows** at various voltage levels in the **distribution periphery of the network, including renewable energy generation and open access consumers, as well as energy consumption by the end consumers.** **Hence option (b) is correct answer.**
- Energy accounting on periodic basic and subsequent annual energy audit, **would help to identify areas of high loss and pilferage**, and thereafter focussed efforts to take corrective action.
- Energy accounting reports will provide detailed information about electricity consumption by different categories of consumers and the transmission and distribution losses in various areas.
- It will identify **areas of high losses and theft** and enable corrective action.

- This measure will also enable the **fixation of responsibility on officers for losses and theft.**
- The data will enable the discoms to take appropriate **measures for reducing their electricity losses.**
- The discoms will be able to plan for suitable infrastructure up-gradation as well as demand-side management (DSM) efforts in an effective manner.
- This initiative will further contribute towards India's climate actions in meeting our **Paris Agreement Goals.**

Q 33.B

- **Jabalpur**, is a city in Madhya Pradesh state, central India. Jabalpur lies just **north of the Narmada River** in a rocky basin surrounded by low hills that are dotted with lakes and temples. Jabalpur is the administrative headquarters of Jabalpur district. Historically, a center of the Kalachuri and Gond dynasties, the city developed a syncretic culture influenced by intermittent Mughal and Maratha rule. **Hence pair 1 is correctly matched.**
- **Ludhiana** city was founded in the time of Lodhi dynasty which ruled in Delhi from 1451-1526 A.D. Ludhiana is now a District Headquarter with Parliamentary Constituency of the same name. It is one of the biggest Municipal Corporations of the State. It is spread over about 310 km². **The city stands on the Sutlej's old bank**, 13 km south of its present course. **Hence pair 2 is not correctly matched.**
- **Madurai**, is a city in south-central Tamil Nadu state. The ancient history of the region is associated with the Pandya kings, and Madurai was the site of the Pandya capital (4th–11th century CE). Later it was conquered by Chola, Vijayanagar, Muslim, Maratha, and British rulers. It is **located on the Vaigai River**, about 30 miles (48 km) southeast of Dindigul. **Hence pair 3 is not correctly matched.**



**Q 34.D**

- The Prime Minister of India has recently launched the Indian Space Association (ISPA),
- It is an industry body consisting of various stakeholders of the Indian space domain.
- The members of the organisation include government bodies such as **Indian Space Research Organisation (ISRO)** and private telecom companies such as **Bharti Airtel's One Web**, **Tata Group's Nelcom, L&T, MapMyIndia, and others**. **Hence statement 1 is not correct.**
- One of the main goals of the organisation is to **supplement the government's efforts towards making India a global leader in commercial space-based excursions**.
- Of late, ISRO's rockets have been carrying the payload and communication satellites of various countries; now, private players will also look to broach this space with the new organisation.
- ISPA said it would engage with stakeholders across the ecosystem for the formulation of an enabling policy framework that fulfils the government vision of leading commercial space exploration.
- NewSpace India Limited (NSIL)**, incorporated on 6 March 2019 (under the Companies Act, 2013) is a wholly-owned Government of India company, under the administrative control of the Department of Space (DOS).
- One of the major business areas of NSIL includes the production of Polar Satellite Launch Vehicle (PSLV) and Small Satellite Launch Vehicle (SSLV) through the industry. **Hence statement 2 is not correct.**

Q 35.A

- Transport is a service or facility by which people, materials and manufactured goods are physically carried from one location to another.
- Transport distance can be measured as:
 - km distance or actual distance of route length;
 - time distance or the time taken to travel on a particular route;
 - and cost distance or the expense of travelling on a route.
- In selecting the mode of transport, distance, in terms of time or cost, is the determining factor. **Isochrone lines are drawn on a map to join places equal in terms of the time taken to reach them**. Hence, option (a) is correct.

Q 36.B

- Situated in the heart of **South America**, the **Pantanal** is the world's largest tropical wetland. At 42 million acres, the Pantanal covers an area that sprawls across three countries—**Bolivia, Brazil, and Paraguay**.
- Currently, the Pantanal remains relatively intact. However, a growing number of environmental pressures, ranging from unsustainable infrastructure development to untreated waste pollution, threaten to destabilize the regional ecosystem and the benefits it provides people and wildlife. Deforestation in the Pantanal is increasing, with more than 12% of the forest cover already lost.

- There were more than 15,000 fires in Brazil's Pantanal wetlands in 2020, causing widespread devastation. That is triple the number recorded in the same period in 2019, according to data collected by Brazil's National Institute for Space Research. The forest fires in the region are common due to wet and dry spells of seasons but for the last two to three years, they have been unusual and apocalyptic.



- Hence option (b) is the correct answer

Q 37.B

- Indian population is constituted of major races of the world. The ancestors of the majority of present population have migrated to India from surrounding territories across the Himalayas. All the races in India, over the past centuries, have got mixed up with one another due to intermarriages. **As such, now there is no race in India which is completely pure.**
- The present population of the Indian subcontinent can be divided into five racial groups- the Negritos, Western Brachycephals, the Proto-Australoids, the Mongoloids, and the Mediterraneans. The Negritos were the first of the racial groups that came to India.
- The Proto-Australoid is also known as the Pre-Dravidian race.** Dr. Guha says that the tribal population of central India is fairly dominated by this racial element. The Santhals, the Mundas, the Juangas, the Soaras, the Kondhs are some of the many tribes belonging to this racial type.
- The Mediterranean race is one of the dominated race in India. Mediterranean is divided into three types. They are (a) Palaeo-Mediterranean (b) Mediterranean, (c) Oriental.
 - The Palaeo-Mediterranean: This racial type is represented by the Tamil and Telugu Brahmins of the South.
 - The Mediterranean: People of this racial type are believed to be the builders of the Indus valley civilization.
 - Oriental: Oriental type is very much similar to the Mediterranean type.
- People of Nordic racial origin came to India from the North and South-East Asia spread all over Northern India during the 2nd millennium B.C. This race is mainly found in North India in a mixed form with the Mediterranean race. The people of this stock are believed to have greatly enriched Indian culture.

- People of Mongoloid racial ancestry are mainly found in North-Eastern India.
- The three races such as the Negrito, the Proto-Austroloid and the Mongoloid constitute the tribal population. The other three, namely the Mediterranean, the Western Brachycephals and the Nordic races constitute the general population of India. Hence option (b) is the correct answer.

Q 38.A

- In South American Continent, **Brazil** is the largest producer of high grade iron-ore in the world.
- **Chile and Peru** are leading producers of copper. Hence statement 1 is correct.
- **Brazil and Bolivia** are among the world's largest producers of tin.
- South America also has large deposits of gold, silver, zinc, chromium, manganese, bauxite, mica, platinum, asbestos and **diamond**. Hence statement 3 is not correct.
- **Mineral oil** is found in **Venezuela, Argentina, Chile, Peru and Columbia**. Hence statement 2 is not correct.

Q 39.B

- **The Rhine Industrial Region of Germany:** The Rhine industrial region, popularly known as Ruhr-Westphalia industrial region, is one of the largest industrial regions in Europe. The large reserve of Ruhr coal and Siegerland iron ore and transportation route through the Rhine were the major factors for the massive growth of industries. Almost every type of manufacturing industry was developed in this region which includes iron and steel, heavy chemicals, metallurgical, textiles and different consumer goods. Hence, pair 1 is correctly matched.
- **The Mid-Lake Region, USA:** This is the region having greatest concentration of ferrous industries. This region accounts about 1/4th of ferrous and Ferro-alloy products of the country. The famous Youngstown-Pittsburg-Johnstown iron and steel triangle is located in the region. The other steel-producing areas are Wheeling, Cleveland, Louisville, Rook-ford, Flint, Steubenville and Detroit. Hence, pair 2 is not correctly matched.
- **The New England Regions, USA:** The vast New England industrial region comprises six states, namely Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and Maine. This is the largest single industrial region on earth. The nucleus of the region is Boston Metropolitan region. The major industries in this region are electrical machinery, textiles, machinery, leather, fabricated metals and other industries. Hence, pair 3 is correctly matched.

Q 40.C

- Coal is one of the important minerals which is mainly used in the generation of thermal power and smelting of iron ore. It is one of the most mined minerals from the earth.
- Of the three fossil fuels (Petroleum, natural gas and coal), coal has the most widely distributed reserves; coal is mined in over 100 countries, and on all continents except Antarctica. The largest proved reserves are found in the United States, Russia, China, Australia and India.
- Distribution:
 - **USA:** Allegheny and Appalachian Mountains have enormous coal deposits. Carboniferous coal of the Great Lakes and Appalachians region helped USA become a leading industrialized nation. The North Antelope Rochelle Coal Mine located in the Powder River Basin of Wyoming is the world's biggest coal mine. Hence, pair 1 is correctly matched.
 - **Russia:** Ural region and the Donbass Basin are important mining regions. Most of Russia's coal in the Siberian Region is untapped.
 - **Australia:** Australia is a leading producer of coal. Most of its coal is exported to China, Japan etc. Australia has rich coking coal deposits. India imports coking coal mainly from Australia. **Bowen Basin coalfield**, Galilee Basin coalfield, South Maitland coalfield, Sydney Basin coalfield, and Latrobe valley coalfield are some of the important coalfields of Australia. Hence, pair 2 is not correctly matched.
 - **China:** China is the largest producer and consumer of coal in the world. China's coal is of poor quality. It imports metallurgical grade coal from Australia. **Shanxi**, Fushun, Inner Mongolia, Kansu and most coal is found in the north and northwest of the country. Hence, pair 3 is correctly matched.

Q 41.A

- Union Minister of Agriculture and Farmers' Welfare has recently launched the **Horticulture Cluster Development Programme (CDP)** to ensure holistic growth of Horticulture. It aims at growing and developing identified horticulture clusters to make them globally competitive. It will address all major issues related to the Indian horticulture sector including pre-production, production, post-harvest

management, logistics, marketing and branding. The programme is designed to leverage geographical specialisation and promote integrated and market-led development of horticulture clusters. Ministry of Agriculture and Farmers' Welfare (MoA&FW) has identified 53 horticulture clusters, of which 12 have been selected for the pilot launch of the programme. Based on the learnings from the pilot project, the programme will be scaled up to cover all the identified clusters.

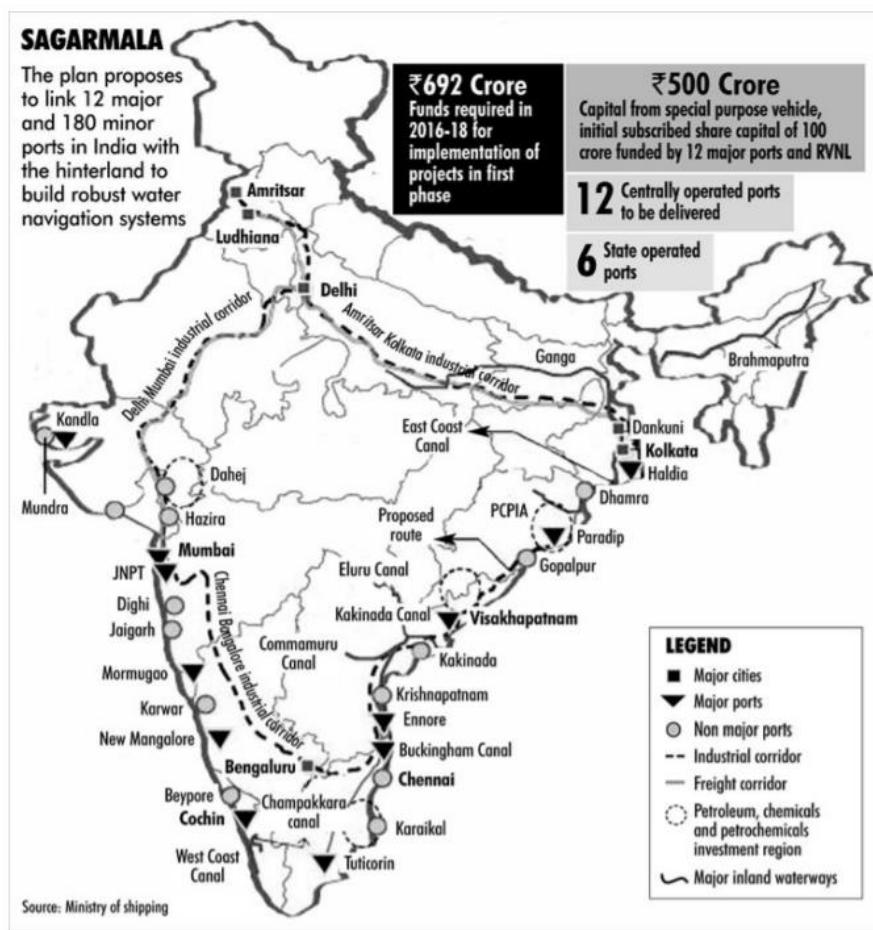
- The clusters of the pilot phase include
 - **Shopian (J&K) and Kinnaur (H.P.) for Apple; Hence pair 1 is correctly matched.**
 - **Lucknow (U.P.), Kutch (Gujarat) and Mahbubnagar (Telangana) for Mango; Hence pair 2 is correctly matched.**
 - Anantpur (A.P.) and Theni (T.N.) for Banana;
 - **Nasik (Maharashtra) for Grapes; Hence pair 3 is not correctly matched.**
 - Siphahijala (Tripura) for Pineapple;
 - Solapur (Maharashtra) and Chitradurga (Karnataka) for Pomegranate and
 - **West Jaintia Hills (Meghalaya) for Turmeric; Hence pair 4 is not correctly matched.**
- These clusters will be implemented through Cluster Development Agencies (CDAs) which are appointed on the recommendations of the respective State/UT Government.

Q 42.D

- PVTGs are more vulnerable among the tribal groups. Due to this factor, more developed and assertive tribal groups take a major chunk of the tribal development funds, because of which PVTGs need more funds directed for their development. In this context, in 1975, the Government of India initiated to identify the most vulnerable tribal groups as a separate category called PVTGs and declared 52 such groups, while in 1993 an additional 23 groups were added to the category, making it a total of 75 PVTGs out of 705 Scheduled Tribes, **spread over 17 states and one Union Territory (UT),** in the country (2011 census).
 - **In Uttar Pradesh and Uttarakhand, Buxas and Rajis tribes comes under PVTGs.**
- **In 1973, the Dhebar Commission** created Primitive Tribal Groups (PTGs) as a separate category, who are less developed among the tribal groups. In 2006, the Government of India renamed the PTGs as Particularly Vulnerable Tribal Groups (PVTGs). **Hence option (d) is the correct answer.**
- Government of India follows the following criteria for identification of PVTGs.
 - Pre-agricultural level of technology
 - Low level of literacy
 - Economic backwardness
 - A declining or stagnant population.

Q 43.C

- India has a total of 13 major ports viz. Kolkata Port, Paradip Port, New Mangalore Port, Cochin Port, Jawaharlal Nehru Port, Mumbai Port, Kandla Port, Vishakhapatnam Port, Chennai Port, Tuticorin port, Ennore Port, Mormugao Port and Port Blair Port. There are over 200 notified minor and intermediate ports. About 95 per cent by volume and 70 per cent by value of India's international trade is carried on through maritime transport.
- **Jawaharlal Nehru Port:** It is also known as Nhava Sheva and is the largest container port in India, handling around half of the containers of all major ports. It is located on the eastern shore of Mumbai harbour off Elephanta Island and is accessed via Thane Creek.
- **Vishakhapatnam Port:** Vizag port is located in Andhra Pradesh and is known for the bulk of Cargo handling on the east coast.
- **Mormugao Port:** Mormugao port in Goa is the leading iron ore exporting port of India.
- **Ennore Port:** This port is now named Kamarajar Port Limited. It is the first corporate port of India and is registered as a public company with a 68% stake held by the government.



- So the correct order is 2-3-1-4

Q 44.C

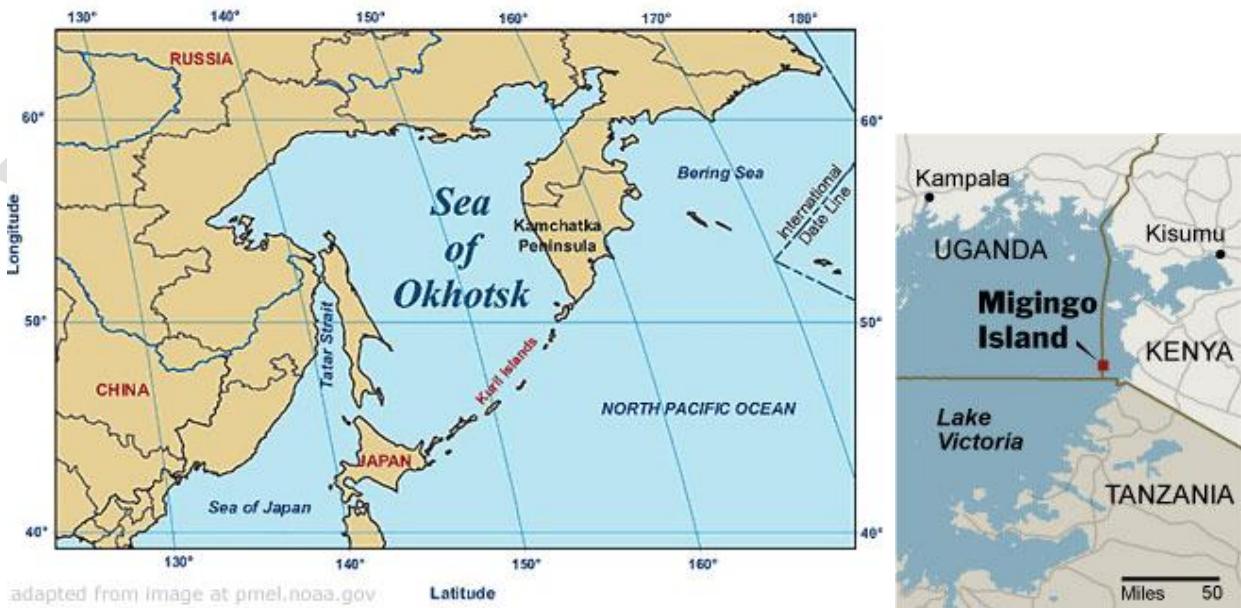
- The landlocked mountainous region of Nagorno-Karabakh is the subject of an unresolved dispute between Azerbaijan, in which it lies, and its ethnic Armenian majority, backed by neighboring Armenia. (Fig 1) The conflict has roots dating back well over a century into a competition between Christian Armenian and Muslim Turkic and Persian influences. Hence pair 1 is correctly matched
- In 1954, Crimea became a part of Ukraine, even though the majority of the population was Russian, not Ukrainian. At the time, both Russia and Ukraine were part of the Soviet Union. In 2014, Russian military forces took over Crimea with the help of pro-Russian Crimeans. A referendum, or countrywide vote, was then held to determine if Crimea should become part of Russia. The vote came out in favor of Crimea joining Russia. (Fig 2) . Hence pair 2 is correctly matched
- The dispute over Kuril Island which is a volcano-intensive archipelago of 56 islands is the primary reason Japan and Russia have never signed a peace treaty to formalize the end of World War II. At the end of the war, the Soviet Union invaded the Kuril Islands, some of which Imperial Russia had previously controlled. While the transfer of the islands to the Soviet Union was included in the Yalta agreements, Japan continued to claim historical rights to the southernmost islands. The islands separate the Sea of Okhotsk from the Pacific Ocean.(Fig 3) Hence pair 3 is not correctly matched.
- Mgingo is a 2,000-square-metre island in Lake Victoria. The island is the center of a low-level territorial dispute between Kenya and Uganda and is extremely densely populated. (Fig 4) Hence pair 4 is not correctly matched



(i) Figure 1: Nagorno-Karabakh



(ii) Figure 2: Crimean Peninsula



(iii) Figure 3: Kuril Island

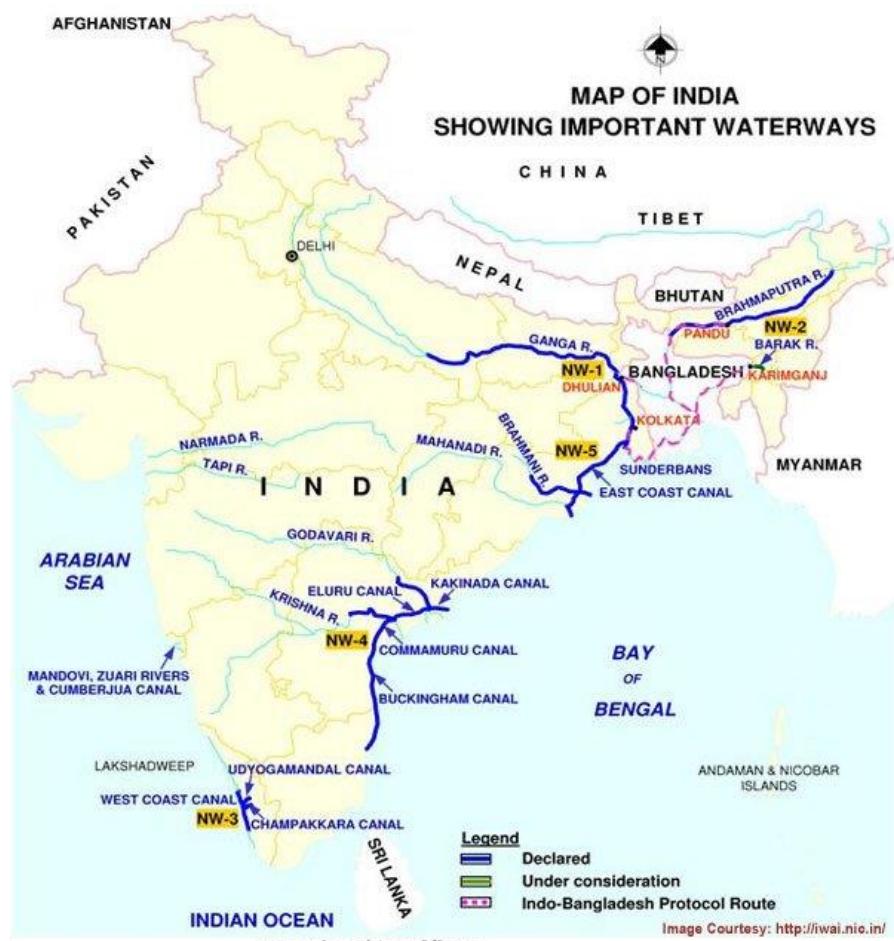
(iv) Figure 4: Mizingo Island

Q 45.A

- The effective literacy rate for India in Census 2011, works out to 74.04 percent. The corresponding figures for males and females are 82.14 and 65.46 per cent respectively. **Thus three-fourth of the population of aged 7 years and above is literate in the country.** Four out of every five males and two out of every three females in the country are literate. **Hence option (a) is the correct answer.**
- Kerala ranks first in the country with a literacy rate of 93.91 per cent, closely followed by Lakshadweep (92.28 per cent) and Mizoram (91.58 per cent).
- Bihar with a literacy rate of 63.82 per cent ranks last in the country preceded by Arunachal Pradesh (66.95 per cent) and Rajasthan (67.06 per cent).
- Among the major States, Maharashtra (82.91 per cent) comes after Kerala, followed by Tamil Nadu (80.33 per cent).
- The States and Union Territories with literacy rates below the National average (74.04 per cent) are Jammu and Kashmir in the North, Rajasthan in the West, Andhra Pradesh in the South, Madhya Pradesh, Chhattisgarh, Uttar Pradesh in Central, Bihar, Jharkhand, Orissa in the East and **Arunachal Pradesh and Assam in the North-East of the country.**
- The States and Union Territories, which have literacy rate below the National average in respect of all the three categories i.e., persons, males and females are Arunachal Pradesh, Chhattisgarh, Madhya Pradesh, Andhra Pradesh, Bihar, Rajasthan, Jammu and Kashmir, Jharkhand and Uttar Pradesh.
- **Kerala holds the first rank in the country in female literacy with 91.98 percent.**
 - **Rajasthan (52.66 per cent) has recorded the lowest female literacy rate** preceded by Bihar (53.33 per cent). Similarly, the States and Union Territories with female literacy rate below the National average (65.46 per cent) are Orissa, Chhattisgarh, Madhya Pradesh, Andhra Pradesh, Arunachal Pradesh, Uttar Pradesh, Jammu and Kashmir, Jharkhand, Bihar and Rajasthan.
- **Lakshadweep (96.11 per cent) holds the first rank in the country with respect to male literacy rate.** Kerala (96.02 per cent) ranks second.
 - Bihar (73.39 percent) has recorded the lowest literacy rate in case of males preceded again by Arunachal Pradesh (73.69 per cent).

Q 46.D

- To promote inland water transport in the country as an economical, environment friendly supplementary mode of transport to rail and road, 111 inland waterways (including 5 National Waterways declared earlier) were declared as 'National Waterways' under the **National Waterways Act, 2016.**
- The Kakinada-Puducherry stretch of canals and the Kaluvelly tank, Bhadrachalam-Rajahmundry stretch of river **Godavari** and Wazirabad - Vijayawada stretch of river **Krishna** with a total length of 1,078 kms was declared as National Waterway-4 (NW-4) in 2008. **The stretch was further extended upto Nashik in case of Godavari and upto Galagali in case of river Krishna, in the states of Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu and Puducherry under the National Waterways Act, 2016.**
- **Development of National Waterways-4:**
 - NW 4 declared in November, 2008 for a total length of 1078 km under following stretches: River Godavari (Bhadrachalam to Rajahmundry), River Krishna (Wazirabad to Vijayawada), Kakinada Canal (Kakinada to Rajahmundry), Eluru Canal (Rajahmundry to Vijayawada), Commamur Canal (Vijayawada to Pedaganjam), North Buckingham Canal (Pedaganjam to Chennai), South Buckingham Canal (Chennai to Merkanam), Kaluvelly Tank (Markanam to Puducherry) - Total =1078 km
- **NW-4 extended by NW Act-2016:** Revised length 2890KM
 - River Krishna from Wazirabad to Galagali (628 Km) and River Godavari from Bhadrachalam to Nasik (1184Km)



Q 47.B

- The **Malthusian doctrine of Population growth** is stated as follows:
 - There is a natural sex instinct in human beings to increase at a fast rate. As a result, the population increases in geometrical progression and if unchecked doubles itself every 25 years. Thus starting from 1, the population in successive periods of 25 years will be 1, 2, 4, 8, 16, 32, 64, 128, 256 (after 200 years).
 - On the other hand, the food supply increases in a slow arithmetical progression due to the operation of the law of diminishing returns based on the supposition that the supply of land is constant. Thus the food supply in successive similar periods will be 1, 2, 3, 4, 5, 6, 7, 8, and 9 (after 200 years).
 - Since **population increases in geometrical progression and the food supply in arithmetical progression, the population tends to outrun the food supply. Thus an imbalance is created which leads to a population crash.**
- Hence option (b) is the correct answer

Q 48.A

- **Recent Context:** The Karen and the Kachin in northern Myanmar are the two major ethnic groups that have allied themselves with the movement against the junta that took power in Myanmar after the army ousted the elected government of Aung San Suu Kyi in February 2021.
- The Karen are a tribal group who have historically lived in the hills in Myanmar (formerly Burma) side of the Thai border. Best recognized for their elongated necks, the Karen women wear heavy brass rings around their necks, forearms, and shins. While the Karen men are mainly field workers and farmers, the women have a rich history of crafting from wood carving to weaving. **Hence option (a) is the correct answer.**
- Jarai people or Jarais are an ethnic group in Vietnam's Central Highlands (Gia Lai and Kon Tum Provinces, with smaller populations in Đăk Lăk Province), as well as in the Cambodian northeast Province of Ratanakiri.
- The Tambanuo people are an indigenous ethnic group residing in Sabah, eastern Malaysia on the island of Borneo. They reside in Beluran, Kota Marudu, and Pitas districts of Kudat Division of Sabah. Their population was estimated at 20,000 in the year 1990. They are considered a sub-group of the Orang Sungai, and their language belongs to the Paitanic branch of the Austronesian language family.
- Kalash are Indo-Aryan indigenous people of Khyber-Pakhtunkhwa province in Pakistan, which can easily be clubbed under the country's smallest religion. A unique group, the Kalash people are polytheists who lay emphasis on nature and offer sacrifices as a part of their culture. Their mythology and folklore have been compared by researchers to that of ancient Greece but are closer to Indo-Iranian traditions. They also have their own, distinct language.

Q 49.B

- Recently, an indigenously developed Quantum Key Distribution (QKD) solution by C-DOT which can support a distance of more than 100 kilometres on standard optical fiber has been unveiled.
- The development of indigenous QKD solutions is essential to address the threat that rapid advancement in Quantum Computing poses to the security of the data being transported by various critical sectors through the current communication networks.
- Quantum Key Distribution (QKD) is a mechanism for agreeing encryption keys between remote parties, relying on the properties of quantum mechanics to ensure that the key has not been observed or tampered with in transit.
- Since traditional public-key cryptography algorithms may be vulnerable to a future large-scale quantum computer, new approaches are required that do not share this vulnerability.
- QKD claims to offer potential mitigation since its security properties are based on the laws of physics rather than the hardness of some underlying mathematical problems.
- QKD protocols provide a mechanism for two remote parties to agree a shared secret key, where the key cannot be observed or tampered with by an adversary without alerting the original parties.
- However, because QKD protocols do not provide authentication, they are vulnerable to physical man-in-the-middle attacks in which an adversary can agree individual shared secret keys with two parties who believe they are communicating with each other. **Hence statement 1 is not correct.**
- For this reason, QKD protocols must be deployed alongside cryptographic mechanisms that ensure authentication.
- These cryptographic mechanisms must also be secure against the quantum threat.
- In March 2021, for the first time in the country, the Indian Space Research Organisation (ISRO) has successfully demonstrated free-space Quantum Communication over a distance of 300 m. **Hence statement 2 is correct.**

Q 50.B

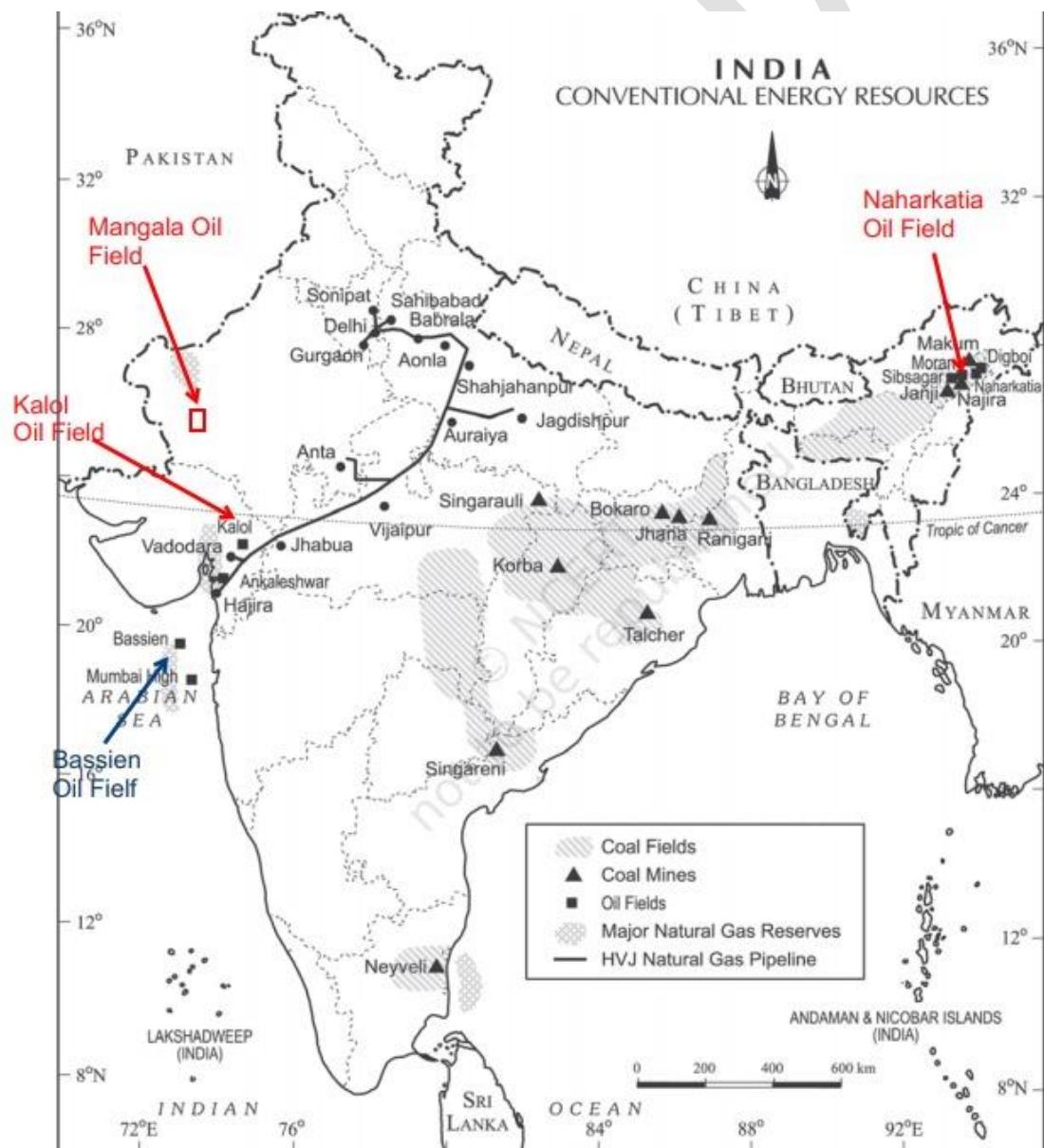
- Union Ministry of Rural Development & Panchayati Raj jointly launched **Climate Resilience Information System and Planning (CRISP-M)** tool for integration of climate information in Geographic Information System (GIS) based watershed planning under Mahatma Gandhi NREGA along with the United Kingdom. Hence statement 1 is not correct.
- CRISP-M is a web and mobile phone-based geographic information system-aided tool that has been designed to help communities make climate-smart decisions.**
- This tool will be used in seven states where the Foreign Commonwealth and Development Office, Government of UK and Ministry of Rural Development, Government of India are jointly working towards climate resilience.
 - The states are Bihar, Jharkhand, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Odisha and Rajasthan.
- The CRISP-M tool will help embed climate information in the GIS-based planning and implementation of Mahatma Gandhi NREGA. **Hence statement 2 is correct.**

Q 51.D

- Bauxite is the ore, which is used in the manufacturing of aluminium. Bauxite is found mainly in tertiary deposits and is associated with laterite rocks occurring extensively either on the plateau or hill ranges of peninsular India and also in the coastal tracts of the country. **Odisha happens to be the largest producer of Bauxite.** Kalahandi and Sambalpur are the leading producers. The other two areas which have been increasing their production are Bolangir and Koraput. The plateaus of Lohardaga in Jharkhand have rich deposits. Gujarat, Chhattisgarh, Madhya Pradesh and Maharashtra are other major producers. Bhavnagar and Jamnagar in Gujarat have major deposits. Chhattisgarh has bauxite deposits in the **Amarkantak plateau** while the Katni-Jabalpur area and Balaghat in M.P. have important deposits of bauxite. Kolaba, Thane, Ratnagiri, Satara, Pune and Kolhapur in Maharashtra are important producers. Tamil Nadu, Karnataka and Goa are the minor producers of bauxite.
- Hence, option (d) is the correct answer.**

Q 52.B

- Onshore refers to the mainland. In exploration and production, “onshore” refers to the development of oil fields, gas deposits and geothermal energy on land.
- The onshore extraction of crude oil and geothermal energy requires drilling into underground deposits. The targeted search for crude oil, natural gas and geothermal deposits is called prospecting.
- Naharkatia** (also spelled as Naharkatia or Nahorkatiya) is a town and a town area committee in Dibrugarh district in the Indian state of Assam. Therefore, it is an onshore oil field. Hence, option 1 is correct.
- It is well known for petroleum and gas reserves. **Naharkatiya-Barauni Crude Oil Pipeline** is an operating crude oil pipeline in India. The pipeline runs from Naharkatiya, Assam to the refinery at Noonmati, Assam and to Barauni, Bihar.
- Scottish firm Cairn Energy-discovered on shore **Mangala oilfield in Rajasthan**, producing more than 473 million stock barrels of oil. Mangala oilfield was discovered by Cairn in 2004.
- The field was put to production on August 29, 2009. In December 2011, Cairn sold the India business Vedanta group. Hence, option 2 is correct.
- Kalol** is a city and a municipality in Panchmahal district in the state of Gujarat, India. It is an onshore oil field. Recently, ONGC has finished drilling operations by country's first indigenously made oil drilling rig at Kalol oil fields in Gujarat which is an onshore facility. Hence, option 3 is correct.
- Located 80-km off the Mumbai coast, the Bassien gas field**, also called the Vasai field, was discovered in 1976 and put in production in 1988. Bassein field has 393 billion cubic meters of initial gas in place, of which 248 bcm (about 7 trillion cubic feet) has been produced. It is an offshore facility. Hence, option 4 is not correct.

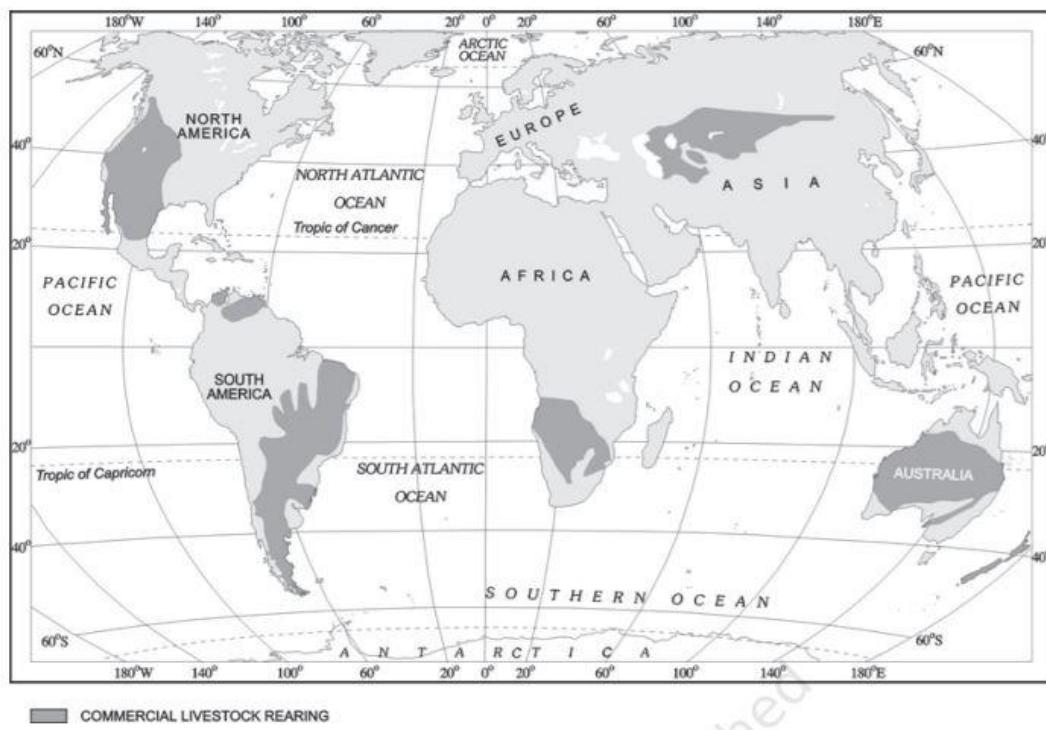


Q 53.D

- The Great Lakes are, from west to east: Superior, Michigan, Huron, Erie, and Ontario. They are a dominant part of the physical and cultural heritage of North America.
- The Great Lakes are shared between Canada and the USA spanning more than 750 miles (1,200 kilometers) from west to east, these vast inland freshwater seas provide water for consumption, transportation, power, recreation, and a host of other uses.
- The lakes drain roughly from west to east, emptying into the Atlantic Ocean through the St. Lawrence lowlands. Except for Lakes Michigan and Huron, which are hydrologically one lake, their altitudes drop with each lake, usually causing a progressively increasing rate of flow.
- Hence, option (d) is the correct answer.

Q 54.B

- Commercial livestock rearing is more organised and capital intensive compared to nomadic herding. It is a specialised activity in which only one type of animal is reared. Important animals include sheep, cattle, goats and horses. Hence, statement 1 is not correct.
- Rearing of animals in ranching is organised on a scientific basis. Products such as meat, wool, hides and skin are processed and packed scientifically and exported to different world markets. Hence, statement 2 is correct.
- These ranches cover large areas and are divided into a number of parcels, which are fenced to regulate grazing. When the grass of one parcel is grazed, animals are moved to another parcel. The number of animals in a pasture is kept according to the carrying capacity of the pasture.
- Commercial livestock ranching is essentially associated with western cultures and is practised on permanent ranches. The main emphasis is on breeding, genetic improvement, disease control and health care of the animals. New Zealand, Australia, Argentina, Uruguay and the United States of America are important countries where commercial livestock rearing is practised. Hence, statement 3 is not correct.

**Fig. 5.6: Areas of Commercial Livestock Rearing****Q 55.D**

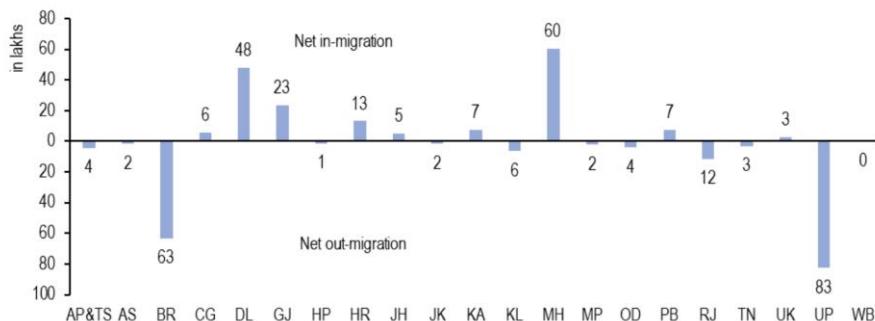
- The Population Commission of United Nations considers the ability, *to both read and write a simple message with understanding in any language, a sufficient basis for classifying a person as literate.*
- The Census of India has adopted this definition with a bit of modification. According to Census of India, **“a person aged seven and above, who can both read and write with understanding in any language, is treated as literate.”** A person, who can only read but cannot write, is not literate. In the Censuses prior to 1991, children below five years of age were necessarily treated as illiterates. The age limit was raised to 7 years based on the advice of experts that the ability to read and write with understanding is not ordinarily achieved until that age. It was, therefore decided at the 1991 Census that all children in the age group 0-6, would be treated as illiterate by definition and the population aged seven years and above only would be classified as literate or illiterate. The same criterion has been retained in the Censuses of 2001 and 2011. **Hence option (d) is the correct answer.**

Q 56.A

- Migration is the movement of people away from their usual place of residence, across either internal (within country) or international (across countries) borders. The latest government data on migration comes from the 2011 Census.
 - As per the Census, India had 45.6 crore migrants in 2011 (38% of the population) compared to 31.5 crore migrants in 2001 (31% of the population).
 - Between 2001 and 2011, while population grew by 18%, the number of migrants increased by 45%.
 - In 2011, 99% of total migration was internal and immigrants (international migrants) comprised 1%.
- Another way to classify migration is: (i) intra-state, and (ii) inter-state.
 - In 2011, intra-state movement accounted for **almost 88%** of all internal migration (39.6 crore persons). **Hence statement 2 is correct.**
- There is variation across states in terms of inter-state migration flows. According to the 2011 Census, there were 5.4 crore inter-state migrants.
 - As of 2011, **Uttar Pradesh and Bihar** were the largest source of inter-state migrants while **Maharashtra and Delhi** were the largest receiver states. Around 83 lakh residents of Uttar Pradesh and 63 lakh residents of Bihar had moved either temporarily or permanently to other states. **Hence statement 1 is not correct.**
 - Around 60 lakh people from across India had **migrated to Maharashtra by 2011 and 48 lakh to Delhi.** **Hence statement 3 is not correct.**
- As of 2011, majority (70%) of intra-state migration was due to reasons of marriage and family with variation between male and female migrants.
 - While 83% of females moved for marriage and family, the corresponding figure for males was 39%.

- Overall, 8% of people moved within a state for work (21% of male migrants and 2% of female migrants).

Figure 1: Inter-state Migration (in lakh)



Note: A net out-migrant state is one where more people migrate out of the state than those that migrate into the state. Net in-migration is the excess of incoming migrants over out-going migrants.

Q 57.D

- Airports Authority of India (AAI) is responsible for handling the airports in India. As of now Airports Authority of India handles a total of 137 airports including 29 International airports (3 Civil Enclaves), 10 Custom Airports (4 Civil Enclaves) and 103 Domestic airports (23 Civil Enclaves).
 - Custom Airports:** These airports have custom checking and clearance facilities/immigration facilities for international operations by national carriers and for foreign tourist and cargo charter flights.
 - Civil Enclaves in Defence Airport:** Handles Indian Armed forces with 26 civil enclaves in Defence Airfields.
 - Amritsar, Srinagar, Kozhikode, Nagpur and Kushinagar all are international airports in India. Hence option (d) is the correct answer.**
- Recently, the Central Government declared **Srinagar international airport** as a major airport. With this move, the Airports Economic Regulatory Authority (AERA) will determine tariff for aeronautical services at Srinagar airport.
- Recently, the Prime Minister of India inaugurated the **Kushinagar International Airport** which means Uttar Pradesh has now 3 functional International Airports which would be five in near future. It is the 29th International Airport of India. Other two are Lucknow and Varanasi.

Q 58.C

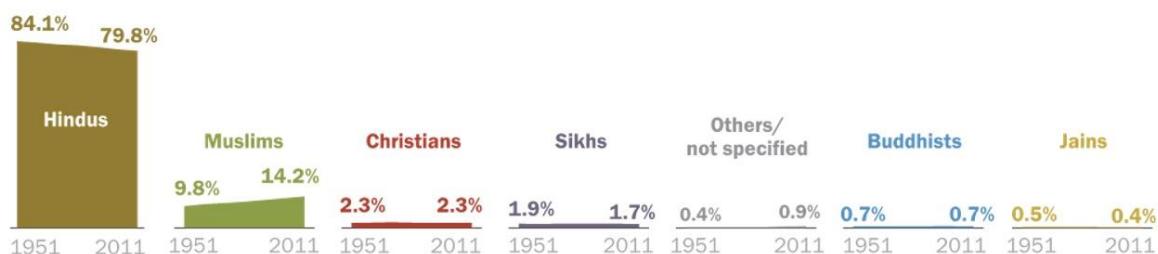
- Cardamom** is also known as the '**queen of aromatic spices**' is mainly used for **medicines**. It grows well in hot 15°C-32°C and humid (150-300 cm) climates. A well-drained forest loams, red and laterite soils with plenty of humus are ideal for its growth. Tropical rain forests at an altitude of **800-1,600 meters above sea level** provide the most congenial environment for its growth. Cardamom is a shade-loving plant and is grown under shady trees. India produces a major part of the world's total cardamom and the entire production comes from three states of southern India viz., **Kerala (53%), Karnataka (42%), and Tamil Nadu**. In Kerala, the crop is largely concentrated in the Cardamom hills. Also, **India stands 2nd after Guatemala in the export of cardamom**.

Q 59.D

- The Christian population is distributed mostly in rural areas of the country. The main concentration is observed along the Western coast around Goa, Kerala and also in the hill states of Meghalaya, Mizoram, Nagaland, Chotanagpur area and Hills of Manipur. **Hence statement 1 is correct.**
- Muslims, the largest religious minority, are concentrated in Jammu & Kashmir, certain districts of West Bengal and Kerala, many districts of Uttar Pradesh, in and around Delhi and in Lakshadweep. They form majority in Kashmir valley and Lakshadweep.
 - As per Census 2011, Muslims account for 14.2% of the total population in India. **Hence statement 2 is correct.**

Hindus still large majority in India, while the share of Muslims has gradually grown

% of Indians who are ...



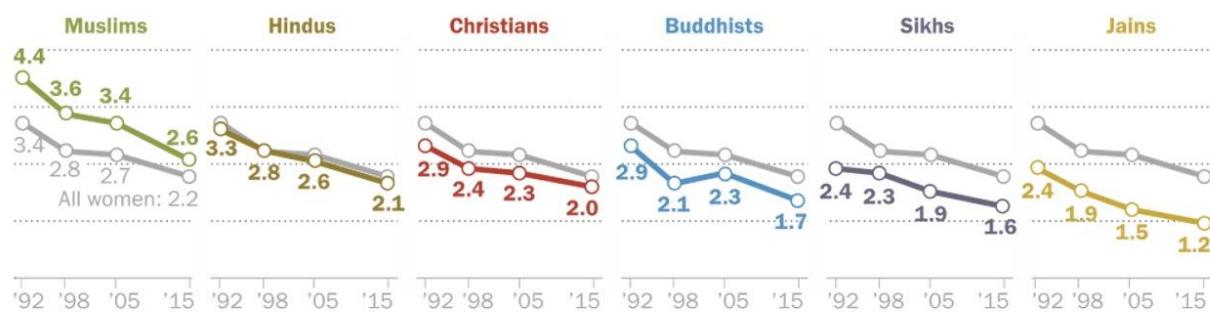
Source: Census of India, 1951-2011.

"Religious Composition of India"

- India's fertility rate has been declining rapidly in recent decades. Today, the average Indian woman is expected to have 2.2 children in her lifetime, a fertility rate that is higher than rates in many economically advanced countries like the United States (1.6) but much lower than India's in 1992 (3.4) or 1950 (5.9).
- Every religious group in the country has seen its fertility fall. Muslims still have the highest fertility rate among India's major religious groups, followed by Hindus at 2.1. Jains have the lowest fertility rate (1.2). **Hence statement 3 is not correct.**

In India, fertility rates have fallen and religious gaps have shrunk

Number of children an average woman in India is expected to have in her lifetime



Source: National Family Health Survey, 1992-2015.

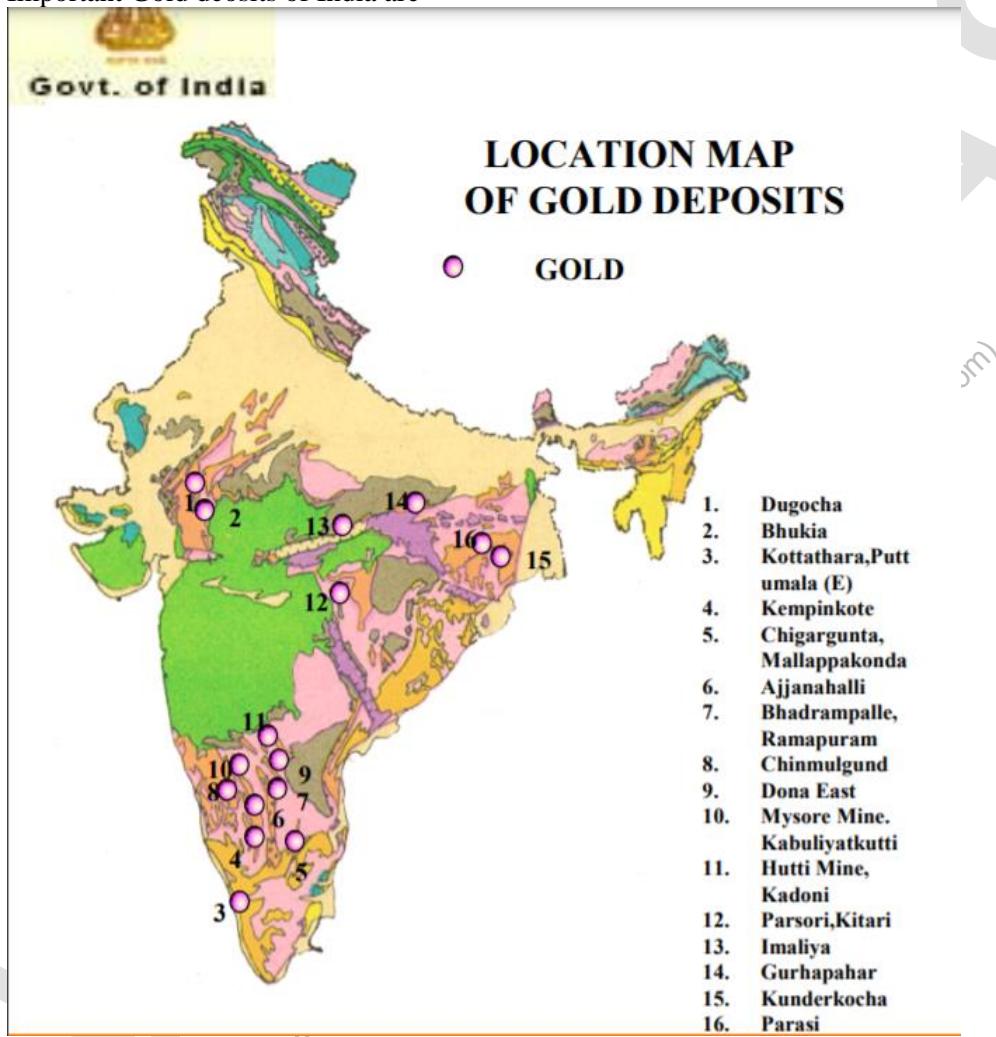
"Religious Composition of India"

Q 60.D

- Narora Atomic Power station is located at **Narora, district Bulandshahar, Uttar Pradesh**. The plant houses two reactors, each a pressurized heavy-water reactor (PHWR) capable of producing 220 MW of electricity. Commercial operation of NAPS-1 began on 1 January 1991, NAPS-2 on 1 July 1992.
- Bhandara district is situated in Wainganga basin. The total area of the district is 33716.65 sq.km. which is **about 1.21% of the total area of Maharashtra State**. The **Wainganga and Bawanhadi rivers bound the major part of the northern territory of the district**. Bhandara District has been endowed with various valuable mineral resources.
- Manganese Ore is found in large quantity in the district**. The other important minerals found in the district are **Iron Ore, Chromite, Silliminite, Corundum, Phyllite, Kynite and Quartz**. Besides these, the other minor minerals are also found in the district. State.
- Nellore mica belt** is the largest mica-producing area covering part of **Nellore district in Andhra Pradesh, India**.
- Andhra Pradesh is the largest mica producing state of India**. The mica mining area lies in Nellore district and is 100 km long and 25 km wide. Nellore mica is generally light green in colour;
- it is generally stained and spotted. The other districts with workable mica deposits are Vishakhapatnam, West Godavari.
- The Neyveli II coal mine is an opencast mine, operated by NCL India Limited, with a capacity of 15 million tonne per year, located near the town of **Neyveli in Cuddalore district in Tamil Nadu, India**.
- The mine supplies the 600 megawatt (MW) Neyveli Thermal Power Station and the 420MW Thermal Power Station
- Hence option (d) is the correct answer**

Q 61.C

- India has **501.83 million tonnes of gold ore reserves as of April 1, 2015, according to National Mineral Inventory data**. Out of these, 17.22 million tonnes were placed under reserves category and the rest under remaining resources category.
- The largest reserves of gold ores are located in Bihar (44 per cent), followed by Rajasthan (25 per cent), Karnataka (21 per cent), West Bengal (3 per cent), Andhra Pradesh (3 per cent), Jharkhand (2 per cent).
- The Geological Survey of India (GSI) is actively engaged in geological mapping, followed by mineral exploration and surveys, of various mineral commodities with an aim to identify potential mineral rich zones and establish resources.
- The Government of India recently amended the Minerals Evidence of Mineral Contents Rules to allow auction of composite licence at G4 level for deep-seated minerals, including gold.**
- This is expected to bring more participation from private players with advanced technology in the field of exploration and mining of deep seated minerals, including Gold.
- Important Gold deosits of India are -



- SOURCE - Ministry of Mines
- Bhukia Gold deposit** - Gold mineralization in the newly discovered Bhukia deposit in northwestern India is hosted in Proterozoic metamorphosed volcano-sedimentary rocks of the Aravalli-Delhi Belt. Three generations of tourmaline occurring in different textural settings are recognized in the host rocks of the deposit. **It is located in Rajasthan.**
- Hatti (or Huttu) Gold Mine** - Hatti Gold Mines, also spelled Huttu, is a notified area council in Raichur district in the Indian state of **Karnataka**. The mines are owned and operated by Huttu Gold Mines Limited.
- Parasi Gold deposit** - Parasi Gold Deposit of M/s Rungta Mines Limited with peak production capacity of gold ore 60006.18 TPA and Beneficiation plant capacity 200 TPD in mine lease area of 75.273 Ha, located at village Parasi, Kutachauli and Kothadih, Taluk Tamar, Ranchi District of State **Jharkhand**.
- Kunderkocha** Gold mine are also located in the state of **Jharkhand**, however, they are located east to Parasi Gold deposits. It forms the part of **West Singhbhum area**.
- Hence option (c) is the correct answer.**

Q 62.C

- Commercial grain cultivation is practised in the interior parts of semi-arid lands of the midlatitudes. Wheat is the principal crop, though other crops like corn, barley, oats and rye are also grown.
- The size of the farm is very large, therefore entire operations of cultivation from ploughing to harvesting are mechanised. There is low yield per acre but high yield per person.
- This type of agriculture is best developed in **Eurasian steppes, the Canadian and American Prairies, the Pampas of Argentina, the Velds of South Africa, the Australian Downs and the Canterbury Plains of New Zealand.**

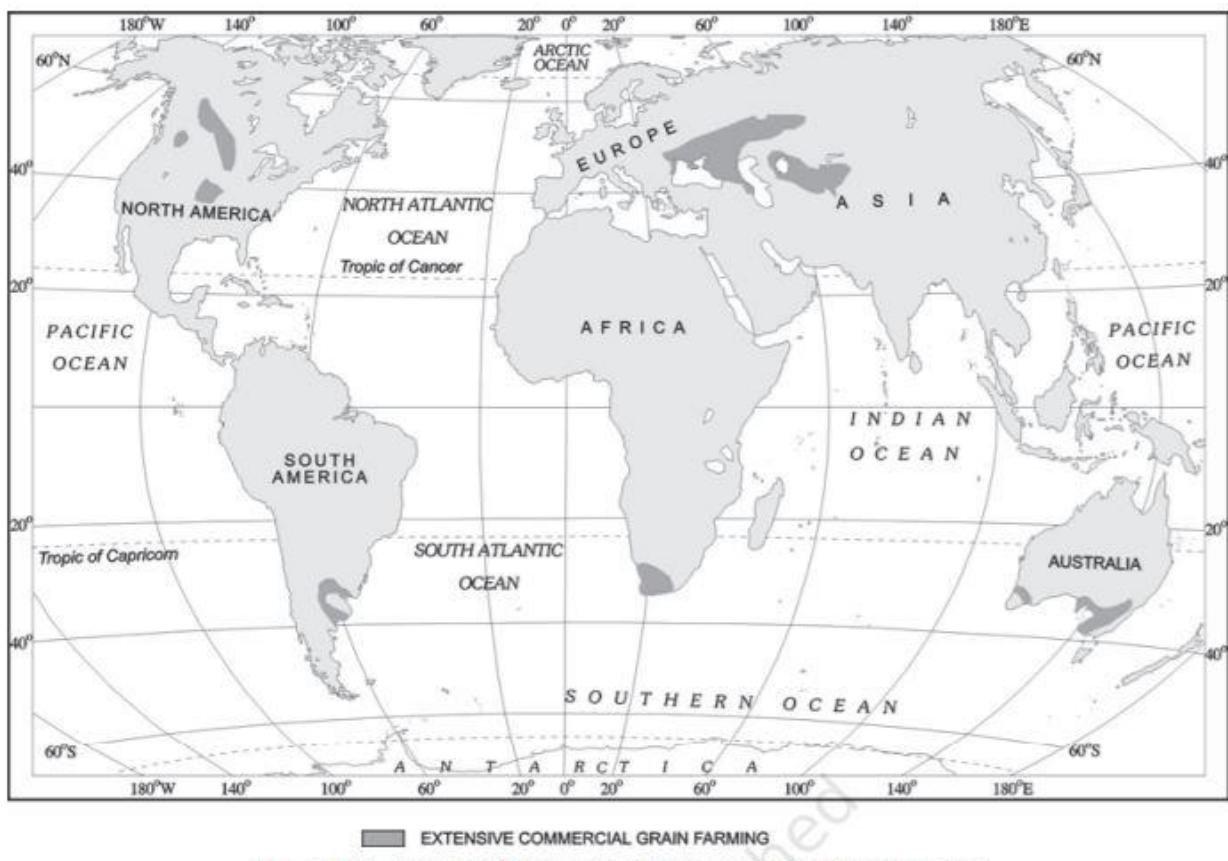


Fig. 5.12: Areas of Extensive Commercial Grain Farming

Q 63.B

- Sex ratio is used to describe the number of females per 1000 of males. There are large spatial and temporal variations in sex ratio at state level. **Only Puducherry and Kerala are states/UT that has more number of females than male.** As per Census 2011, the Gender ratio of India is 943 females per 1000 males. There are 949 females to 1000 men in rural areas, while in an urban area, there are 929 females to 1000 males. **Hence statement 1 correct.**

T 00-003: Population by sex and sex ratio

State Code	State / UT	Population			Sex ratio
		Persons	Males	Females	
	India@	1,028,737,436	532,223,090	496,514,346	933
01	Jammu & Kashmir	10,143,700	5,360,926	4,782,774	892
02	Himachal Pradesh	6,077,900	3,087,940	2,989,960	968
03	Punjab	24,358,999	12,985,045	11,373,954	876
04	Chandigarh	900,635	506,938	393,697	777
05	Uttaranchal	8,489,349	4,325,924	4,163,425	962
06	Haryana	21,144,564	11,363,953	9,780,611	861
07	Delhi	13,850,507	7,607,234	6,243,273	821
08	Rajasthan	56,507,188	29,420,011	27,087,177	921
09	Uttar Pradesh	166,197,921	87,565,369	78,632,552	898
10	Bihar	82,998,509	43,243,795	39,754,714	919
11	Sikkim	540,851	288,484	252,367	875
12	Arunachal Pradesh	1,097,968	579,941	518,027	893
13	Nagaland	1,990,036	1,047,141	942,895	900
14	Manipur@	2,166,788	1,095,634	1,071,154	978
15	Mizoram	888,573	459,109	429,464	935
16	Tripura	3,199,203	1,642,225	1,556,978	948
17	Meghalaya	2,318,822	1,176,087	1,142,735	972
18	Assam	26,655,528	13,777,037	12,878,491	935
19	West Bengal	80,176,197	41,465,985	38,710,212	934
20	Jharkhand	26,945,829	13,885,037	13,060,792	941
21	Orissa	36,804,660	18,660,570	18,144,090	972
22	Chhattisgarh	20,833,803	10,474,218	10,359,585	989
23	Madhya Pradesh	60,348,023	31,443,652	28,904,371	919
24	Gujarat	50,671,017	26,385,577	24,285,440	920
25	Daman & Diu	158,204	92,512	65,692	710
26	Dadra & Nagar Haveli	220,490	121,666	98,824	812
27	Maharashtra	96,878,627	50,400,596	46,478,031	922
28	Andhra Pradesh	76,210,007	38,527,413	37,682,594	978
29	Karnataka	52,850,562	26,898,918	25,951,644	965
30	Goa	1,347,668	687,248	660,420	961
31	Lakshadweep	60,650	31,131	29,519	948
32	Kerala	31,841,374	15,468,614	16,372,760	1,058
33	Tamil Nadu	62,405,679	31,400,909	31,004,770	987
34	Pondicherry	974,345	486,961	487,384	1,001
35	Andaman & Nicobar Islands	356,152	192,972	163,180	846

Source: Primary Census Abstract : Census of India 2001

- Hence statement 2 is not correct.**
- Although overall sex ratio in India gives a gloomy picture, situation with respect to child sex ratio in the age group of 0-6 years is more depressing. Whereas overall sex ratios has slightly improved between 1991 and 2011, the child sex ratio has registered a steep fall from 976 in 1961 to a desperate 914 in 2011. **This is the lowest child sex ratio India has ever recorded since Independence. Hence statement 3 is correct.**

Q 64.B

- Usually, rural settlements are located near water bodies such as rivers, lakes, and springs where water can be easily obtained. Sometimes the need for water drives people to settle in otherwise disadvantaged sites such as islands surrounded by swamps or low-lying river banks. Most water-based ‘wet point’ settlements have many advantages such as water for drinking, cooking, and washing. Rivers and lakes can be used to irrigate farmland. But in certain areas, these are associated with disadvantages such as floods and increased sea levels. **A dry point settlement has the advantages of flood protection, fertile soil, and fairly flat land which is ideal for agriculture and building. It is relatively upland as compared to the surrounding areas. Such types of settlements are common in deltaic regions, wetlands, marshes, and plains which are prone to multiple floods in a year.**
- **Hence option (b) is the correct answer.**

Q 65.A

- The Iron and Steel industry is one of the most complex and capital-intensive industries and is concentrated in the advanced countries of North America, Europe and Asia.
- In Europe, U.K., Germany, France, Belgium, Luxembourg, the Netherlands and Russia are the leading producers.
 - The important steel centres are Scun Thorpe, Port Talbot, Birmingham and Sheffield in the U.K.;
 - Duisburg, Dortmund, Dusseldorf and Essen in Germany;
 - **Le Creusot** and St. Etienne in **France**; and
 - Moscow, St. Petersburgh, Lipetsk, Tula, in Russia and Krivoi Rog, and **Donetsk in Ukraine**.
- Asia, the important centres include Nagasaki and Tokyo-Yokohama in Japan; Shanghai, **Tienstin and Wuhan in China**; and Jamshedpur, Kulti-Burnpur, Durgapur, Rourkela, Bhilai, Bokaro, Salem, Visakhapatnam and Bhadravati in India.
- **Hence, option (a) is the correct answer.**

Q 66.D

- Density of population, is expressed as number of persons per unit area. The density of population in India (2011) is 382 persons per sq km. There has been a steady increase of more than 200 persons per sq km over the last 50 years as the density of population increased from 117 persons/ sq km in 1951 to 382 persons/sq km in 2011.
- The spatial variation of population densities in the country which ranges from as low as 17 persons per sq km in Arunachal Pradesh to 11,297 persons in the National Capital Territory of Delhi. Among the northern Indian States, Bihar (1102), West Bengal (1029) and Uttar Pradesh (828) have higher densities, while Kerala (859) and Tamil Nadu (555) have higher densities among the peninsular Indian states. States like Assam, Gujarat, Andhra Pradesh, Haryana, Jharkhand, Odisha have moderate densities.
- **The hill states of the Himalayan region and North eastern states of India (excluding Assam) have low densities, whereas Rajasthan (201), Orissa (269), Chhattisgarh (189), Madhya Pradesh (236), Gujarat (308), Karnataka (319) and Andhra Pradesh have population density lower than National density. Hence statement 1 is not correct.**
- The Union Territories (excluding Andaman and Nicobar islands) have very high densities of population. **Hence statement 2 is not correct.**
- Growth of population is the change in the number of people living in a particular area between two points of time. Its rate is expressed in percentage.

Table 1.1 : Decadal Growth Rates in India, 1901-2011

Census Years	Total Population	Growth Rate*	
		Absolute Number	% of Growth
1901	238396327	-----	-----
1911	252093390	(+) 13697063	(+) 5.75
1921	251321213	(-) 772117	(-) 0.31
1931	278977238	(+) 27656025	(+) 11.60
1941	318660580	(+) 39683342	(+) 14.22
1951	361088090	(+) 42420485	(+) 13.31
1961	439234771	(+) 77682873	(+) 21.51
1971	548159652	(+) 108924881	(+) 24.80
1981	683329097	(+) 135169445	(+) 24.66
1991	846302688	(+) 162973591	(+) 23.85
2001	1028610328	(+) 182307640	(+) 21.54
2011**	1210193422	(+) 181583094	(+) 17.64

* Decadal growth rate:
$$g = \frac{P_2 - P_1}{P_1} \times 100$$

where P_1 = population of the base year
 P_2 = population of the present year

** Source : Census of India, 2011[Provisional]

- Hence statement 3 is not correct.

Q 67.C

- High technology, or simply high-tech, is the latest generation of manufacturing activities. It is best understood as the application of intensive research and development (R and D) efforts leading to the manufacture of products of an advanced scientific and engineering character.
- High-tech industries which are regionally concentrated, self-sustained and highly specialised are called technopolies.** The Silicon Valley near San Francisco and Silicon Forest near Seattle are examples of technopolies. Hence, statement 1 is correct.
- Professional (white-collar) workers make up a large share of the total workforce.** These highly skilled specialists greatly outnumber the actual production (blue-collar) workers. Hence, statement 2 is correct.
- Robotics on the assembly line, computer-aided design (CAD) and manufacturing, electronic controls of smelting and refining processes, and the constant development of new chemical and pharmaceutical products are notable examples of high-tech industries.

Q 68.D

- The rock containing 40-45% MgCO₃ is usually called dolomite. It is grouped under flux and construction minerals and is important for iron & steel and ferro-alloys industries.
- Dolomite is consumed by iron & steel, ferro-alloys, fertilizer, glass, alloy steel and other industries. Iron & steel industry was the major consumer of dolomite accounting more than 80%, followed by sponge iron (about 8%) and cement & ferro-alloys (about 2% each).
- The remaining quantity are consumed by other industries, such as alloy steel, glass, fertilizer, paint, refractory, etc.
- According to the Indian Bureau of Mines, **Madhya Pradesh has almost a third (27 per cent) of India's dolomite reserves.** Within the state, dolomite deposits are found in Mandla, Balaghat, Chattarpur, Sagar, Jabalpur, Katni, Sidhi, Narsinghpur, Seoni, Jhabua, Khandwa and Dewas districts.
- Other states where Dolomite reserves are available include **Orissa, Chhattisgarh and Andhra Pradesh.**
- Madhya Pradesh government notified an amendment to the Madhya Pradesh Minor Mineral Rules, 1996. The amendment tweaks the procedure for issuing permits to quarry 'minor minerals' like dolomite, used in the state's steel and other industries.
- Dolomite mining fall in an ecological corridor connecting the Kanha and Bandhavgarh tiger reserves, which are classified as reserve forests.** This brings the state government's amendment in conflict with yet another existing law-a statutory provision in the Wildlife (Protection) Act, 1972.
- Due to this, the protests were staged against the government for its amendment act in January 2021.
- Hence option (d) is the correct answer

Q 69.A

- Atomic energy can be produced by fission or fusion of the atoms or rather the nuclear parts of radio-active minerals like uranium thorium and radium. **India possesses the world's largest reserves of monazite, the principal source of thorium and some reserves of uranium.**
- In India, **uranium is embedded in the igneous and metamorphic rocks in Jharkhand, Rajasthan, Andhra Pradesh and some parts of Himalaya.** A substantial source of uranium deposits is also found in the monazite sands along the Kerala coasts.
- The production of **uranium is at the mines at Jaduguda in Singhbhum district of Jharkhand. Soon, India's biggest uranium mine will come up in Kadapa district of Andhra Pradesh where 6,000 tonnes of uranium will be produced everyday.** Hence option (a) is the correct answer.
- Thorium is principally obtained from monazite. **The beach sands of Kerala in Palghat and Quilon district contain the world's richest monazite deposits.** It also occurs on the sands of Visakhapatnam in Andhra Pradesh.

Q 70.D

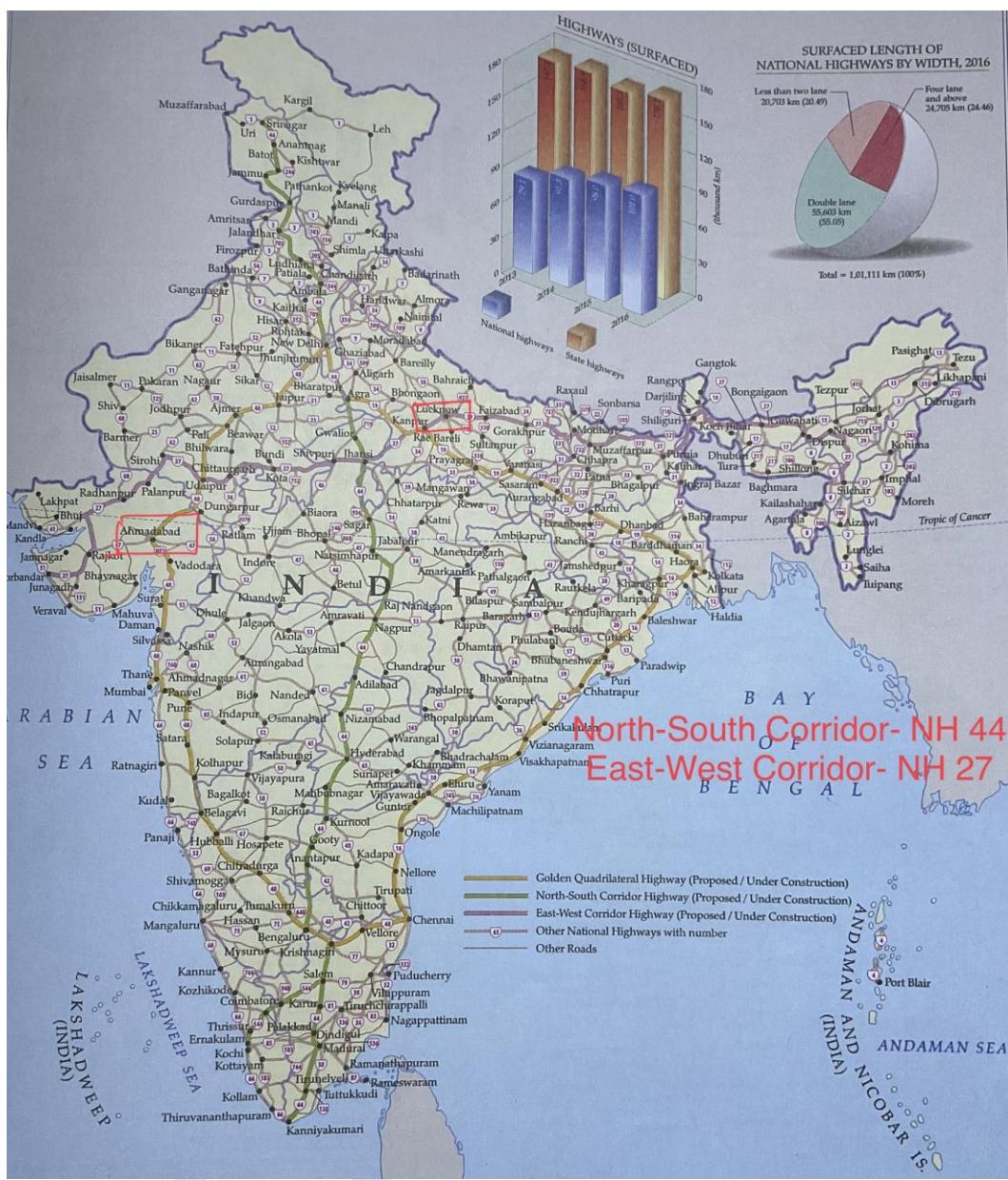
- **Ruhr Coal field in Germany** has been one of the major industrial regions of Europe for a long time. Coal and iron and steel formed the basis of the economy.
- The Ruhr region is responsible for **80 % of Germany's** (not world) total steel production. **Hence statement 1 is not correct.**
- Changes in the industrial structure have led to the decay of some areas, and there are problems of industrial waste and pollution in the Ruhr region.
- **Duisburg**, not Port Talbot is the major inland riverine port in the Ruhr region. Port Talbot is the important steel centre in the United Kingdom. **Hence statement 2 is not correct.**

Q 71.A

- Vertical farming is the practice of producing food in vertically stacked layers and vertically inclined surfaces. Crops are grown indoors, under artificial conditions of light and temperature. It uses soil-less methods such as hydroponics, aquaponics and aeroponics.
- **Advantages of vertical farming**
 - Can yield 390 times higher food per square foot while using **95% less water than traditional agricultural methods.**
 - Crops aren't subject to seasons and hence give **high productivity year-round**
 - Pesticide-free or organic food is produced
 - Offers a plan to handle future food demands.
- **Disadvantages of Vertical farming**
 - High Initial cost for establishing the vertical farming system
 - **Difficult and costly Pollination; The absence of natural pollinators in vertical farming represents a major challenge that if not addressed could result in substantial economic losses.**
 - Higher labour costs
 - Relies too much on technology and power loss would result in devastating impacts
- **Hence, option (a) is correct.**

Q 72.B

- About 80% of the total road length are categorised as rural roads. The National Highways, State Highways and District Roads constitute 2%, 4% and 14% respectively. **Hence statement 1 is not correct.**
- National Highway 44 (NH 44) is the longest-running National Highway in India. It is 3,745 km long and covers the North-South Corridor of NHDP. It starts from Srinagar in the north and ends in Kanyakumari in the south. **Hence statement 2 is correct.**



- The **Golden Quadrilateral** is a national highway network connecting most of the major industrial, agricultural and cultural centres of India. It forms a quadrilateral connecting the four major metro cities of India, viz., **Delhi (north), Kolkata (east), Mumbai (west) and Chennai (south)**. Other cities connected by this network include Ahmedabad, Bengaluru, Balasore, Bhubaneswar, Cuttack, Berhampur, Durgapur, Jaipur, Kanpur, Pune, Kolhapur, Surat, Vijayawada, Ajmer, Vizag, Bodhgaya, Varanasi, Allahabad, Agra, Mathura, Dhanbad, Gandhinagar, Udaipur, and Vadodara. **Hence statement 3 is not correct.**

Q 73.C

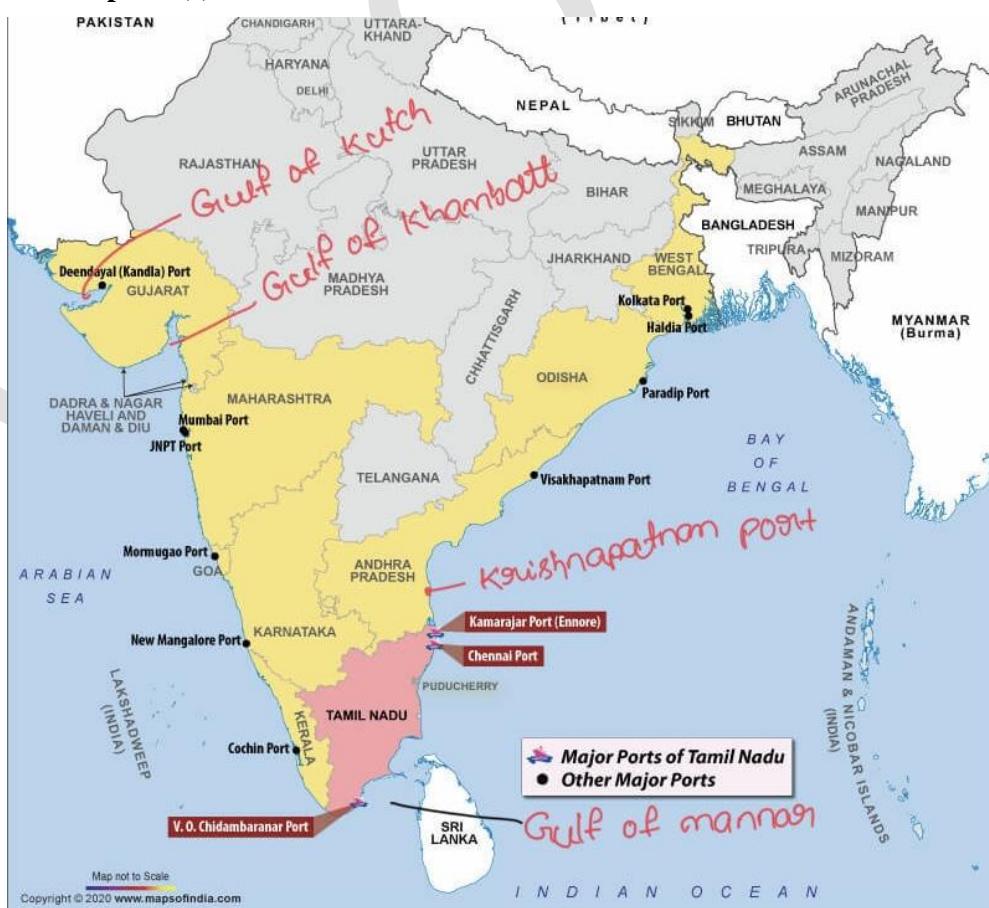
- Territorial Army celebrated its 72nd Rising Day on 9th October 2021.**
- The English raised the Territorial Army in 1920 through **Indian Territorial Act of 1920** and comprised of two wings namely – ‘The Auxiliary Force’ for Europeans & Anglo-Indians, and ‘The Indian Territorial Force’ for Indian Volunteers.
- After Independence the **Territorial Army Act was passed in 1948** and the first Indian Governor General Shri C Rajagopalachari formally inaugurated the Territorial Army on 09 October 1949 and this day is celebrated as the TA Day every year. **Hence statement 1 is not correct.**
- The Territorial Army is a part of **Regular Army**. Thus it works under the Ministry of Defence. **Hence statement 2 is not correct.**
- Its present role is to relieve the Regular Army from static duties and assist Civil Administration in dealing with natural calamities and maintenance of essential services in situations where life of the communities is affected or the security of the Country is threatened and to provide units for Regular Army as and when required. **Hence statement 3 is correct.**

Q 74.C

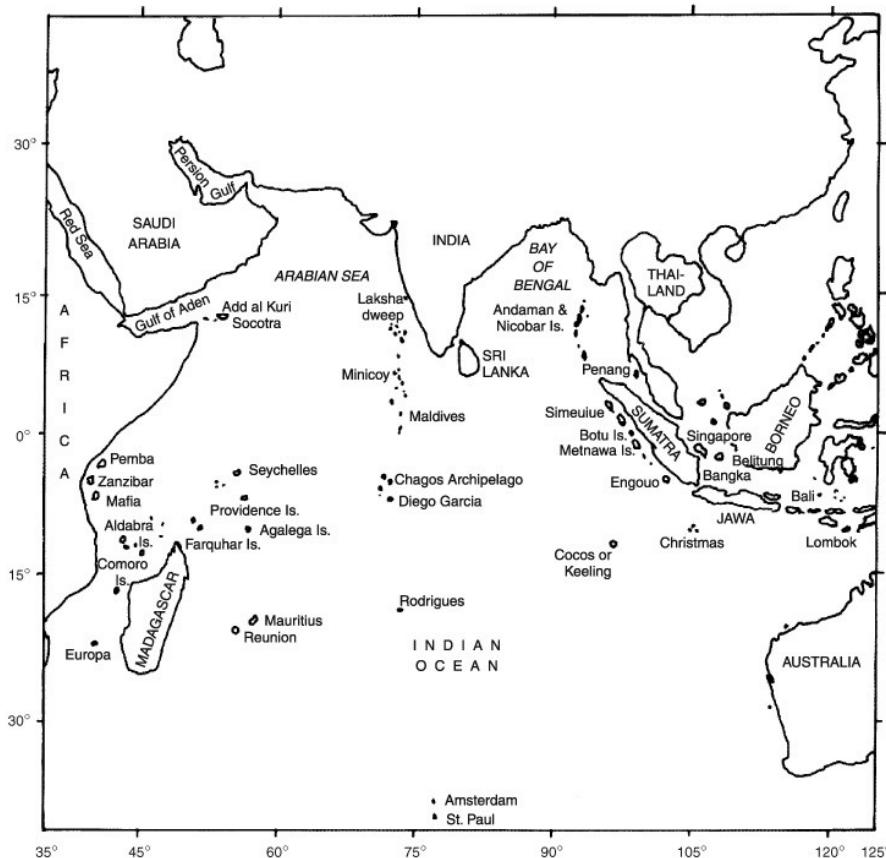
- Human activities which generate income are known as economic activities. Economic activities are broadly grouped into primary, secondary, tertiary and quaternary activities.
- Primary activities are directly dependent on the environment as these refer to the utilisation of the earth's resources such as land, water, vegetation, building materials and minerals.
- These economic activities are directly tied to the extraction resources of the earth.** Such economic activities occur at the beginning of the production cycle where people live in close contact with the resources of the land. Such primary economic activities produce basic foodstuff and raw materials for industry. Hence, statement 1 is correct.
- It, thus includes hunting and gathering, pastoral activities, fishing, forestry, agriculture, and mining and quarrying.** Hence, statement 2 is correct.
- People engaged in primary activities are called red-collar workers due to the outdoor nature of their work.** Hence, statement 3 is not correct.

Q 75.C

- V.O. Chidambaranar Port** is located strategically close to the East-West International sea routes on the South Eastern coast of India. It is located in the **Gulf of Mannar**, with Sri Lanka on the South East and the large land mass of India on the West. The Port is well sheltered from the fury of storms and cyclonic winds and is operational round-the-clock all through the year. Hence statement 1 is correct.
- Kandla**, also known as the Deendayal Port Trust is a seaport in Kutch District of Gujarat state in western India, near the city of Gandhidham. Located on the **Gulf of Kutch**, it is one of major ports on west coast. Kandla was constructed in the 1950s as the chief seaport serving western India, after the partition of India from Pakistan left the port of Karachi in Pakistan. The Port of Deendayal is located on the Gulf of Kutch on the northwestern coast of India some 256 nautical miles southeast of the Port of Karachi in Pakistan and over 430 nautical miles north-northwest of the Port of Mumbai (Bombay). It is the largest port of India by volume of cargo handled. Hence statement 2 is not correct.
- Krishnapatnam Port** popularly known as KPCL is a privately built and owned **all weather, deep water port on the east coast of India**, located in the **Nellore District of Andhra Pradesh**. It is located about 190 km north of the Chennai Port and 18 km east of the city of Nellore. In October 2020, Adani Ports & SEZ acquired 75% stake in the port, which increased to 100% in April 2021 with Adani Group buying the residual 25% stake. Hence statement 3 is correct.
- Hence option (c) is the correct answer.



Q 76.B



- The **Chagos Archipelago** is a group of seven atolls comprising more than 60 islands in the Indian Ocean. This chain of islands is the southernmost archipelago of the Chagos-Laccadive Ridge, a long submarine mountain range in the Indian Ocean.
- The **Territory of Cocos (Keeling) Islands** is an Australian external territory in the Indian Ocean, comprising a small archipelago approximately midway between Australia and Sri Lanka and relatively close to the Indonesian island of Sumatra.
- Reunion Islands** is a French overseas région. It is located in the western Indian Ocean about 680 km east of Madagascar and 180 km southwest of Mauritius. Of volcanic origin, Réunion consists mostly of rugged mountains in an advanced state of dissection by short torrential rivers.
- Saint Paul Island** is an island forming part of the French Southern and Antarctic Lands in the Indian Ocean, with an area of 6 square kilometers. It is an important breeding site for seabirds. A scientific research cabin on the island is used for scientific or ecological short campaigns, but there is no permanent population. It is under the authority of a senior administrator on Réunion.
- Hence option (b) is the correct answer

Q 77.D

- Recently the Prime Minister of India has launched the PM Ayushman Bharat Health Infrastructure Mission, which will seek to address three critical gaps in India's public health sector: augmenting health facilities for treatment; setting up of Integrated Public Health labs for diagnosis of disease, and expansion of existing research institutions that study pandemics.
- It is the largest pan-India scheme since 2005 for the creation and improvement of long-term public healthcare infrastructure. Hence statement 1 is correct.
- It is meant to be implemented in each district of the country.
- The government will spend Rs 64,180 crore on the scheme from the financial year 2021-22 to 2025-26.
- The first component is to establish comprehensive surveillance of infectious diseases. Hence statement 2 is correct.
 - At the district level, Integrated Public Health laboratories in all 730 districts will be set up.
 - At the state level, five regional branches and 20 metropolitan units of the National Centre for Disease Control.
 - And at the national level, an Integrated Health Information Platform (IHIP) will be established.
- The second component is the creation of comprehensive diagnostics and treatment facilities. Hence statement 3 is correct.

- At the district level, new rural health and wellness centres will be set up; new urban health and wellness centres will be set up; critical care hospital blocks will be established in each of 602 districts, with a population of more than 5 lakh.
- At the state level, 15 health emergency operation centres will be set up.
- At the national level, two container-based mobile hospitals will be set up; and critical care hospital blocks in 12 Government of India hospitals will be set up which will also act as mentor institutions for training and capacity building.
- The third component of the mission will be on **comprehensive pandemic research**.
 - At the district level, strengthening of existing 80 viral diagnostics and research labs will be undertaken.
 - At the state level, 15 new bio-safety level III laboratories will be operationalised.
 - At the national level, four new regional national institutes for virology will be operationalized and a regional research platform (digital) for WHO southeast Asia Region will also be set up.

Q 78.C

- **The Government has notified Medical Termination of Pregnancy (Amendment) Rules, 2021.** The new rules are under the Medical Termination of Pregnancy (Amendment) Act, 2021 passed by Parliament in March 2021.
 - Under these rules, the upper limit for termination of a pregnancy has been **increased from 20 to 24 weeks for certain categories of women. Hence statement 1 is not correct.**
 - According to the Medical Termination of Pregnancy (Amendment) Rules, 2021, these categories include **survivors of sexual assault or rape or incest, minors and women whose marital status changes during an ongoing pregnancy (widowhood and divorce) and women with physical disabilities.**
 - According to the new rules, **a state-level medical board** will be set up to decide if pregnancy **may be terminated after 24 weeks in cases of foetal malformation** and if the foetal malformation has a substantial risk of it being incompatible with life or if the child is born it may suffer from such physical or mental abnormalities to be seriously handicapped. **Hence statement 2 is correct.**
 - The function of the Medical Board shall be to examine the woman and her reports if she approaches for medical termination of pregnancy and provide the opinion with regard to the termination of pregnancy or rejection of a request for termination within three days of receiving the request.
 - The Board has also been tasked to ensure that the termination procedure, when advised by it, is carried out with all safety precautions along with appropriate counselling within five days of the receipt of the request for medical termination of pregnancy.
- Under the Medical Termination of Pregnancy Act, 1971, a pregnancy may be terminated up to 20 weeks by a married woman in the case of failure of contraceptive method or device but the Amendment Act of 2021 allows **unmarried women to also terminate a pregnancy for this reason. Hence statement 3 is correct.**

Q 79.B

- Copper is an indispensable metal in the electrical industry for making wires, electric motors, transformers, and generators.
- It is alloy-able, malleable, and ductile. It is also mixed with gold to provide strength to jewellery.
- The Copper deposits mainly occur in **Singhbhum district in Jharkhand, Balaghat district in Madhya Pradesh (hence pair 2 is correctly matched)**, and Jhunjhunu and Alwar districts in Rajasthan.
- Minor producers of Copper are **Agnigundala in Guntur District (Andhra Pradesh), hence pair 1 is not correctly matched, Chitradurga and Hasan districts (Karnataka), hence pair 3 is correctly matched.**

Q 80.C

- **Market gardening and horticulture specialise in the cultivation of high-value crops such as vegetables, fruits and flowers, solely for the urban markets. Hence, statement 1 is correct.**
- Farms are small and are located where there are good transportation links with the urban centre where a high-income group of consumers is located. **It is both labour and capital intensive and lays emphasis on the use of irrigation, HYV seeds, fertilisers, insecticides, greenhouses and artificial heating in colder regions. Hence, statement 2 is correct.**
- **This type of agriculture is well developed in densely populated industrial districts of northwest Europe, northeastern United States of America and the Mediterranean regions.** The Netherlands specialises in growing flowers and horticultural crops especially tulips, which are flown to all major cities of Europe.

Q 81.B

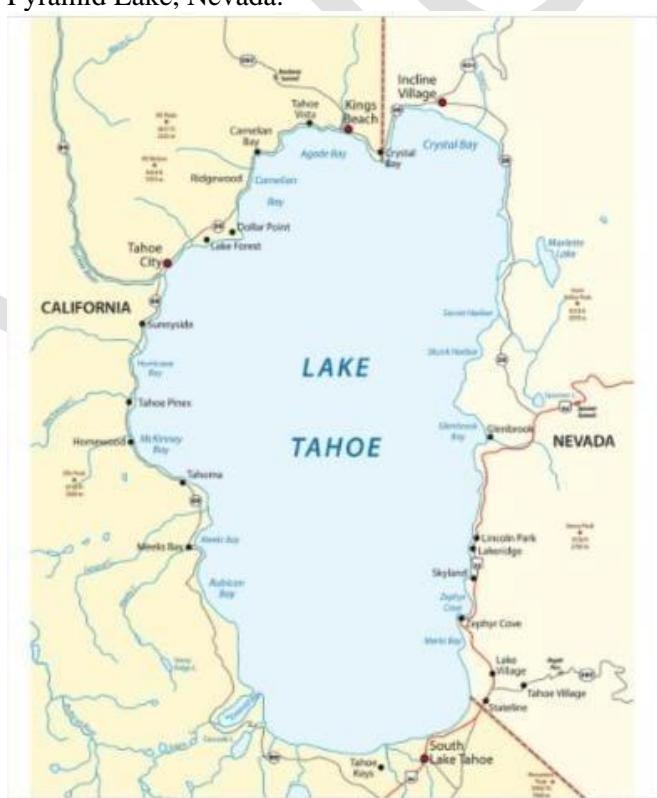
- The primary aim of the Cape Town Convention and the Protocol is to resolve the problem of obtaining certain and opposable rights to high-value aviation assets, efficient use of air traffic rights, encouraging domestic and international passengers and goods transfers and rationalising the tax regime. **Hence option (b) is the correct answer.**
- At a Diplomatic Conference held in Cape Town in November, 2001 under the auspices of the **International Civil Aviation Organisation (ICAO)** and the **International Institute for the Unification of Private Law (UNIDROIT)**, two international law instruments were adopted, namely, the Convention on International Interests in Mobile Equipment (the Cape Town Convention) and the Protocol to the Convention on Matters Specific to Aircraft Equipment (the Cape Town Protocol).

Q 82.B

- **India was re-elected to the U.N. Human Rights Council for the 2022-24 term with an overwhelming majority in the General Assembly.**
- The United Nations Human Rights Council consists of **47 Member States** elected directly and individually by secret ballot by the majority of the members of the General Assembly.
- The membership is based on equitable geographical distribution, and seats are distributed among regional groups Group of African States (13), Group of Asia-Pacific States (13), Group of Eastern European States (6), Group of Latin American and Caribbean States (8) and Group of Western European and other States (7). **Hence statement 3 is not correct.**
- The members of the Council shall serve for a period of **three years**. **Hence statement 1 is not correct.**
- The members shall not be eligible for immediate **re-election after two consecutive terms**. **Hence statement 2 is correct.**

Q 83.B

- **Recent Context: Drought fueled by climate change has dropped Lake Tahoe below its natural rim and halted flows into the Truckee River, a historically cyclical event that's occurring sooner and more often than it used to — raising fears about what might be in store for the famed alpine lake. The US Forest Service canceled this year's annual kokanee salmon festival at South Lake Tahoe because low water levels have all but cut off their migration route to spawn in Taylor Creek.** Tahoe's water last reached its peak level in July 2019, but since then has generally fallen. The usual increase due to snowmelt in May and June was largely absent in 2021.
- **Lake Tahoe is a freshwater lake occupying a fault basin on the California-Nevada border in the northern Sierra Nevada, U.S.** Fed by numerous small streams, it is drained by the Truckee River to Pyramid Lake, Nevada.



- **Hence option (b) is the correct answer**

Q 84.B

- **Chromite** is a relatively hard, metallic, black oxide mineral of chromium and iron (FeCr_2O_4) that is the chief commercial source of chromium.
 - Chromite has applications in chrome plating and alloying for the production of corrosion-resistant superalloys, nichrome, and stainless steel. Chromium is also used as a pigment for glass, glazes, and paint, and as an oxidizing agent for tanning leather.
 - **The production of chromite was at 3,929 thousand tonnes in 2019-20. Odisha reported almost the entire production of chromite.**
- **Lead** is a very soft, blue-gray, metallic element. It is primarily produced from the mineral galena.
 - **Rajasthan is the leading producer of lead in the country with almost a 100 percent share in lead production.**
- **Limestone** is a sedimentary rock composed mainly of calcium carbonate, usually in the form of calcite or aragonite
 - **Rajasthan is the leading producer of limestone accounting for around 21 percent of the total production of limestone in the country followed by Madhya Pradesh & Andhra Pradesh.**
- **Hence, option (b) is the correct answer.**

Q 85.B

- Zero Budget Natural Farming (ZBNF) is a method of chemical-free agriculture drawing from traditional Indian practices. It was originally promoted by Maharashtrian agriculturist Subhash Palekar.
- Zero Budget Natural Farming (ZBNF) technology uses locally available resources to manage soil nutrition, fertility, pests, and weeds. The technology completely avoids the use of inorganic fertilisers, pesticides, and herbicides.
- **It emphasises the effective utilisation of water through specified methods and recommends less tilling (minimal disturbance of Soil), to produce higher yields.** This farming practice asserts that ZBNF is resilient to climate change, reduces the cost of cultivation, and increases farmers' income.
- The ZBNF method also promotes **soil aeration, minimal watering, intercropping, bunds and topsoil mulching and discourages intensive irrigation and deep ploughing.**
- **ZBNF is against vermicomposting**, which is the mainstay of typical organic farming, as it introduces the most common composting worm, the European red wiggler to Indian soils.
- **Hence, option (b) is correct.**

Q 86.B

- **Glasgow** is **Scotland's** largest city, and it forms an independent council area that lies entirely within the historic county of Lanarkshire. Glasgow became one of the first cities in Europe to reach a population of one million. COP 26 is taking place in Glasgow.
- **Havana** City is a major port, and **leading commercial centre of Cuba**. It also constitutes one of Cuba's 15 provinces. The city is located on **La Habana (Havana) Bay** on the island's north coast. It is the largest city in the Caribbean region and has one of the great treasures of historic colonial preserves in the Western Hemisphere.
- **Abidjan** is the chief port and de facto capital, and largest city of **Côte d'Ivoire** (Ivory Coast). It lies along the Ébrié Lagoon, which is separated from the Gulf of Guinea and the Atlantic by the Vridi Plage sandbar. It has the headquarter of African Development Bank group.
- **Hence option (b) is the correct answer.**

Q 87.D

- **Recent Context:** Russian and Chinese warships held their first joint patrols in the Western part of the Pacific ocean in October 2021. The group of ships passed through the **Tsugaru Strait** for the first time as part of the patrol.
- The strait is regarded as international waters.
- The Tsugaru Strait is a strait between Honshu and Hokkaido in northern Japan connecting the **Sea of Japan with the Pacific Ocean.**
- **Hence option (d) is the correct answer.**

**Q 88.B**

- Livestock plays an important role in Indian economy. About 20.5 million people depend upon livestock for their livelihood. Livestock is an important source of income to small farm households.
- **In light of this Livestock Census is very important from an economic point of view and Indian government has been conducting Livestock census once every five years.** The latest one 20th livestock census has been launched in October 2018. **Hence, statement 1 is not correct.**
- Key features of the 20th Livestock Census are
 - **The total Livestock population is 535.78 million in the country showing an increase of 4.6% over previous Livestock Census.**
 - **Hence, statement 2 is not correct.**
 - Total Bovine population (Cattle, Buffalo, Mithun and Yak) is 302.79 Million.
 - The total number of cattle in the country is 192.49 million.
 - **The total buffaloes in the country is 109.85 Million showing an increase of about 1.0% over previous Census.**
 - The total sheep in the country is 74.26 Million.
 - The Goat population in the country is 148.88 Million.
 - The total Pigs in the country is 9.06 Million.
 - The total Camel population in the country is 2.5 Lakhs.
 - The total Poultry in the country is 851.81 Million.
- **Uttar Pradesh has the largest livestock population at 67.8 million. It also has the largest population of buffaloes at 33 million.**
 - **Hence, statement 3 is correct.**
- West Bengal has the largest population of cattle at 19 million.
- Tamil Nadu has the largest population of Poultry.

Q 89.B

- **Edayur Chilli and Kuttiattoor Mango** are the latest to receive the Geographical Indication status from **Kerala**. **Hence pair 1 is not correctly matched.**
 - Edayur chilli is a local cultivar of Edayur, Athavanad, Marakkara, Irimbiliyam, Kalpakanchery and Valanchery panchayats in Valanchery block and Moorkanad and Kuruva panchayats in Angadippuram block of Malappuram district.
 - It has been cultivated in the area for at least 150 years.
 - Edayur chilli is a unique cultivar of this area with very low pungency.
- The **white onion of Alibag in Maharashtra's Raigad district** has received a 'Geographical Indication', giving the crop a unique identity and wider markets. **Hence pair 2 is correctly matched.**
 - Alibag's white onion has medicinal qualities and is used for the treatment of heart ailments, controlling cholesterol and creation of insulin, has been mentioned in the official gazette as long back as 1883.

- The traditional dye-painted figurative and patterned cloth called **Karuppur kalamkari paintings** and the wood carvings of Kallakurichi have received geographical indication (GI) tag from **Tamil Nadu**. Hence **pair 3 is not correctly matched.**
 - Kalamkari paintings are done on pure cotton cloth, predominantly used in temples for umbrella covers, cylindrical hangings, chariot covers and asmanagiri (false ceiling cloth pieces).

Q 90.C

- Union Minister for Power and New and Renewable Energy (MNRE), Government of India, recently addressed the Ministerial session of the **Green Grids Initiative-One Sun One World One Grid Northwest Europe Cooperative Event**.
- The **Ministry of New and Renewable Energy** (MNRE, Government of India), the **International Solar Alliance (ISA)** & the **World Bank** are steering the implementation of the Vision & Roadmap study for the OSOWOG Initiative.
- In October 2018, the idea of “**One Sun, One World, One Grid**” (**henceforth OSOWOG**) made its first appearance on a global platform when the idea was floated by the Indian Prime Minister in the **first assembly of the International Solar Alliance (ISA)**. Hence statement 1 is correct.
- **Its goal is to build a global ecosystem of interconnected renewable energy supply generators and demand centres across continents to contribute to meeting the targets of the Paris Agreement to prevent dangerous climate change, hasten energy transition, and to achieving the Sustainable Development Goals.** Hence statement 2 is correct.
- Its aim is to build a framework for a global cooperation initiative targeted at the **effective utilization of renewable sources across the globe**.
- The aim of the initiative is to **generate round the clock electricity from the sun, as it sets in one part of the world and it rises in the other**.
- **OSOWOG is expected to be implemented in a phased manner and is divided into three main phases:**
 - The first phase will ensure interconnectivity in the Asian continent; the Indian grid would be connected to the grids of Middle East, South Asia and South-East Asia as a common grid to share solar energy in addition to other renewable energy sources.
 - The second phase would connect the functional first phase to the pool of renewable resources in Africa. As concerns the first two phases, the solar spectrum is divided into two broad zones: firstly, ‘Far East’ consisting of countries like Thailand, Laos, Cambodia, Vietnam, Myanmar etc. and secondly, ‘Far West’ covering the African and Middle East region. India falls at the fulcrum of this spectrum.
 - The third and final phase aims to achieve a global interconnection. The project aims to incorporate as many countries as possible to create a “single power grid of renewable energy” that can be accessed by countries all over the globe.

Q 91.D

Circular Migration or Repeat Migration is the temporary and usually repetitive movement of a migrant worker between home and host areas, typically for the purpose of employment. It represents an established pattern of population mobility, whether cross-country or rural-urban.

- Pandemics: As witnessed in the COVID-19 pandemic, the mass exodus of laborers from North India back to the villages of Bihar and Uttar Pradesh was not an example of seasonal migration, **it was rather based on a forceful return to the native place due to lack of opportunities to earn and feed themselves as well as the families. Such pandemics are once-in-a-century events and thus cannot be considered as factors of seasonal or circular migration.** Hence option 2 is not correct
- Social Security: An individual in search of better living conditions and social security often relies on permanent and not seasonal migration wherein he migrates between home and host areas. Social Security benefits once provided to an individual often become a factor for permanent migration in the case of rural-urban as well as in urban-urban. The individual who gets social security is mostly indulged in year-round employment. **Hence option 4 is not correct**
- The rise in Sea Levels of Coastal areas is a type of migration based on climatic changes, such changes are often irreversible and leave a very negligible scope for rehabilitation of those who were forced to migrate to other areas to protect their lives. **Hence option 5 is not correct.**
- Seasonal or Circular migration includes migrations such as moving sheep or cattle to higher elevations during summer to escape the heat and find more forage. Human labor often moves with fruit harvest or to other crops that require manual picking. Also, people work in urban areas for a season and move

back to their native places in cropping season, This has been specially observed in the Gangetic plains of India. **Hence option 3 is correct**

- **Tourism, landscaping, and construction** are industries that vary by season. **In the Tourism sector, circular migration is witnessed in a dual-tone wherein those employed in the industry, as well as the tourists, migrate in a seasonal or circular manner** during seasons that are apt for visiting a tourist spot. **Hence option 1 is correct**

Q 92.B

- Natural gas is energizing as an important source of commercial energy. Most of the time it is found in association with petroleum.
- **It is obtained along with oil in all the oilfields but exclusive reserves have been located along the eastern coast as well as (Tamil Nadu, Odisha and Andhra Pradesh), Tripura, Rajasthan, and off-shore wells in Gujarat and Maharashtra.** Hence statement 1 is not correct.
- **Gas Authority of India was established in the year 1984** with an aim for **processing, transporting, distributing, and marketing of natural gas.** AIL was conferred with the Maharatna status on 1 Feb 2013, by the Government of India. **Only 10 other Public Sector Enterprises (PSEs) enjoy this coveted status amongst all central CPSEs.** Hence statement 2 is correct.
- It has an existing 13,722 Km. of gas pipeline network with a capacity of 204 MMSCMD. GAIL's existing natural gas pipeline network covers 20 States (Andhra Pradesh, Assam, Bihar, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh Uttarakhand and West Bengal) and 2 UT's (Puducherry & Dadra Nagar Haveli).

Q 93.A

- Iron ore is the basic mineral and the backbone of industrial development. India is endowed with fairly abundant resources of iron ore. India is rich in good quality iron ores.
- **Magnetite** is the finest iron ore with a very high content of iron up to 70 per cent. It has excellent magnetic qualities, especially valuable in the electrical industry.
- **Hematite** ore is the most important industrial iron ore in terms of the quantity used, but has a slightly lower iron content than magnetite. (50-60 per cent).
- The major iron ore belts in India are:
- **Odisha-Jharkhand belt:** In Odisha high grade hematite ore is found in Badampahar mines in the Mayurbhanj and Kendujhar districts. In the adjoining Singbhum district of Jharkhand haematite iron ore is mined in Gua and Noamundi.
- **Durg-Bastar -Chandrapur belt lies in Chhattisgarh and Maharashtra.** Very high grade hematites are found in the famous **Bailadila range of hills in the Bastar district of Chhattisgarh.** The range of hills comprise of 14 deposits of super high grade hematite iron ore. It has the best physical properties needed for steel making. **Iron ore from these mines is exported to Japan and South Korea via Vishakhapatnam port.** Hence pair 1 is correctly matched
- **Ballari-Chitradurga-ChikkamagaluruTumakuru belt in Karnataka** has large reserves of iron ore. The Kudremukh mines located in the Western Ghats of Karnataka are a 100 per cent export unit. Kudremukh deposits are known to be one of the largest in the world. **The ore is transported as slurry through a pipeline to a port near Mangaluru.** Hence pair 2 is not correctly matched
- **Maharashtra-Goa belt** includes the state of Goa and **Ratnagiri district of Maharashtra.** Though, the ores are not of very high quality, yet they are efficiently exploited. **Iron ore is exported through Marmagao port.** Hence pair 3 is not correctly matched.

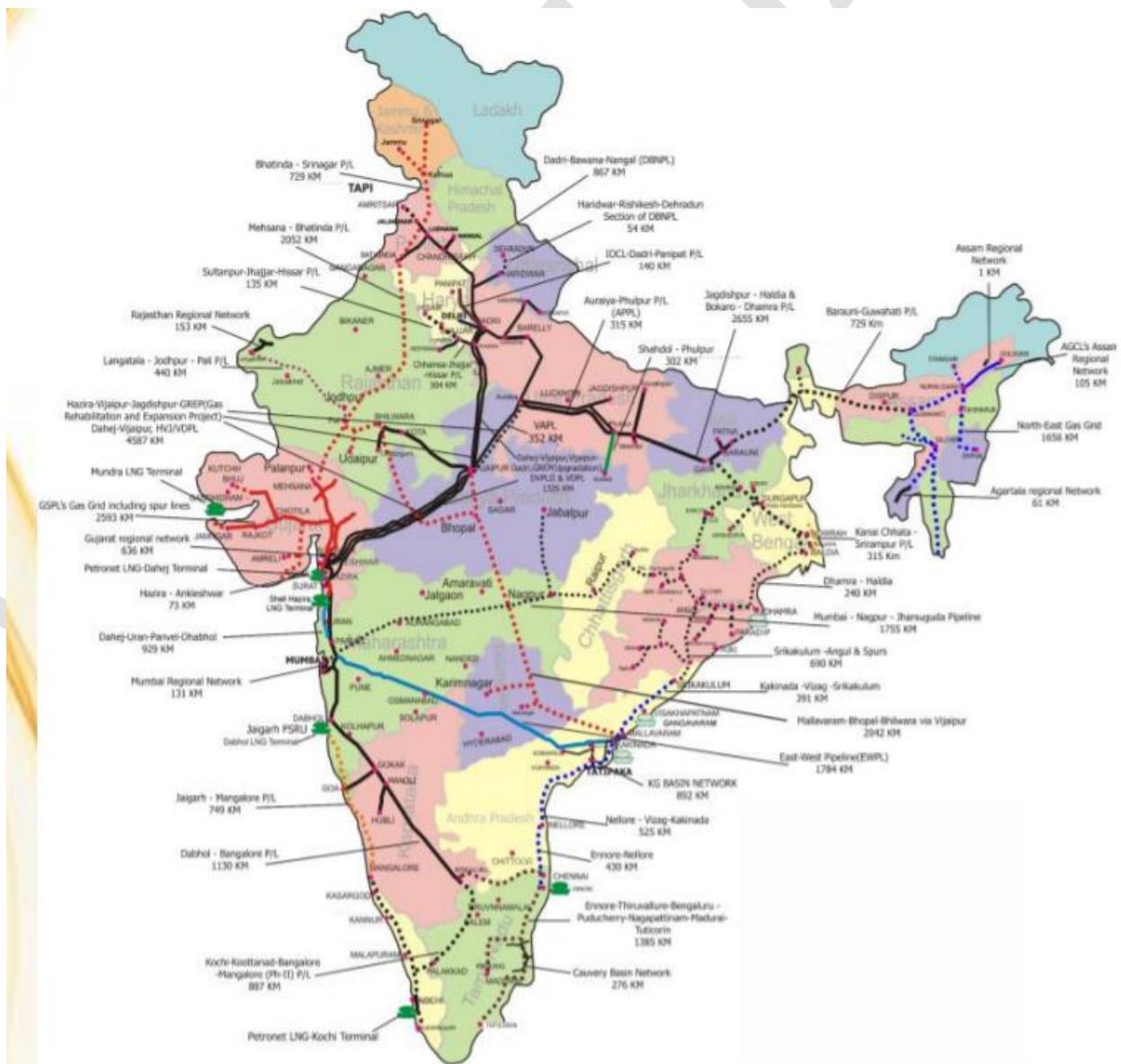
Q 94.B

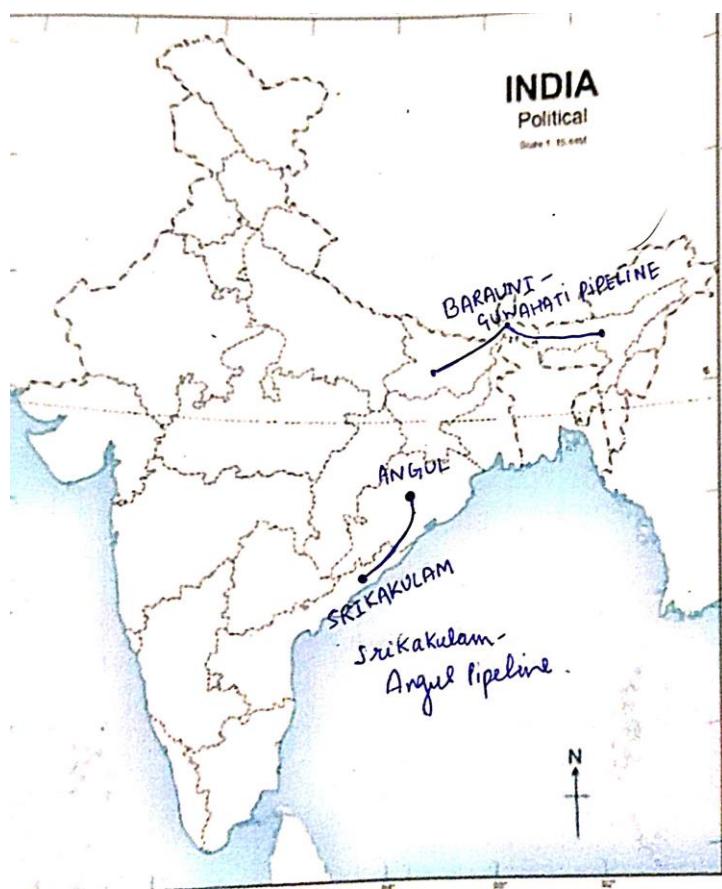
- There is a long pending demand for the inclusion of four tribal communities of Puducherry-- Kattunayakan, Malalikuravan, Yerukkula and Kuruman -- in the scheduled tribe (ST) category.
 - As per Census 2011, Puducherry has no notified Scheduled Tribes.
 - In 2016, the Central government notified inclusion of only 'Irular' community as ST. **Hence statement 3 is not correct.**
- As per Census 2011, Madhya Pradesh has the largest population (153.17 lakh) followed by Maharashtra (105.1 Lakh). Whereas, Haryana, Punjab, Chandigarh and Delhi has no notified Scheduled Tribes. **Hence statement 1 is correct.**
- Andaman & Nicobar Islands has only 7.5% of population as Scheduled Tribes. **Hence statement 2 is not correct.**

Q 95.B

S No.	Projects	Length (in Km)	Investment(in Rs Crore)	States covered
1	Jagdishpur Haldia and Bokaro Dhamra Pipeline(JHBDPL) Phase-2 & 3	1546	7154	Bihar, Jharkhand, Odisha and West Bengal
2	Barauni Guwahati Pipeline (BGPL)	729	3060	Bihar, West Bengal and Assam
3	Vijapur Auraiya Pipeline (VAPL) (Jhansi to Vijapur)	178	900	Madhya Pradesh and Uttar Pradesh
4	Coimbatore to Krishnagiri Pipeline (Part of Kochi-kottanad-Bengaluru-Mangaluru Pipeline Phase- II)	322	2365	Kerala, Karnataka and Tamil Nadu
5	Srikakulam Angul Pipeline (SAPI)	744	2658	Odisha and Andhra Pradesh
6	Mumbai Nagpur Jharsuguda Pipeline(MNJPL)	1755	7844	Maharashtra, Madhya Pradesh, Chhattisgarh and Odisha
7	Dhamra Haldia Pipeline (DHPL)	253	1030	Odisha and West Bengal
8	Sultanpur- Jhajjar-Hissar Pipeline (SJHPL)	135	327	Haryana
9	Haridwar-Rishikesh-Dehradun Pipeline (HRDPL)	50	218	Uttarakhand
	Total	5712	25556	

- The Srikakulam-Angul Gas Pipeline is a natural gas pipeline under construction in India. The main line of the project would run from Srikakulam in Andhra Pradesh to Angul in Odisha via Ganjam, Nayagarh, Khordha, Cuttack, and Dhenkanal. A 2019 route proposal also shows spurs running to Vedanta Lanjigarh, Utkal Alumnia, and Nalco Koraput. **Hence option (b) is the correct answer.**



**Q 96.C**

- Deep-ocean polymetallic nodules form on or just below the vast, sediment-covered, abyssal plains of the global ocean. **Polymetallic nodules primarily consist of precipitated iron oxyhydroxides and manganese oxides**, onto which metals such as nickel, cobalt, copper, titanium and rare earth elements sorb. The enormous tonnage of nodules on the seabed, and the immense quantities of critical metals that they contain, have made them a target for future mining operations. **Hence, statement 1 is correct.**
- The chemical and mineralogical compositions of polymetallic nodules are primarily controlled by their formation process. A unique characteristic of deep-ocean nodules compared to terrestrial deposits is the presence of multiple commodities in one deposit; for example, nodules from the Clarion–Clipperton Zone contain Mn, Ni, Cu and Co.
- **Distribution:**
 - **Nodules have been found in all the oceans and even in lakes.** However, nodules of economic interest are more localized. **Three areas have been selected by industrial explorers: the centre of the north-central Pacific Ocean, Peru Basin in the southeast Pacific Ocean and the centre of the north Indian Ocean.** Hence, statement 2 is correct.

Q 97.A

- The Sardar Sarovar Narmada Dam is a terminal dam built on the Narmada river at Kevadia in Gujarat's Narmada district. Called the 'lifeline of Gujarat', it usually has no water for irrigation during summers. This is one of the largest water resource projects of India covers four states—Maharashtra, Madhya Pradesh, Gujarat, and Rajasthan. **Hence option (a) is the correct answer.**
- However, this year, in the ongoing summer, the dam released about 1.3 Million Acre Feet (MAF) water for irrigation between April 1 and May 31 in its command area of 21.29 lakh hectares.
- As of June 3, the dam had 122.72 meters with live storage of 1,711 million cubic meters. With an inflow of about 15,000 cusecs, the total outflow from the dam is at around 43000 cusecs —of which 12,965 cusecs are being released after generation of power from the Canal Head Power House and 30,361 cusecs from the Riverbed Powerhouse.
- River Narmada is a classic case of Integrated River Basin Planning, Development, and Management, with water storage available in all major, medium, and minor dams on the main river and its tributaries, **shared amongst four party states – Gujarat, Rajasthan, Madhya Pradesh, and Maharashtra** — in the ratio stipulated by the 1979 award of the Narmada Water Dispute Tribunal.

- Out of the 28 MAF capacity of the Narmada basin, Gujarat has been awarded a share of 9 MAF, while Madhya Pradesh has 18.25 MAF, Rajasthan 0.50 MAF, and Maharashtra 0.25 MAF. The power benefits from the project are to be shared thus: Madhya Pradesh at 57 percent, Maharashtra at 27 percent, and Gujarat at 16 percent.
- In 2017, the dam was raised to a height of 138.68 meters (spillway level until 2017 was 121.92 meters) and 30 gates were installed. The dam achieved its Full Reservoir Level (FRL) for the first time in 2019.

Q 98.D

- **Quinary activities** are services that focus on the creation, re-arrangement and interpretation of new and existing ideas; data interpretation and the use and evaluation of new technologies. Often referred to as ‘gold collar’ professions, they represent another subdivision of the tertiary sector representing special and highly paid skills of senior business executives, government officials, research scientists, financial and legal consultants, etc. **Hence, option (d) is correct answer.**
- The highest level of decision-makers or policymakers performs quinary activities. These are subtly different from the knowledge-based industries that the quinary sector in general deals with.

Q 99.D

- The leather industry in India is geographically well diversified, though Tamil Nadu, Uttar Pradesh and West Bengal account for bulk of the output.
- The major production centres for leather and leather products are located at **Chennai, Ambur, Ranipet, Vaniyambadi, Trichi, Dindigul in Tamil Nadu, Kolkata in West Bengal, Kanpur, Agra and Noida in Uttar Pradesh, Jalandhar in Punjab, Bahadurgarh and Manesar in Haryana, Bangalore in Karnataka, Delhi and Hyderabad in Andhra Pradesh.** The sector is dominated by micro and small units with bigger units accounting for just around 5 per cent of the total manufacturing units.

Q 100.A

- Depending upon the location of mineral ores, mining is of two types:
 - **Surface:** The surface mining, which is also known as open-cast mining or quarrying, is easier. At present, **about 90 percent of all mines and 99 percent of non-metallic mines are surface mines. Sedimentary or bedded ores lying close to the surface are called open cast mines.**
 - **Underground:** In this kind of mining, vertical or inclined shafts and horizontal tunnels are made and connected with underground galleries. Rocks are extracted and transported to the surface through these passages. It requires specially designed lifts, drills, haulage vehicles and ventilation system for safe and efficient movement of people and materials. **In contrast to the open cast mining, it is inherently risky. Poisonous gases, fires, floods and cavings lead to fatal accidents.**

Copyright © by Vision IAS

All rights are reserved. No part of this document may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission of Vision IAS.