



# VIDHVATH ACADEMY FOR COMPETITIVE EXAMS

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## SUBJECT WISE TEST: VPT036 PHYSICAL GEOGRAPHY OF THE WORLD TEST BOOKLET

*Time Allowed: 120 mins*

*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  $1/3^{\text{rd}}$  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:
1. Equator records the highest temperature of ocean water due to direct sunlight.
  2. The winds blowing from the land towards the ocean lead to upwelling of cold water from below.
  3. Gulf stream lowers the temperature near the eastern coast of North America

Which of the statements given above is/are correct?

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

2. Consider the following statements:

1. Statement-I: Carbon dioxide contributes to the Greenhouse effect primarily by the absorption of outgoing terrestrial radiation.
2. Statement-II: Carbon dioxide is transparent to incoming solar radiation but opaque to outgoing terrestrial radiation.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is Correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

3. With reference to the 'Cyclones', consider the following statements:

1. The extra-tropical cyclones have a clear frontal system which is not present in the tropical cyclones.
2. The tropical cyclones move from east to west but the extra-tropical cyclones move from west to east.
3. There is no landfall of extra-tropical cyclones in India.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

4. Consider the following statements:

1. Statement-I: A positive Indian Ocean Dipole (IOD) can mitigate the adverse effects of an El Nino event on the monsoon.
2. Statement-II: A positive IOD leads to warmer sea surface temperatures in the western Indian Ocean and cooler temperatures in the eastern Indian Ocean.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

5. The Coromandel Coast of Tamil Nadu experiences a distinct climatic pattern characterized by a dry summer and significant rainfall during the northeast monsoon season. According to the Koppen climate classification scheme, which type of climate is observed on the Coromandel Coast of Tamil Nadu?

- (a) As
- (b) Amw
- (c) Aw
- (d) Bwhw

6. Water vapor is a crucial component of the Earth's atmosphere that:

1. Increases in concentration with altitude.

2. Is most abundant in Polar Regions due to low temperatures and reduced evaporation rates.
3. Acts as a greenhouse gas, helping to regulate Earth's temperature.
4. Has no significant impact on weather patterns or atmospheric stability.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

7. With reference to the India's first indigenous Fast Breeder Reactor, consider the following statements :

1. Statement-I: They can generate more nuclear fuel than they consume by converting fertile material into fissile.
2. Statement-II: Thorium - 233 blankets surrounding the fuel core will produce Plutonium - 239 after undergoing nuclear fission.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

8. Consider the following:

1. Sleet
2. Drizzle
3. Mist
4. Haze

How many of the above phenomena are considered as a form of precipitation?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

9. Which of the following is a primary reason for the generally weaker intensity of Arabian Sea cyclones compared to those in the Bay of Bengal?

- (a) Higher wind shear in the Arabian Sea disrupts cyclone organization.
- (b) The Arabian Sea's clockwise Coriolis Effect inhibits cyclonic rotation.
- (c) Proximity to major deserts leads to intrusion of dry air in the Arabian Sea.
- (d) Shallow bathymetry of the Arabian Sea limits heat energy available.

10. At convergent plate boundaries, where two tectonic plates move towards each other, which of the following geological features can usually form?

- (a) Mid-ocean ridges
- (b) Rift valleys
- (c) Island arcs
- (d) Transform faults

11. With reference to the Earthquake Waves, consider the following statements:

1. Statement-I: The shadow zone of Secondary-waves is much larger than that of Primary-waves.
2. Statement-II: Secondary-waves can travel through only solid mediums, whereas the Primary-waves can travel through all mediums like gaseous, liquid and solid.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is Correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

12. With reference to Distribution of Rainfall across the world, consider the following statements:

1. Rainfall generally decreases as one move away from the equator towards the poles.
2. The rainfall is more over the landmasses than on the oceans of the world.
3. Inland regions of continents tend to experience higher rainfall as compared to coastal areas.

Which of the statements given above is/are correct?

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

13. On which day of the year, Tropic of Capricorn receives direct rays of the sun and experiences longer days and shorter nights?

- (a) 22nd December
- (b) 21st March
- (c) 23rd September
- (d) 21st June

14. With reference to different types of cloud, consider the following statements:

1. Nimbus clouds are shapeless masses of thin vapour which are formed at very high altitudes.
2. Cirrus are thin and detached white clouds.
3. Cumulus clouds exist in patches and they have a flat base.
4. Stratus clouds are generally formed due to mixing of air masses of different temperatures or due to loss of heat.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

15. With reference to the Salinity in the Oceans, consider the following statements:

1. The highest salinity is observed near the equator.
2. North Sea has high salinity due to the influx of saline water from the North Atlantic Drift.

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. Consider the following impacts:

1. Erosion of Soil
2. Ocean Acidification
3. Carbon Sequestration

How many of the above can be considered as the impacts of Enhanced Rock Weathering?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

17. Consider the following statements :

1. Statement-I: Coriolis force deflects the wind to the right direction in the northern hemisphere and to the left in the southern hemisphere.
2. Statement-II: The revolution of the earth is the primary cause of the direction of the wind.
3. Statement-III: The Coriolis force is directly proportional to the angle of latitude.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-II and Statement-III are correct and both of them explain Statement-I
- (b) Both Statement-II and Statement- III are correct, but only one of them explain Statement I
- (c) Only one of the Statements II and III is correct and that explains Statement-I
- (d) Only one of the Statements II and III is correct and that does not explains Statement-I

18. Which of the following is the primary source of phosphorus in the phosphorus cycle?

- (a) Atmosphere
- (b) Oceans
- (c) Rocks and minerals
- (d) Plants

19. Consider the following statements:

1. They are generally located in the continental interiors of the regions.
2. They are generally associated with humid conditions.
3. Local wind also known as 'Snow eater' is found here.

How many statements given above are correct in context of Steppe Climate?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

20. Consider the following statements:

1. Statement-I: The gravitational pull and the centrifugal force of the Sun, Moon and Earth are responsible for creating the tidal bulges on the earth.
2. Statement-II: Spring Tide occurs when the Sun and Moon are at right angles to each other.
3. Statement-III: Neap Tide occurs when the Sun, Moon and Earth are arranged in a straight line.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-II and Statement-III are correct and both of them explain Statement-I
- (b) Both Statement-II and Statement- III are correct, but only one of them explains Statement-I
- (c) Only one of the Statements II and III is correct and that explains Statement-I
- (d) Neither Statement-II nor Statement-III is correct

21. Consider the following:

1. Labrador current

2. Agulhas current

3. Kuroshio current

How many of the above are cold ocean currents?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

22. Consider the following statements:

1. Statement I: Volcanoes are generally not located around the transform boundaries.

2. Statement II: At transform boundaries, the tectonic plates slide horizontally past one another resulting in neither creation nor destruction of the Earth's crust.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement- II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement- II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

23. With reference to the Evolution of the Earth, consider the following statements:

1. Earth lost its primordial atmosphere due to solar winds.

2. The density of the earth-forming material rises from the crust to the core.

3. Oceans were created as a result of rainwater collecting in depressions on the Earth's surface.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

24. Which of the following types of volcanoes is characterized by eruptions of cooler and more viscous lavas than basalt, often resulting in explosive eruptions, and is known for forming layers of pyroclastic material and ashes?

- (a) Shield Volcanoes
- (b) Composite Volcanoes
- (c) Cinder Cone Volcanoes
- (d) Lava Domes

25. Consider the following layers of atmosphere:

- 1. Troposphere
- 2. Stratosphere
- 3. Mesosphere
- 4. Ionosphere

In which of the above layers, temperature generally decreases with the increase in altitude?

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

26. Consider the following statements:

- 1. Statement-I: The Equator receives comparatively less insolation than the tropics.
- 2. Statement-II: A sizable portion of incoming solar radiation is lost while passing through the atmosphere due to absorption by clouds.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I.
- (c) Statement-I is correct but Statement-II is incorrect.
- (d) Statement-I is incorrect but Statement-II is correct

27. Consider the following statements:

- 1. The Strait of Hormuz connects the Persian Gulf and the Gulf of Oman.

- 2. Bab el Mandeb Strait connects the Gulf of Aden and the Red Sea.
- 3. Socotra Island is located in the Red Sea.
- 4. The Gulf of Aqaba connects Jordan with the Red Sea.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

28. Consider the following statements with regard to the critical minerals in India:

- 1. Critical minerals are essential for economic development and national security.
- 2. The lack of availability of the critical minerals may lead to supply chain vulnerabilities.
- 3. Graphite has been identified as one of the critical minerals.

How many of the statements given above is/ are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

29. Consider the following statements about Polar Stratospheric Clouds (PSCs):

- 1. PSCs form at altitudes of approximately 15 to 25 kilometers in the stratosphere, primarily during the winter months in polar regions.
- 2. Ozone depletion above the polar regions is most severe during the polar spring, following the winter period of PSC formation.
- 3. PSCs are sometimes visible from the ground during twilight, displaying vivid colours.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

30. Which of the following birds is facing a critical threat in India due to power lines because of its unique flying style with a narrow frontal vision and a heavy body that makes it difficult to maneuver?

- (a) Sarus crane
- (b) Great Indian Bustard
- (c) Himalayan Griffon Vulture
- (d) Greater flamingo

31. Consider the following:

- 1. Cumulo-nimbus
- 2. Stratus
- 3. Cirro-cumulus
- 4. Nimbo-stratus
- 5. Strato-cumulus

How many of the above are generally categorized as high clouds?

- (a) Only two
- (b) One three
- (c) Only four
- (d) All five

32. Regarding Black Sea, which of the following statements are true?

- 1. It is bordered by Italy, Ukraine and Russia.
- 2. One of Europe's largest rivers, the Danube empties into Black sea.
- 3. It is connected to the Mediterranean Sea through the Bosphorus Strait.

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

33. Consider the following statements:

- 1. The movement of tectonic plates is driven by convection currents in the Earth's mantle.
- 2. Subduction zones are commonly associated with divergent plate boundaries.

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

- (a) 1 only
- (b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

34. Consider the following statements:

- 1. Statement-I: Polar Jet streams are strongest during winters in both the northern and southern hemisphere.
- 2. Statement-II: During winters, the thermal contrast decreases and the intensity of the high pressure center at the pole increases.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement II is correct

35. With reference to the 'Tsunami', consider the following statements :

- 1. These are long waves caused by sudden displacement of the ocean water.
- 2. Speed of the tsunami waves decreases as it reaches the shoreline from the deep ocean.
- 3. Height of tsunami waves is more at the coast than Deep Ocean.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

36. With reference to the interior of Earth, consider the following statements:

- 1. Oceanic crust is thicker than the continental crust.
- 2. Asthenosphere is a layer within the core and primary source of Magma.
- 3. The outer core is in liquid state while the inner core is in solid state.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

37. Which one of the following landforms does not result from erosional activities of Glaciers?

- (a) Playas
- (b) Cirque
- (c) Horns
- (d) Glacial Valleys

38. Consider the following statements about the Levant region:

1. Levant historically refers to a large area in the Eastern Mediterranean, encompassing present-day countries such as Syria, Lebanon, Israel, Jordan, and parts of Turkey.
2. Sykes-Picot Agreement of 1916 played a significant role in shaping the modern borders of the Levant countries.
3. Levant has a unified economic policy that facilitates free trade and movement of labor among its countries.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

39. Consider the following pairs:

Desert: Country

1. Gibson: Australia
2. Atacama: Chile
3. Taklamakan: Mongolia

How many of the pairs given above are correctly matched?

- (a) Only one pair
- (b) Only two pairs
- (c) All three pairs
- (d) None of the pair

40. With reference to the Marine West Coast Climate, consider the following statements:

1. It receives precipitation all round the year.
2. It can be found in Southern Chile and New Zealand.
3. It experiences extreme temperatures with freezing winters and humid summers.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

41. Consider the following statements:

1. Statement-I: North East Coast of Canada is generally ice free.
  2. Statement-II: Labrador Current flows along the North East Coast of Canada.
- Which of the following is correct with respect to the above statements?

- (a) Both Statement I and Statement II are correct and Statement II is the correct explanation for Statement I
- (b) Both Statement I and Statement II are correct and Statement II is not the correct explanation for Statement I
- (c) Statement I is correct but Statement II is incorrect
- (d) Statement I is incorrect but Statement II is correct

42. Consider the following statements:

1. Atmospheric conduction process is primarily limited to the troposphere.
2. Atmospheric advection creates diurnal weather variations in the middle latitudes.

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

43. Consider the following pairs:

Intrusive Volcanic Landform: Description

1. Laccoliths: Dome-shaped magma patches
2. Batholiths: Massive body of magma located in deeper layers of crust
3. Sill: Saucer shaped magma structures

How many of the above pairs are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

44. Consider the following statements with reference to Tropical Easterly Jet Streams:

1. It causes the reversal in upper air circulation.
2. The advent of easterly jet streams is held responsible for the burst of the monsoon in India.
3. It does not extend beyond 15°N latitude in the upper atmosphere.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

45. Which of the following can be likely reasons for the delay in the Indian monsoon?

1. Weakening of the Intertropical Convergence Zone (ITCZ)
2. The phenomenon of La Nina in the Eastern Pacific
3. Delay in shift of subtropical westerly jet at the beginning of summer
4. Madden Julian Oscillations

Select the correct answer using the code given below:

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

46. In the context of landform formation, Stalactites, Stalagmites and Pillars are:

- (a) Erosional landforms of glaciation
- (b) Depositional landforms of groundwater
- (c) Landforms of wind erosion
- (d) Erosional landforms of waves

47. Consider the following pairs:

Minor Plates: Location

1. Cocos plate: South America and Pacific plate
2. Philippine plate: Asiatic and Pacific plate
3. Fuji plate: Philippine and Pacific plate

How many of the above pairs are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

48. In the context of India's recently inaugurated first Dolphin Research Centre, consider the following statements:

1. Dolphins are not fish and breathe through lungs like mammals.
2. Gangetic Dolphins are blind and hunt by emitting ultrasonic sound waves.
3. Irrawaddy dolphins are naturally found in Chilika Lake.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

49. Consider the following statements about the Mediterranean climate:

1. It is characterized by hot, dry summers and mild, rainy winters.
2. The annual precipitation ranges between 35-90 cm.
3. It is primarily influenced by the subtropical high pressure belt throughout the year.

Which of the statements given above is/are correct?

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

50. Consider the following statements about the advantages of Tamil Nadu's Kulasekarapattinam as the site for ISRO's new rocket launch port:

1. Its proximity to the equator enables launches with increased fuel efficiency for missions in low-inclination orbits.
2. The location allows for a direct southward trajectory for launches, eliminating the need to divert around Sri Lanka.

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

51. Consider the following pairs:

Sea: Bordering Country

1. Baltic Sea: Sweden
2. Red Sea: Egypt
3. Caspian Sea: Afghanistan
4. Mediterranean Sea: Spain

How many of the pairs given above are correctly matched?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

52. Consider the following pairs

Local storms: Area where they blow

1. Mango Shower: Kerala and coastal Karnataka
2. Blossom Shower: Kerala and nearby areas
3. Nor Westers: Bengal and Assam
4. Loo: Northern plains from Punjab to Bihar

Which of the above pairs are correctly matched?

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

53. Statement-I: Warming sea waters, worsened by El Nino, triggered the recent global mass coral bleaching event.

Statement-II: At elevated temperatures, zooxanthellae algae produce toxins harmful for coral, leading to rare mass bleaching events

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

54. Mr. X lives in Itanagar and wants to watch the live streaming of the India Pakistan match which is scheduled to held in New York on June 9, 2024. New York is located at 75°W Meridian. Match starts at 10:30 A.M. EDT (Eastern Daylight Time) in New York. Considering 1 hour of daylight savings into account in New York, when should Mr. X be on his television set to watch the match?

- (a) 8:00 PM IST on 9th June.
- (b) 8:00 PM IST on 8th June
- (c) 3:30 AM IST on 9th June.
- (d) 10:00 PM IST on 9th June

55. Consider the following statements:

1. The solar output received at the top of the atmosphere remains constant throughout the year.
2. The insolation received by the earth on 3rd January is slightly more than the amount received on 4th July.

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

56. Consider the following statements about landforms created by river systems:

1. Oxbow lakes are formed when a wide meander from the main stem of a river is cut off to create a lake.
2. Alluvial fans are typically formed in the high gradient regions of mountain fronts where rivers emerge from steep valleys onto flat plains

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

57. With reference to the Polar vortex, consider the following statements:

1. The polar vortex is an area of high pressure in Polar Regions.
2. In the northern hemisphere, the vortex strengthens and becomes much colder in winter.

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

58. Besides geological significance, the Barberton Greenstone Belt has potential economic importance. Which of the following resources is actively mined in the region?

- (a) Copper
- (b) Gold
- (c) Platinum
- (d) Diamonds

59. With reference to temperature of Ocean Water, consider the following statements:

1. Statement I: The temperature of ocean water steadily declines with increasing depth.
2. Statement II: The amount of sunlight reduces with increasing depth of the ocean.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I.
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I.
- (c) Statement-I is correct but Statement-II is incorrect.
- (d) Statement-I is incorrect but Statement-II is correct

60. Which of the factors given below are favorable conditions for a Heat wave?

1. Prevalence of hot dry air over a region
2. Presence of moisture in the upper atmosphere
3. Cloudy sky
4. Large amplitude anticyclone flow over the area

Select the correct options from the code given below:

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

61. Consider the following pairs:

Recently erupted volcanoes: Country

1. Marapi: Japan
2. Mount Ulawun: Papua New Guinea
3. Mount Etna: Italy

How many pairs given above are correctly matched?

- (a) Only one pair
- (b) Only two pairs
- (c) All three pairs
- (d) None of the pairs

62. With reference to Dew Point, consider the following statements:

1. Dew point must be higher than freezing point for the formation of dew.
2. The ideal conditions for dew formation are clear sky and calm air.

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

63. With reference to the insolation of the earth, consider the following statements:

1. Insolation reaches the earth's surface in short waves and heat is radiated from the earth in long waves.
2. In the tropical region, the amount of insolation is higher than the amount of terrestrial radiation.

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

64. Match the following  
Local Winds Region

1. Bora A. Europe
2. Harmattan B. Africa
3. Norther C. Australia
4. Brickfielder D. Gulf of Mexico

Select the correct answer from the code given below:

- (a) 1-A; 2-B; 3-C; 4-D
- (b) 1-D; 2-C; 3-B; 4-A
- (c) 1-A; 2-B; 3-D; 4-C
- (d) 1-B; 2-A; 3-D; 4-C

65. With reference to the High Seas Treaty, consider the following statements:

1. It aims to establish clear boundaries for national jurisdiction over marine resources.
2. It ensures that all benefits from marine genetic resources are

controlled by Intellectual Property Rights.

3. It provides for the establishment of Marine Protected Areas (MPAs) in International waters.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

66. Consider the following statements about the Evolution of Earth's Atmosphere:

1. The process of degassing released gasses and water vapor from Earth's interior.
2. Photosynthesis contributed significantly to the increase of oxygen in the atmosphere.
3. The formation of oceans preceded the evolution of life on Earth.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

67. With reference to Cyclones, consider the following statements:

1. Cyclonic system is fueled by the release of the latent heat of condensation.
2. The eye of the cyclone has the lowest pressure but the highest temperature.
3. Wall Cloud Zone is a wide zone which constitutes the most hazardous zone of a tropical cyclone.

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

68. Consider the following statements:

1. The focus of an earthquake is the point within the Earth where the seismic waves originate.
2. The epicenter of an earthquake is the point on the Earth's surface directly above the focus.
3. The Richter scale is a logarithmic scale used to measure the magnitude of earthquakes.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

69. "It is found only in the northern hemisphere and only in two regions. It is characterized by cold, dry winters and warm, wet summers. Winter temperatures are below freezing-point and snowfall is quite natural. Summers are as warm as the tropics. Lumbering is the most common activity here. It is also called the Eastern Margin climate." Which of the following climate is best described in the above description?

- (a) Tundra climate
- (b) Mediterranean climate
- (c) Humid Continental climate
- (d) Laurentian climate

70. With reference to Prevailing Winds, consider the following statements:

1. The Coriolis Effect makes wind systems twist counter-clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.
2. Areas from Atacama of South America to the arid Kalahari of Africa, are part of the horse latitudes.
3. Doldrums is the area around the tropics with weak prevailing winds and unusually calm weather.

Which of the statements given above is/are correct?

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

- (d) 1, 2 and 3

71. Consider the following statements about Temperature Inversion:

1. Temperature inversion occurs when the normal lapse rate is reversed.
2. Surface inversion promotes stability in the lower layers of the atmosphere.
3. Air drainage is a type of temperature inversion that occurs in hilly regions.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

72. With reference to Antarctica, consider the following statements:

1. Antarctica is one of the driest realms of Earth.
2. Mount Erebus is an active volcano located in the Antarctica region.
3. Antarctica has been declared as a natural reserve under the Madrid Protocol.

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

73. Red Sea is red primarily due to:

- (a) A type of blue-green algae called *Trichodesmium erythraeum*
- (b) Scattering caused by sea surface water molecules
- (c) Refraction of light at the air-water surface
- (d) High concentration of iron oxide in the water

74. Consider the following statements:

1. Nearly half of the solar insolation is absorbed by the surface of earth.
2. Snow and ice-covered areas have higher albedo than the upper clouds.

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

75. Senkaku Islands, often seen in the news, belong to which of the following regions?

- (a) East China Sea
- (b) South China Sea
- (c) Sea of Japan
- (d) Persian Gulf

76. Consider the following statements regarding investments in government bonds in India.

1. The Fully Accessible Route (FAR) regulations impose no limits on investments by Non -Resident Indian retail investors.
2. NRI's can invest in Government Securities both on repatriable and non -repatriable bases, depending on the terms and conditions of the investment scheme.
3. Recently the Reserve Bank of India included new 14-year and 30-year government securities (G -Secs) under the Fully Accessible Route (FAR) category.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

77. Which of the following could help countries come out of Middle -Income Trap?

1. Increase Labor Force Participation
2. Accelerate Infrastructure Pipeline
3. Boost Private Investment
4. Implement Structural Reforms
5. Increase Capital Accumulation

How many of the above options is/are correct?

- (a) Only two

- (b) Only three
- (c) Only four
- (d) All five

78. Consider the following statements regarding Carry Trade.

1. It is a trading strategy where investors borrow in a country with high interest rates and reinvest in assets of another country.
2. The Japanese yen is a popular currency for taking carry trades.
3. Unwinding of Carry Trades is seen as a positive factor for equity markets worldwide.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

79. The Directorate of Revenue Intelligence, functions under

- (a) Ministry of Home Affairs
- (b) Ministry of External Affairs
- (c) Ministry of Finance
- (d) Ministry of Commerce and Industry

80. How many of the following is NOT a direct tool used by the Reserve Bank of India to control interest rates?

1. Repo Rate
2. Open Market Operations
3. Cash Reserve Ratio
4. Foreign Exchange Reserve

Select the correct answer code:

- (a) Only one
- (b) Only two
- (c) Only three
- (d) None

81. Mission LiFE is envisioned as an India-led global mass movement that will nudge individual and collective action to protect and preserve the environment. It focuses on which of the following themes?

1. Saving water and energy
2. Reducing e-waste

3. Banning single-use plastics
  4. Adopting sustainable food systems
  5. Adopting healthy lifestyles
- How many of the above options is/are correct?
- (a) Only two
  - (b) Only three
  - (c) Only four
  - (d) All five

82. Global Water Tech Summit 2024, recently in news was hosted by
- (a) Ministry of Jal Shakti
  - (b) Central Water Commission (CWC)
  - (c) Global Energy and Environment Foundation
  - (d) Niti Ayog

83. Consider the following pairs.
1. Biligiri Rangaswamy Temple Tiger Reserve: Karnataka
  2. Hoollongapar Gibbon Wildlife Sanctuary: Tamil Nadu
  3. Papikonda National Park: Assam
- How many of the above pairs is/are correctly matched?
- (a) Only one
  - (b) Only two
  - (c) All three
  - (d) None

84. What unique characteristic of *Methylococcus oryzae* makes it particularly interesting for environmental applications?
- (a) Its ability to grow in temperatures above 37°C
  - (b) Its efficiency in oxidizing methane to CO<sub>2</sub> and water
  - (c) Its small size and spherical shape
  - (d) Its ability to enhance rice plant growth

85. Which of the following statements regarding prokaryotes in marine ecosystems is correct?
- (a) Prokaryotes include organisms with complex cell structures and a defined nucleus.

- (b) Prokaryotes will decline more in biomass compared to other marine life as oceans warm.
- (c) The decline of prokaryotes will have no significant impact on marine ecosystems.
- (d) Prokaryotes play a vital role in supporting food chains and balancing carbon emissions in marine ecosystems.

86. Consider the following statements regarding the northern bald ibis:
1. The northern bald ibis was once extinct in Europe due to hunting.
  2. The species has been revived through breeding and rewilding efforts.
  3. The northern bald ibis is currently classified as critically endangered by the IUCN.
- Which of the above statements is/are correct?
- (a) 1 and 2 only
  - (b) 2 and 3 only
  - (c) 1 and 3 only
  - (d) 1, 2, and 3

87. Consider the following statements regarding pyrocumulonimbus clouds:
1. These clouds form during extremely hot wildfires or volcanic eruptions.
  2. Pyrocumulonimbus clouds often produce heavy rainfall, helping to extinguish wildfires.
  3. Rising global temperatures have contributed to the increased formation of these clouds.
- Which of the above statements is/are correct?
- (a) 1 and 2 only
  - (b) 1 and 3 only
  - (c) 2 and 3 only
  - (d) 1, 2, and 3

88. Consider the following statements regarding One DAE One Subscription (ODOS).

1. One DAE One Subscription (ODOS) was launched by the Department of Atomic Energy.
2. It provides access to national and international research papers and scientific journals.
3. It will allow scientists, engineers, students, and researchers to publish in open –access journals.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

89. Consider the following statements in the context of Waqf properties in India

1. Statement 1: Waqf properties can be freely sold or transferred.
2. Statement 2: Waqf properties are managed by individual owners.

Which of the statements above is/are correct?

- (a) only statement 1
- (b) only statement 2
- (c) both statements
- (d) neither statement

90. Consider the following statements regarding Pradhan Mantri Awas Yojana-Urban (PMAY-U) 2.0.

1. The scheme targets families with no permanent house and offers subsidies on home loans.
2. The program focuses solely on new construction projects.
3. Middle-income groups are not the beneficiaries under PMAY-U 2.0.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

91. Consider the following statements regarding the "Exercise AIKYA" national symposium:

1. The symposium was a joint effort of the National Disaster Management Authority (NDMA) and the Indian Navy.
2. It focused particularly on disaster management in southern states of India that are prone to cyclones and floods.
3. The event primarily aimed at developing new disaster response vehicles for the army.

Which of the statements given above is/are correct?

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

92. Consider the following statements regarding the Ramon Magsaysay Award:

1. The award is given only to citizens of Southeast Asia.
2. It was established to honor the then president of the Philippines, Ramon Magsaysay.
3. Recipients of the award receive a medallion, a certificate, and not cash prize.

Which of the statements given above is correct?

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

93. Which of the following regions showed the most advancement in cybersecurity according to the Global Cyber security Index (GCI) 2024?

- (a) Africa
- (b) Europe
- (c) North America
- (d) Asia

94. Consider the following statements about the robotic mule recently inducted by the Indian Army:

1. It can operate in extremely cold temperatures as low as  $-40^{\circ}\text{C}$ .

2. It can carry a payload of up to 50 kg, making it suitable for heavy artillery transport.
3. It is designed to operate in unstructured urban and natural environments.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**95.** Consider the following statements regarding Amphibious Operations:

1. Amphibious operations require coordination between land, naval, and air forces.
2. These operations are only conducted during wartime scenarios.
3. The Indian Armed Forces have developed a doctrine for conducting amphibious operations in the Indian Ocean Region.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**96.** Consider the following statements regarding Project NAMAN:

1. Project NAMAN is an initiative by the Indian Army to streamline pension processes for Defence Pensioners and Veterans.
2. The project relies on the SPARSH digital pension system, which is managed entirely by the Indian government without any private sector involvement.
3. Common Service Centres (CSCs) under Project NAMAN are managed by veterans or their families, ensuring community involvement in service delivery.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**97.** Consider the following statements about the significance of secondary agriculture:

1. Secondary agriculture increases farmer income through value added products.
2. It primarily focuses on large-scale industrial production.
3. It helps boost rural cottage industries.
4. Secondary agriculture promotes unsustainable farming practices.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**98.** Consider the following statements about jute production in India:

1. West Bengal accounts for over 70% of India's total jute production.
2. Andhra Pradesh is the second largest producer of jute in India.
3. Assam and Bihar are among the top five jute-producing states in India.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**99.** Consider the following statements about the Indus Valley Civilization (IVC):

1. The civilization existed primarily in the Indus River basin.
2. The Ghaggar-Hakra river system was an important river for IVC settlements.
3. It is noted for its use of iron tools and weapons.
4. IVC artifacts show advanced metallurgy, including the use of copper, bronze, lead, and tin.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

100. Consider the following statements regarding the Battle of Saragarhi:

1. It was fought between British forces and Mughal warriors.
2. The soldiers at Saragarhi defended the fort for 7 days before succumbing.
3. The battle took place on the eastern frontier of British India.

Which of the above statements is/are correct?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1, 2, and 3
- (d) None of the above