

CIVIL SERVICES PRELIMS MODEL PAPER

No. of Questions: 100

Marks: 200

Time: 2 Hours

GENERAL STUDIES PAPER – 1

1. Given below are two statements. Read them.
1. Prime Minister of India is first among equals in the Union Cabinet.
 2. Prime Minister can create a new Ministry.
- a) Only 1 is correct
b) Only 2 is correct
c) Both 1 and 2 are correct
d) Neither is correct
2. Who can remove the President of India?
1. Lok Sabha
 2. Parliament
 3. Supreme Court
 4. Specially set up Collegium
- a) 1 and 3 Only
b) 1 and 4 Only
c) 3 Only
d) 2 and 3 Only
3. Which one of the following statement / s is / are true?
1. Democratic Party and Republican Party are the main political parties in the USA .
 2. Republican Party is called the GOP.
 3. Great Old Party is the expansion of GOP.
 4. Donkey is the symbol of Democratic Party.
- Which one / s of the above is / are correct?
- a) 1 and 2 Only
b) 1, 2 and 4 Only
c) 1 and 3 Only
d) 1 and 4 Only
4. Regarding legislation in the Parliament of India, which one of the following statements is / are correct?
1. Private member of Parliament is one who is not an elected member of Parliament.
 2. The last two and a half hours of a sitting on Friday shall be allotted for the transaction of private members' business.
 3. Private Member can introduce any Bill that the Minister can introduce.
 4. Private member can not introduce a Money Bill.
- a) 2 and 3 Only
b) 2 and 4 Only
c) 1, 2 and 4 Only
d) 1 and 2 Only
5. Prime Minister of India is
- a) Directly elected
b) Indirectly elected
c) Neither
d) Either

6. The following country / countries is / are not a member or members of the The United Nations Convention on the Law of the Sea (UNCLOS)

1. India
 2. China
 3. United States of America
 4. Russia
- a) 1 and 2 Only b) 2 and 3 Only
c) 2 Only d) 2, 3 and 4 Only

7. Consider the following statements.

- i. U. Srinivas was a famous Mandalin Player. He passed away last year.
- ii. Mandalin is the integral part of Carnatic music.

Which of the above is / are correct?

- a) Only i b) Only ii c) Both i and ii d) None

8. Which of the following painting (s) is / are awarded with GI?

- i. Nirmal Painting
 - ii. Cheriya Serolis
 - iii. Srialahasti Kalamkari
 - iv. Tanjavur Paintings
- a) Only i & iv b) Only iv & ii
c) Only ii & iii d) All the above

9. Which of the following statements is / are true, about the Woods dispatch?

- i. Education in Vernacular languages.
- ii. Westernization of Indian education.
- iii. Provision of education only by public institutions.

- a) Only i & iii b) Only ii c) Only iii d) Only i

10. Which of the following reasons is / are correct for the failure of French & success of British in India?

- i. Commercial & naval superiority of British.
- ii. England's Victory in European wars.
- iii. Lack of Support of French from any Mughal Emperor.

- a) i & ii Only b) ii & iii Only
c) i Only d) All the above

11. Which of the following is / are the correct characteristic (s) of primary seismic wave?

- a) It is a longitudinal and compressional wave.
- b) It is analogous to sound waves.
- c) It travels with faster speed through solids but slowly through liquids.
- d) All the above three

12. Which of the following are formed due to collision of continental plates?

1. The Alps
2. The Himalayas
3. The Rockies
4. The Caucasus Mountains

Select the correct answer using the codes given below.

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

13. Which one of the following statements is correct?
- Jet streams are best developed in winters
 - Jet streams often develop oscillations
 - Jet streams greatly influence our surface weather
 - All the above three are correct in respect of jet streams
14. What is the correct sequence of the following zonal pressure belts?
- Subpolar low
 - Equatorial low
 - Polar high
 - Subtropical high
- Select the correct answer using the codes given below.
- 2 - 3 - 1 - 4
 - 1 - 4 - 2 - 3
 - 2 - 4 - 1 - 3
 - 1 - 3 - 2 - 4
15. Temperature generally decreases towards the poles because
- Air movement is generally towards the equator.
 - Cold polar air masses prevent surface heating of the land.
 - Cold surfaces do not absorb solar energy as readily as warm surfaces.
 - Progressively lesser solar energy per unit area falls on the earth's surface as we move to polar regions.
16. A temperature inversion is most likely to occur under which of the following conditions?
- Mountain top in late evening
 - Windy but cloudy night
 - Calm, cloudy and humid night
 - Calm, clear and cool winter night
17. Consider the following statements with regard to ARIES telescope, India's largest ground-based optical telescope, in Devasthal in Uttarakhand.
- The telescope has been built to study the planet mars only.
 - The telescope will help to study chemical evolution of milky way.
 - The telescope is the product of an Indo-Israel collaborative effort, assisted by the Russian Academy of Sciences.
 - The telescope will high – energy radiation emanating from sources like blackholes and the formation and properties of exoplanets.
- Which of the above statements is / are correct?
- 1 and 3 Only
 - 2 and 4 Only
 - 1, 3 and 4 Only
 - 1, 2, 3 and 4 Only
18. The species confined to a particular region and not found elsewhere is termed as.
- Keystone
 - Alien
 - Endemic
 - Rare
19. During ecological succession.
- The gradual and predictable change in species composition occurs in a given area.
 - The establishment of a new biotic community is very fast in its primary phase.
 - The numbers and types of animals remain constant.
 - The changes lead to a community that is in near equilibrium with the environment and is called pioneer community.

20. Most animals that live in deep oceanic waters are
- Primary consumers
 - Secondary consumers
 - Tertiary consumers
 - Detritivores
21. Which of the following statements is / are true with regard to cloud seeding?
- Cloud – seeding is a process to augment rainfall by spreading either dry ice (or more commonly silver iodide aerosols) into the upper part of clouds to try to stimulate the precipitation process and form rain.
 - Cloud – seeding is used to reduce formation of hail.
 - Cloud – seeding is used to reduce thickness of fogs that reduce visibility for the safety of aircrafts movements.
- 1 Only
 - 2 and 3 Only
 - 1 and 2 Only
 - 1, 2 and 3
22. Regarding the Office of Profit under Indian laws, consider the following statements.
- Legislators are barred from holding office of profit.
 - Certain offices do not disqualify their holders from being members of legislature.
- Which one of the above is correct?
- 1 Only
 - 2 Only
 - Neither 1 nor 2
 - Both 1 and 2
23. Match the following Constitutional dignitaries with the emoluments.
- | | |
|----------------------------|-----------------------|
| 1. President of India | i) Rs.1,50,000 Only |
| 2. Vice President of India | ii) Rs.1,25,000 Only |
| 3. Governor of a State | iii) Rs.1,10,000 Only |
| 4. Chief Justice of India | iv) Rs.1,00,000 Only |
- 1-i, 2-ii, 3-iii, 4-iv
 - 1-i, 2-iii, 3-ii, 4-iv
 - 1-i, 2-ii, 3-iv, 4-iii
 - 1-iii, 2-i, 3-ii, 4-iv
24. World Economic Forum (WEF) does not release the following.
- Global Competitiveness Report
 - Human Capital Report
 - World Economic Outlook
 - World Development Report
- 1 and 4 Only
 - 1 and 2 Only
 - 3 and 4 Only
 - 2, 3 and 4 Only
25. National Green Tribunal (NGT) Order can be challenged before the
- | | |
|-----------------------|-------------------|
| 1. High Court | 2. Supreme Court |
| 3. Within ninety days | 4. Within 30 days |
- Which one of the above is/ are correct?
- 1 and 3 Only
 - 2 and 4 Only
 - 2 and 3 Only
 - 1 and 2 Only

26. External debt (bilateral and multilateral loans) is managed by
- Reserve Bank of India
 - Department of Economic Affairs in the Ministry of Finance (MoF)
 - Financial Stability and Development Council
 - None of the above
27. World Intellectual Property Organisation is associated with the following.
- Global Innovation Index
 - National Happiness Index
 - Human Capital Index
 - All the above
28. Which of the following statements is / are true about the Sangam Age?
- Hereditary monarchy was the form of Government.
 - State was involved in foreign trade.
 - Land revenue was not charged by the state.
 - There was a separate military wing in administration.
- i & ii Only
 - iii & iv Only
 - i, ii & iv Only
 - All the above
29. Which of the following statements is / are true about the Chalukyan administration?
- High centralization
 - Absence of village autonomy
 - A strong maritime power
- i & ii Only
 - ii & iii Only
 - i & iii Only
 - All the above
30. One of the major failures of Zamindari System was the lack of 'Pattas' granted to the peasants by the Zamindars. Why did it happen?
- British Govt. later retracted on the decision of granting pattas.
 - Most of the farmers didn't register for the grant.
 - Zamindars were not officially accountable to the British for the grant of pattas.
 - A nexus between Zamindars & British officials allowed them to allot land among themselves.
31. Vedas were useful for which of the following purposes?
- Religious rituals & sacrifices
 - Answers to mythical questions
 - For appropriate governance in local Kingdoms
- Only i & ii
 - Only ii & iii
 - Only i & iii
 - All of the above
32. With reference to The Humpback Mahseer, an iconic fish found in India, which of the following statements is / are correct.
- It's a highly – prized freshwater fish found in the Cauvery river basin in Karnataka.
 - The fish is on the brink of extinction due to Pollution, loss of habitat, destructive fishing and sand extraction.
- 1 Only
 - 2 Only
 - 1 and 2 Only
 - Neither 1 nor 2

33. Which one of the following statements is correct?

Hurricanes

- a) Form at the equator
- b) Are not as large as tornadoes
- c) Develop over warm ocean areas
- d) Tend to intensify when they move over land surfaces

34. Which one of the following regions has a Mediterranean type of climate?

- a) Cape Town region of South Africa
- b) Great Plains of North America
- c) North – Eastern Australia
- d) Southern Algeria

35. **Assertion (A):** Generally, temperature decreases from the equator towards poles which is called temperature gradient. But the highest temperature is never recorded at the equator, instead it is recorded near both the tropics.

Reason (R): A sizeable portion of the incoming solar radiation is reflected by clouds and a large part of heat is spent in the process of evaporation.

- a) Both (A) and (R) are true and (R) is the correct explanation of (A).
- b) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
- c) (A) is true, but (R) is false.
- d) (A) is false, but (R) is true.

36. The coastline formed by the submergence of mountain ridges running parallel to the coast is known as:

- a) Dalmation coast
- b) Ria coast
- c) Fiord coast
- d) Haff coast

37. Coral reefs are formed by

- a) Volcanic rocks
- b) Marine sediments
- c) Chlorine material precipitated from sea water
- d) Tiny colonial marine animals which construct limestone skeleton material

38. Consider the following.

- 1. Lead
- 2. Mercury
- 3. Cadmium
- 4. Chromium
- 5. Halogenated substances
- 6. Polychlorinated biphenyls
- 7. Poly – brominated di – phenyl ethers.

Electronic goods are repositories of which of the above hazardous and toxic substances?

- a) 1, 2, 3 and 4 Only
- b) 1, 3, 4, 6 and 7 Only
- c) 1, 2, 3, 5 and 6 Only
- d) 1, 2, 3, 4, 5, 6 and 7

47. Indian banks provide a certain portion of 'priority sector' lending in the form of small value loans to farmers, weaker sections and others. Which agency defines priority sector and eligibility under it?
- Government of India
 - Reserve Bank of India
 - National Bank for Agriculture and Rural Development (NABARD)
 - State Bank of India
48. Which of the following is/are in sync with Gandhian economic philosophy?
- Self – sufficient villages
 - Labour intensive activities
 - Owners as the trustees of wealth
- Choose the correct answer code.
- Only i & ii
 - Only ii & iii
 - Only i & iii
 - All the above
49. To which of the following movements, was the Manjeri Conference associated with?
- Eka Movement
 - Malabar uprising
 - Tebhaga Movement
 - Singpho's Rebellion
50. Which of the following was related to the Mansabdari System?
- Improving administration in far – flung regions
 - Military recruitment
 - Increasing revenue collection
- Only ii & iii
 - Only i & ii
 - Only ii
 - Only iii
51. With reference to Bhakti Literature, 'Tirumurais' refer to
- Composition of Thyagaraja
 - Collection of writings of Nayanars & Alvars
 - Goddess worshipped by the Alvars
 - Goddess worshipped by the Nayanars
52. Match List – I with List – II and select the correct answer.
- | List – I | List – II |
|----------------------------|--|
| A. Gulf Stream | 1. Pacific Ocean |
| B. West wind drift | 2. A slow eastward movement of water over the zone of westerly winds |
| C. Peru current | 3. Indian Ocean |
| D. West Australian current | 4. Warm current |
- A-4, B-2, C-1, D-3
 - A-1, B-3, C-4, D-2
 - A-4, B-3, C-1, D-2
 - A-1, B-2, C-4, D-3

53. The term 'syzygy' is referred to when the
- Earth is at perihelion and moon at perigee
 - Earth is at aphelion and moon at apogee
 - Moon and sun are at right angles with reference to the earth
 - Moon, sun and earth lie along a straight line
54. Which of the following Ramsar sites of India is incorrectly matched.
- Wular Lake – Jammu and Kashmir
 - Ashtamudi Wetland – Kerala
 - Deepor Beel – West Bengal
 - Nal Sarovar – Gujarat
55. What happens to tropical soils when the rainforest is cleared?
- The soil improves to the extent that soluble nutrients are no longer depleted by the trees
 - Here is little effect on the soil because of its depth of richness
 - Clearing interrupts the critical nutrient cycle and leads to soil leaching
 - The soils stabilise and become excellent for grain crops
56. Among the following climatic factors, which one has the least effect upon a terrestrial ecosystem?
- Temperature variation
 - Wind
 - Conditions of sunlight
 - Availability of water
57. Consider the following.
1. Kerosene
 2. Petrol and diesel
 3. leaves of agave americana
 4. Temephos
- Which of the above is / are used as larvicides to make the water container or cooler dengue free?
- 1 and 2 only
 - 2 only
 - 1, 2 and 3 only
 - 1, 2, 3 and 4
58. Accreditation of Environmental Consultant Organizations in India is done by
- Ministry of Environment, Forest and Climate Change
 - Central Pollution Control Board
 - Ministry of Earth Sciences
 - Quality Council of India
59. The best practice of disposal of construction and demolition (C & D) debris is
- Incineration
 - Recycling
 - Land fills
 - Solidification
60. Pyrolysis of Solid Waste refers to
- High temperature aerobic incineration
 - High temperature anaerobic distillation of waste for energy generation
 - Ambient aerobic distillation
 - Ambient anaerobic distillation

61. Citizen's Charter on Environment in the Constitution of India is embodied in
a) Article 48 b) Article 48A c) Article 49A d) Article 51A
62. Given below are statements about Asia – Pacific Economic Cooperation (APEC). Read them and answer the questions that follow.
1. It has 21 members
2. It promotes free trade throughout the Asia – Pacific region
3. India has the status of "Observer" in the forum
a) 2 and 3 only b) 1 and 3 only c) 1 only d) 1, 2 and 3
63. Which of the following statements is true.
a) Dhirendra Singh Committee was set up to suggest amendments to the Defence Procurement
b) NK Singh Committee to review Fiscal Responsibility and Budget Management Act (FRBM Act)
c) Bimal Jalan Committee on expenditure management
d) None of the above
64. Negative interest rates are to
a) Slow down growth b) Reduce price rise
c) Increase investment d) Competitively devalue the domestic currency
65. In keeping with the requirements of food grains under the National Food Security Act, buffer stocking norms have been formulated. According to then, in case the Central food grain Pool exceeds the buffer norms, the Department of Food and Public Distribution will do the following
a) Offload the excess stock in the domestic market through open sale
b) Exports
c) Either
d) Both
66. About pulses, the following correct.
a) Currently India's yield per hectare for pulses is about 700 kilogram
b) Pulses production in 2015 – 16 is 17.33 million tonnes
c) Rs 500 cr Price Stabilisation Fund is set up for pulses
d) All the above
67. Given below are the three types of banks involved in giving credit to agriculture. On the basis of the amount disbursed by them, arrange them in descending order
1. Commercial Banks
2. Cooperative Banks
3. Regional Rural Banks
a) 1, 2 and 3 b) 1, 3 and 2 c) 3, 2 and 1 d) 2, 3 and 1
68. Which one of the following is not a treatise on state craft?
a) Arthasashtra of Kautilya b) Nitivakyammrita of Samdeva Suri
c) Amuktamalyada of Krishna Devraya d) Indica of Megasthenis

69. 'Theravali' refers to which of the following.
- A sub – sect of Jainism which avoided idol – worship
 - Code of conduct prescribed for Jaina monks
 - Prayer book of Jainas
 - A section of Jaina Kalpasutras containing a list of ganas & their heads
70. Which of the following musical instruments is not used in Hindustani style of music?
- | | | | |
|--------------|----------------|------------------|-----------------|
| i. Mridangam | ii. Tabla | iii. Tanpura | iv. Santoor |
| a) i only | b) i & iv only | c) ii & iii only | d) i & iii only |
71. Which of the following is / are the features of Kangra school of painting?
- It depicts Verdant greenery & Varied foliage.
 - Multiple shades of green are used.
 - Kangra Arts Promotion society is working for its promotion as its on the verge of extinction today.
- | | | | |
|----------------|------------------|-----------------|------------------|
| a) Only i & ii | b) Only ii & iii | c) Only i & iii | d) All the above |
|----------------|------------------|-----------------|------------------|
72. Consider the following statements about the blackbuck.
- It belongs to the species antelope.
 - It has been classified as endangered by IUCN since 2003.
 - Blackbucks originally ranged in the northeastern states of India.
 - The main threats to the species are poaching, predation, habitat destruction, overgrazing, and diseases, inbreeding and sanctuary visitors.
 - Recently, The Haryana forest department has embarked on a plan to create a habitat to reintroduce blackbucks in the Aravalis.
- Which of the above statements is /are correct?
- | | |
|-----------------------|-----------------------|
| a) 4 and 5 Only | b) 2, 4 and 5 Only |
| c) 2, 3, 4 and 5 Only | d) 1, 2, 4 and 5 Only |
73. Consider the following statements.
- The Taiga biome stretches across large parts of Canada, Europe and Asia.
 - Taiga is the largest biome in the world.
 - A lot of coniferous trees grow in the Taiga.
- 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 |
74. Which of the following is / are correct with regard to National Green Highways Mission 2016?
- The mission is a step to secure the nature along with employment generation.
 - It's a step to meet the difference between The National Forest Policy mandate for a forest cover and the current area under the forest.
- | | |
|-----------------|--------------------|
| a) 1 Only | b) 2 Only |
| c) Both 1 and 2 | d) Neither 1 nor 2 |

75. The longest inland waterways in the world is:
- Mississippi river system
 - The Great Lakes
 - St. Lawrence
 - River Rhine
76. Which one of the following statements is correct?
- The mountains of the Peninsular India are about 40 million years old.
 - The Eastern Ghats extend as a continuous range for a distance of about 1600 km.
 - The Western Ghats consist of a series of discontinuous hills with no structural continuity.
 - The Siwalik Ranges have hogback appearance.
77. Consider the following statements about the soils of India.
- High temperature during most of the year retards formation of humus.
 - Soils which have humus require regular application of chemical fertilizers to remove nitrogen deficiency.
 - Titanium salts in basalt impart black colour to the soils of the Indian plateau.
 - Red soils are confined to the peripheral areas of the Indian plateau.
- Which of the statements given above are correct?
- 1 and 2
 - 1, 3 and 4
 - 2 and 3
 - 2 and 4
78. Which of the following statements with regard to the India Biodiversity Awards is NOT correct?
- The India Biodiversity Awards recognize excellence in biodiversity governance and conservation.
 - It is joint initiative of the Union Ministry of Environment, Forest and Climate Change (MoEFCC) and United Nations Development programme (UNDP).
 - Pakke Tiger Reserve in East Kameng district of Arunachal Pradesh has won the 'India Biodiversity Award 2016' under the conservation of threatened species category for its Hornbill Nest Adoption Programme.
 - It has been launched for the first time in 2016.
79. **Assertion (A):** Shade loving species show better natural regeneration under highly disturbed condition.
- Reason (R):** Heliophilic species needs more exposure to light for better natural regeneration. In the context of the two statements,
- Which one of the following is correct?
- Both (A) and (R) are true and (R) is the correct explanation of (A).
 - Both (A) and (R) are true, but (R) is not the correct explanation of (A).
 - (A) is true, but (R) is false.
 - (A) is false, but (R) is true.
80. Which of the following statements with regard to Soil Health Card Scheme is NOT correct?
- The SHC has in it all basic and crop wise recommendations of fertilizers and nutrients.
 - In order to increase the productivity of farms, it provides crop wise nutrient recommendation and other various inputs.
 - Profiling of soil structure would take place that would help in crop diversification as per soil content of that particular place.
 - Gujarat has become the first ever state in the country to issue Soil Health Cards or SHC to the farmers.

81. Indian Microwave Remote Sensing Satellite is
a) RISAT b) Resourcesat c) IRS d) Bhaskara
82. Following statements are related to taxation powers under the Indian Constitution.
Read them and answer the question below:
1. State Governments have no powers for direct taxation.
2. All direct taxes in the country are imposed and collected by the centre and shared with the States.
3. Service tax is entirely appropriated by the Centre.
a) 1 and 2 are correct b) 2 and 3 are correct
c) 1, 2 and 3 are correct d) None of the statements is correct
83. For an open economy that is developed, the value of the economy by Purchasing Power Parity is
a) Closer to the exchange rate- based value of the economy.
b) Much less than the exchange rate- based value of the economy
c) Much more than the exchange rate- based value of the economy
d) Zero
84. Fiscal deficit is identified as
- a) Budgetary deficit + Government market borrowing
b) Total outlay – income received
c) Budget deficit – public borrowing
d) None of these
85. **Assertion (A):** Indian agriculture still absorbs a major part of the work force.
Reason (R): India is not a developed economy.
a) Both (A) and (R) are true and (R) is the correct explanation of (A).
b) Both (A) and (R) are true and (R) is not the correct explanation of (A).
c) (A) is true, but (R) is false.
d) (A) is false, but (R) is true.
86. **Assertion (A):** Devaluation can correct imbalance in the Balance of Payments.
Reason (R): Devaluation raises the price of imported goods and reduces the foreign price of exports of the devaluing country.
a) Both (A) and (R) are true and (R) is the correct explanation of (A).
b) Both (A) and (R) are true and (R) is not the correct explanation of (A).
c) (A) is true, but (R) is false.
d) (A) is false, but (R) is true.
87. Laffer Curve measures
a) Relation between tax rate and tax revenue
b) Total tax burden and total payment burden
c) Total Income and total expenditure
d) None of the above

88. Early literature of Jainas was written in which of the following languages?
i. Sanskrit
ii. Prakrit
iii. Ardhamagadhi
a) Only i & ii b) Only ii & iii c) Only i & iii d) All the above
89. Which of the following helped in fueling of Nationalist Movement in pre – independent India?
i. Indian press & literature
ii. Indian contact with European countries
iii. Modern methods of transport & communication
iv. Racial discrimination by British
a) i, ii & iii b) i, iii & iv c) ii, iii & iv d) All of the above
90. The famous historical 'Magna Carta' laid the first step towards which of the following.
i. Parliamentary Democracy ii. Rule of law
iii. Rights of man iv. Liberty
a) i & ii Only b) ii, iii & iv c) i, ii & iv d) All of the above
91. What is 'Mucchangam' in Indian literature?
a) Buddhist literature developed under the Satvahanas.
b) Compilation of the works of Krishna Devraya.
c) Literature produced by all the three Sangams combined.
d) A holy text associated with Lingayats of Karnataka.
92. The temperature of Thiruvananthapuram is lower than that of Mumbai in May and higher than that of Mumbai in January, because
a) Thiruvananthapuram has cold current and Mumbai is faced with warm current.
b) Thiruvananthapuram has higher rainfall in summer and it is nearer to the equator.
c) Thiruvananthapuram is on the windward side and Mumbai is on the leeward side.
d) Thiruvananthapuram is thickly vegetated while Mumbai is not.
93. Xerophytic vegetation is a characteristic feature of
a) Chhotanagpur plateau b) Khasi hills
c) Eastern Ghats d) Kuchch
94. Match List – I (Forest Type) with List – II (Regions) and select the correct answer
- | List – I | List – II |
|-----------------------|--|
| A. Tropical evergreen | 1. Chhotanagpur plateau, Siwaliks |
| B. Monsoon | 2. Shillong plateau, Sahyadris |
| C. Temperate | 3. West Bengal, Terai |
| D. Mangrove | 4. Eastern and Western Himalayas, Nilgiris |
- a) A - 2, B - 4, C - 1, D - 3 b) A - 3, B - 1, C - 4, D - 2
c) A - 2, B - 1, C - 4, D - 3 d) A - 3, B - 4, C - 1, D - 2

95. Which one of the following is the junction point of the Eastern Ghats and Western Ghats?

- a) Javadi Hills
b) Anaimalai Hills
c) Nilgiri Hills
d) Shevaroy Hills

96. Ecolabels are indicators of

- i. Acceptable level of environmental impact of a product.
ii. Environmental performance of a product.
iii. Claims of environmental friendliness of a product.

Choose the correct answer from the codes given below.

- a) i, ii, iii
b) i, ii only
c) i only
d) ii only

97. Match List – I with List – II and select the correct answer using the codes given below the lists.

List – I

(Biosphere Reserves)

- A. Manas
B. Nokrek
C. Gulf of Mannar
D. Nanda Devi

- a) A - 2, B - 3, C - 4, D - 1
c) A - 2, B - 1, C - 4, D - 3

List – II

(States)

1. Meghalaya
2. Assam
3. Uttaranchal
4. Tamilnadu

- b) A - 4, B - 1, C - 2, D - 3
d) A - 4, B - 3, C - 2, D - 1

98. Biennial assessment of forest cover in India is done by

- a) Indian Institute of Remote Sensing, Dehradun
b) Forest Research Institute, Dehradun
c) Indian Institute of Forest Management, Bhopal
d) Forest Survey of India, Dehradun

99. As per colour coding of plastic bags for biomedical wastes, match the List – I with List – II and choose the correct answer from the codes given below.

List – I

(Colour Code)

- A. Yellow plastic bags
B. Black plastic bags
C. Blue / White plastic
D. Red plastic bags

- a) A - 4, B - 3, C - 2, D - 1
c) A - 2, B - 1, C - 4, D - 3

List – II

(Option for disposal)

1. Disposal in secured land fills
2. Incineration and deep burials
3. Autoclaving bags and chemical treatment
4. Microwave treatments and destruction

- b) A - 1, B - 4, C - 3, D - 2
d) A - 3, B - 2, C - 1, D - 4

100. Basel convention is related to

- a) Control of ozone depletion.
b) Control of water pollution.
c) Transboundary movement of hazardous wastes and their disposal.
d) Environmental auditing.

KEY

1-d; 2-d; 3-b; 4-a; 5-c; 6-c; 7-c; 8-d; 9-b; 10-a; 11-d; 12-c; 13-d; 14-c; 15-d; 16-d; 17-b; 18-c; 19-a; 20-d; 21-d; 22-d; 23-a; 24-c; 25-c; 26-b; 27-a; 28-c; 29-d; 30-c; 31-a; 32-c; 33-c; 34-a; 35-a; 36-a; 37-d; 38-d; 39-c; 40-a; 41-d; 42-c; 43-d; 44-a; 45-d; 46-c; 47-b; 48-d; 49-b; 50-c; 51-b; 52-a; 53-d; 54-c; 55-c; 56-b; 57-d; 58-d; 59-c; 60-b; 61-d; 62-d; 63-d; 64-c; 65-d; 66-d; 67-a; 68-c; 69-d; 70-a; 71-d; 72-d; 73-c; 74-c; 75-a; 76-d; 77-b; 78-d; 79-d; 80-d; 81-a; 82-d; 83-a; 84-a; 85-a; 86-a; 87-a; 88-b; 89-d; 90-a; 91-c; 92-b; 93-d; 94-c; 95-c; 96-b; 97-c; 98-d; 99-c; 100-c.

EXPLANATIONS

1-d; 2-d; 3-b; 4-a; 5-c; 6-c; 7-c;

8-d: Nirmal, Cheriya are from Telangana, Srikalahasti is from Andhra Pradesh while Tanjavur is from Tamilnadu.

9-b: Woods Dispatch recommended to encourage private participation in the field of education. The focus was to westernize education. One university was established in each of Calcutta, Bombay & Madras on the model of London University. Also the focus was on technical education.

10-a: Major advantages which British had were Commercial, naval superiority & their victory in European wars. British also had 3 important parts – Calcutta, Bombay & Madras, while French only had one Pondicherry.

11-d: The correct characteristic (s) of primary seismic wave are

1. It is a longitudinal and compressional wave.
2. It is analogous to sound waves.
3. It travels with faster speed through solids but slowly through liquids.

12-c: The Alps (continental – continental plate collision). The Himalaya (Continental – continental plate collision, Eurasian and Indian plate). The Rockies (Oceanic – Continental plate collision, Pacific and American Plate). The Caucasus Mountains (Continental – continental plate collision).

13-d: Jet streams develop best in winters because of greater thermal contrasts. Jet streams, generally, develop a wavy pattern called Rossby waves. Jet streams have been found, to influence earth's surface weather phenomena (temperate cyclone, monsoon, etc). The monsoon of South Asia is largely affected and controlled by jet streams.

14-c: In the idealized tricellular circulations, the sequence of pressure conditions from equator to poles is (i) Equatorial low, (ii) Subtropical high, (iii) Subpolar low, (iv) Polar high. The equatorial low pressure belt is located on either side of the geographical equator in a zone extending between 5° N and 5° S latitudes but this zone is not stationary because there is seasonal shift of belt.

★ Subtropical high pressure belt extends between the latitude of 25° – 35° in both the hemisphere. It is important to note that this high pressure belt is not thermally induced because this zone besides two to three winter months receives fairly high temperature throughout the year. Each polar low pressure belt is located between 60° – 65° latitudes in both the hemisphere. Polar high pressure belt persists at the poles throughout the year because of prevalence of very low temperature below freezing point all the year round.

15-d: The declination of the sun in a year's time is $23\frac{1}{2}^{\circ} + 23\frac{1}{2}^{\circ}$ i.e. 47°. The two tropics (of Cancer and Capricorn) represent the farthest limits of the vertical rays of the Sun. As the angle of Sun's rays decreases pole ward; the amount of insolation received also decreases in that direction.

16-d: Temperature inversion: upward reversal of the normal environmental temperature lapse rate. So, that the air temperature increases upward. The following types on the basis of relative heights from the earth's surface at which it occurs and the type of air circulation:

1. Non – advective inversion: (i) Ground or surface inversion or radiation inversion; (ii) Upper air inversion
2. Advective inversion: (i) Frontal inversion or cyclonic inversion; (ii) Valley inversion due to vertical air movement; (iii) Surface inversion due to horizontal air movement.
3. Mechanical inversion: (i) Subsidence inversion; (ii) Turbulence and Convective inversion. The ground surface inversion occurs under the following conditions:
 - a) Long winter nights, so that the loss of heat by terrestrial radiation from the ground surface during night may exceed the amount of insolation received from the Sun through incoming shortwave electro – magnetic radiation waves and thus the ground surface becomes too cold.
 - b) Cloudless and clear sky, so that the loss of heat through terrestrial radiation proceeds more rapidly without any obstruction.
 - c) Presence of dry air near the ground surface so that it may not absorb much heat radiated from the earth's surface.
 - d) Slow movement of air, so that there is no transfer and mixing of heat in the lower layers of the atmosphere.

17-b: The telescope is the product of an Indo – Belgium collaborative effort, assisted by the Russian Academy of Sciences.

18-c; 19-a; 20-d;

21-d: Only clouds that meet certain criteria are suitable for seeding. Summer clouds must possess a sustained updraft of moist air, a lack of natural ice, and grow to heights cold enough to contain supercooled liquid water. Winter clouds must also be supercooled and persist long enough to grow snowflakes large enough to fall to the ground. Criteria for fog seeding are very similar to the conditions required for winter clouds. Clouds can be seeded with a number of different types of agents: silver iodide, liquid propane, dry ice (solid carbon dioxide), and various salt compounds. Seeding is typically done either by specially – equipped aircraft or via ground – based generators at higher elevations in mountainous areas.

22-d; 23-a; 24-c; 25-c; 26-b; 27-a;

28-c: Land revenue was the chief source of state's income while customs duty in foreign trade was another source.

29-d: Pulakesin II had over 100 ships in his navy Chalukyas were a major naval power.

30-c: Permanent Settlement / Zamindari System. Zamindars as the permanent owners of land. Total revenue 89% paid to state, 11% kept with themselves. They were left independent in the internal affairs of their respective districts & hence the system of 'Patta', mentioning the area of the land to farmers was not enforced properly.

31-a;

32-c: The research paper shows that the endemic Humpback Mahseer is on the brink of extinction having been replaced by non-native, blue-finned outsiders, which have been artificially bred and introduced in the river in the name of conservation. The blue – finned variety was introduced from Maharashtra in the 1980 s.

33-c: The source of tropical cyclones occurrence lies between 5° to 30° latitudes in both the hemispheres. They never form exactly over the equator. A tropical hurricane is nearly circular vortex averting 500 to 600 km in diameter. The diameter of small sized Tornado violent storm varies from 150 to 600 meters. Hurricanes form only over oceans having a high surface temperature (27°C). Whenever a tropical cyclone moves on to land, much of its severity is reduced simply because its source of moisture is cut off. In other words, no energy is available on land to maintain a cyclone. The weakening of the hurricane over land is also the result of increased friction.

- 34-a:** The Mediterranean climate is characterised by a dry summer, a mild humid winter and abundant sunshine, about 90 percent of the possible sunshine in summer and 50% to 60% even during the rainy winter season. This happens because of shift of pressure belts as a result of which westerlies bring winter rain. Mediterranean climates are found 30° and 40° N and latitudes on the western sides of the continents. These climates are found in five regions of the world; The borderlands of the Mediterranean Sea (north of the Mediterranean Sea from Portugal to Turkey and beyond the Iranian Highlands; the southern borderland includes Morocco, northern Algeria, and Tunisia and north of Bengasi in Libya) the Central and California coast in the United States of America; Central Chile; the Capetown area of South Africa; and Southern and South – western coasts of Australia.
- 35-a:** The temperature of the atmosphere of a particular place near the ground surface depends on the amount of insolation received at that place. Since the amount of insolation received by the ground surface decreases poleward from the equator i.e. from low latitudes towards high latitudes because the Sun's rays become more and more oblique (slanting) poleward and hence air temperature also decreases poleward. It may be noted that though Sun's rays are almost vertical over the equator throughout the year but there is no maximum temperature on it rather maximum temperature is recorded along 20° N latitude in July because major portion of insolation is reflected by clouds and sizeable amount of heat is lost in evaporation in the low latitude zone (equatorial zone).
- 36-a:** Dalmatian Coast is the longitudinal coast where mountains run parallel (on concordant) to the coast. The name comes from the coast of Dalmatia (former Yugoslavia), along the Adriatic Sea.
- 37-d:** Coral reefs and atolls are significant sub – marine features. These are formed due to accumulation and compaction of skeletons of lime secreting organisms known as coral polyps.
- 38-d; 39-c; 40-a; 41-d; 42-c; 43-d; 44-a; 45-d; 46-c; 47-b;**
- 48-d:** All these initiatives were the inalienable parts of Gandhian theories of Swaraj, Trusteeship & Oceanic Circles.
- 49-b:** It was associated with the Malabar uprising also called the Noplah/Mappila revolt. Conference took place in 1921. Nellikuth in Manjeri was the birth place of rebel leader Ali Musliyar.
- 50-c:** Mansab – Rank, Mansabdar – Rank Holder. It was a system of giving ranks to Mughal officials. There were 33 categories of Mansabdars.
- 51-b:** They are also referred to as the fifth Veda.
- 52-a:** Gulf Stream is a warm current, moving from low latitudes to higher latitudes. West Wind Drift (Cold), a strong ocean current known as west wind drift flows from west to east under the influence of the westerlies in the zone of 40° – 50°S latitudes (South Pacific; South Atlantic and Indian Ocean). This current becomes much stronger because of immense volume of watermass and high velocity winds called as roaring forties and thus the current flows with great velocity. Peru Current (cold): The cold current flowing along the western coast of South America in the eastern Pacific Ocean from south to north is called Peru Current or Humboldt Current. West Australian current is a warm current in the Indian Ocean.
- 53-d:** The position of the sun, the moon and the earth in a straight line is called Syzygy. When the sun, the moon and the earth are in sequential order in a straight line, in other words, when the sun and moon are in one side of earth, the position is called Conjunction (the situation of solar eclipse). When the position of the earth is in between the sun and moon, this is called opposition. On the other hand, when sun, the earth and the moon are in a position of a right angle, this position is called quadrature. The nearest position of the moon with the earth is called perigee when the distance between them is 3,56,000 km. The farthest position of the moon with the earth is apogee (4,07,000 km).
- 54-c:** Deepor Beel is in Assam
- 55-c:** When rain – forest is cleared, the humus formation almost ceases, thereby depleting soils critical nutrients. High rainfall also results into leaching of soil nutrient in the absence of tree cover.

56-b: Temperature variation is universally important environmental factor as each species has its own minimum, maximum and optimum temperatures for life. Condition of sunlight determines the source of energy for ecosystem. Besides most organisms need large amount of water to survive so wind has the least effect.

57-d; 58-d; 59-c; 60-b; 61-d; 62-d; 63-d; 64-c; 65-d; 66-d; 67-a;

68-c: Amuktamalyada – One who wears & gives away garlands. It is considered a masterpiece in Telugu literature. It tells the story of a girl who used to wear the garlands intended for Lord Ranganatha, before they were offered to the deity.

69-d: Kalpasutra is a Jaina text containing biographies of the Jain tirthankaras, most notably Mahavira & Parsvanath. Bhadrabahu I is considered as the author of this text.

70-a: Mridangam is a percussion instrument used in Carnatic music.

71-d;

72-d: Males and females have distinctive colorations. Male blackbucks are dark brown, black, and white and have long, twisted horns, while females are fawn – coloured with no horns. Blackbucks originally ranged over large tracts of India except in the northeast. Today, the blackbuck population is confined to areas in Maharashtra, Orissa, Punjab, Rajasthan, Haryana, Gujarat, Andhra Pradesh, Tamilnadu and Karnataka, with a few small pockets in central India.

★ Blackbucks thrived in the Haryana Aravali region about four decades ago, but eventually died out because of change in vegetation into a closed canopy forest (thick forest). The animals prefer grassland forest. The forest department also hopes to introduce other species of the deer family through this initiative.

★ 'The reserve forest is near Sultanapur National Park. Historically, this area was used as a salt pan. After the practice discontinued, the area turned into a scrub forest and later open forest through process of natural succession'.

★ This area was naturally inhabited by blackbucks and nilgais about four decades ago but since the area turned into a closed canopy forest it became unsuitable for the habitation of blackbucks.

73-c: The Taiga biome stretches across large parts of Canada, Europe and Asia. A lot of coniferous trees grow in the Taiga. Taiga is not the largest biome in the World.

74-c: The National Forest Policy mandate for a forest cover of **33 percent of the country's land area**. Currently, only **22 per cent is covered by forests**. This difference can be met only through the planting of trees outside the forest areas.

75-a: The Mississippi Waterway: The Mississippi – Ohio waterway connects the interior part of the USA with the Gulf of Mexico in the South. Large steamer can go through this route upto Minneapolis.

★ The Great Lakes – St. Lawrence Waterway: It is an unique water way in the northern part of North America. The ports located on this route have developed just like ocean ports with all facilities. As such large ocean freighters are able to navigate deep inside the continent upto 3,760 km through the estuary of St. Lawrence below Quebec.

Rhine Waterway: The Rhine is the most important channel of navigation in this region. It is the world's most heavily trafficked waterway. Rotterdam is located at its mouth in the Netherlands.

76-d: The Siwalik comprises range of the Himalaya and is also known as Outer Himalayas. With its southern steep slopes, it assumes hogback appearance. Flat scarps, anticlinal crests and synclinal valleys are the chief characteristic feature of this range.

77-b: The decayed leaf material adds much needed humus to soil thereby increasing its fertility. Humus itself decomposes in process known as mineralisation which releases nitrogenous compounds into the soil. So, the soils which have humus should not face nitrogen deficiency.

78-d: Launched for the first time in 2012.

- ★ This year, the categories of the India Biodiversity Awards have been modified to link them with the provisions of the Biological Diversity Act, 2002, in order to incentivize stakeholders for the conservation of biodiversity and the effective implementation of the Act.
- ★ The four categories of the India Biodiversity Awards 2016 are: Conservation of threatened species (both wild and domesticated):

Winners:

1. Purnima Devi Barman and the women's Hargilla army protect this endangered species (The Greater Adjutant bird, found only in two areas in India and Cambodia) increasing nests three-fold in six years.
2. Nature Conservation Foundation and the Ghora – Abhe Society: The group introduced the Hornbill Nest Adoption Programme in Pakke Tiger Reserve, Arunachal Pradesh, which has managed to protect 62 active hornbill nests and help 60 hornbill pairs breed successfully.

Runner up: Dr. SossamaIype, Professor at the Kerala Agricultural University, saved the Vechur cattle from the brink of extinction through an ex – situ breeding programme and distribution to farmers allowing for its in-situ conservation. Sustainable use of biological resources.

Winner: Mawkynot Self Help Group: The Living Root Bridges; The 52 – feet long living roots bridges in Mawkynot, are a marvel of bio – engineering, are resilient and enhance ecosystem services.

Runner up: Participatory Learning Action Network and Training (PLANT): An ecological intervention to conserve the coastal ecosystem in Tamilnadu, PLANT is creating artificial reefs to counter the effects of prolonged mechanized trawling operation improving quality and quantity of fish. Successful mechanisms/ models for access and benefit sharing.

Winner: Gram Mooligai Co. Ltd., Madhya Pradesh; involves local communities in developing medicinal plant products and markets, aimed at sustainable use and equity.

Runner up: Indian Institute of Oilseeds Research; Developing eco – friendly and non – toxic biopesticides that only attacks its target insect, pest or disease without harming any other biological specie. These bio – pesticides are also available at an affordable price. Biodiversity Management Committees.

Winner: Dudhai Biodiversity Management Committee; The Dudhai Biodiversity Management Committee in Uttarakhand has banned illegal sand mining and revived river ecosystems.

Runner up: Biodiversity Management Committee Niitii Hong; Conserving and reviving the ecosystem of Ziro Valley in Arunachal Pradesh by combating rampant felling of trees, checking over consumption of forest produce by tribes and villagers, reducing soil erosion and water contamination due to dumping of waste by local communities.

79-d; 80-d: It's Punjab; 81-a; 82-d; 83-a; 84-a; 85-a; 86-a; 87-a;

88-b: Early Jaina writers discarded Sanskrit as the language of Brahmans & adopted Prakrit & Ardhamagadhi, the languages of common people.

89-d;

90-a: UK celebrated 800 years of Magna Carta signing on 15th June 2015. It was a document of promises between King Jon & his subjects about governing England with customs & feudal law. Rights & Liberty were the concepts developed much later.

91-c: I Sangam – Madurai

II Sangam – Kapadapuram

III Sangam – Mudathirumran

These Sangams flourished under the royal patronage of Pandyas.

92-b: Thiruvananthpuram has lower temperature than Mumbai in May because of higher rainfall in summer. Since it is nearer to equator it has higher temperature than that of Mumbai in January.

93-d: Xerophytic Vegetation are found in north – western parts of the country including Rajasthan, South – western Punjab, Western Haryana, Kuchchh and neighbouring parts of Saurashtra.

94-c:

- | | |
|-----------------------|--|
| A. Tropical evergreen | 2. Shillong plateau, Sahyadris |
| B. Monsoon | 1. Chhotanagpur plateau, Siwaliks |
| C. Temperate | 4. Eastern and Western Himalayas, Nilgiris |
| D. Mangrove | 3. West Bengal, Terai |

95-c: The Nilgiri, far south in Tamilnadu is the meeting place of the Western Ghats, the Eastern Ghats and the Southern hills, rising abruptly from the surrounding areas, it has the highest peak of Dodabetta (2,637 m) and Udhagamandalam (Ooty) hill station.

96-b;

97-c:

- | | |
|-------------------|----------------|
| A. Manas | 2. Assam |
| B. Nokrek | 1. Meghalaya |
| C. Gulf of Mannar | 4. Tamilnadu |
| D. Nanda Devi | 3. Uttaranchal |

98-d; 99-c; 100-c.

(This Model Paper was prepared by SRIRAM'S IAS)