

ROLL NO.

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(To be filled by candidate)

Man
Signature of Invigilator

Time: 1 Hour 45 Minutes

Total Marks:100

Instructions to Candidates

1. Do not write your name or put any other mark of identification anywhere in the OMR Response Sheet. **IF ANY MARK OF IDENTIFICATIONS IS DISCOVERED ANYWHERE IN OMR RESPONSE SHEET, the OMR response sheet will be cancelled, and will not be evaluated.**
2. This Question Booklet contains the cover page and a total of **100 Multiple Choice Questions of 1 mark each.**
3. Space for rough work has been provided at the beginning and end. Available space on each page may also be used for rough work.
4. There is negative marking in Multiple Choice Questions. For each wrong answer 0.25 marks will be deducted.
5. **USE OF CALCULATOR IS NOT PERMITTED.**
6. **USE/POSSESSION OF ELECTRONIC GADGETS LIKE MOBILE PHONE, iphone, iPad, pager ETC. are strictly PROHIBITED.**
7. Candidate should check the serial order of questions at the beginning of the test. If any question is found missing in the serial order, it should be immediately brought to the notice of the Invigilator. No pages should be torn out from this question booklet.
8. Answers must be marked in the OMR Response sheet which is provided separately. OMR Response sheet must be handed over to the invigilator before you leave the seat.
9. The OMR Response sheet should not be folded or wrinkled. The folded or wrinkled OMR/ Response Sheet will not be evaluated.
10. Write your Roll Number in the appropriate space (above) and on the OMR Response Sheet. Any other details, if asked for, should be written only in the space provided.
11. There are four options to each question marked A, B, C and D. Select one of the most appropriate option and fill up the corresponding oval/circle in the OMR Response Sheet provided to you. The correct procedure for filling up the OMR Response Sheet is mentioned below.
12. Use Black or Blue Ball Pen only for filling the ovals/circles in OMR Response Sheet. Darken the selected oval/circle completely. If the correct answer is 'B', the corresponding oval/circle should be completely filled and darkened as shown below.

CORRECT METHOD
(A) ● (C) (D)

WRONG METHOD					
(A) ✗ (C) (D)	(A) ⊕ (C) (D)	(A) ◐ (C) (D)	(A) ⊙ (C) (D)	○ ● (C) (D)	(A) ● (C) ●

1. Which of the following issues is not taken into account while discussing the concept of sea-floor spreading?
 - A. Volcanic activities along mid-oceanic ridges
 - B. Distribution of fossils in different continents
 - C. Stripes of normal and reverse magnetic field observed in rocks of ocean floor
 - D. Age of rocks from the ocean floor
2. In which stage of landforms development down cutting is totally absent?
 - A. Youth stage
 - B. Early mature stage
 - C. Late mature stage
 - D. Old stage
3. The Maximum level up to which a stream can erode its bed is called:
 - A. Base level of erosion
 - B. Extreme level of erosion
 - C. Stream level of erosion
 - D. Final level of erosion
4. The streams which do not follow the regional slopes and drain across the geological structures are called
 - A. Subsequent stream
 - B. Re-sequent stream
 - C. Insequent stream
 - D. Consequent stream
5. Drainage density is normally highest in which course of river?
 - A. Lower course
 - B. Middle course
 - C. When river enters plain
 - D. Upper course
6. River rejuvenation can occur due to which of these? Choose correct codes:
 - I. *Up-liftment of land which the river is flowing*
 - II. *Rise of sea-level*

Codes:

 - A. I only
 - B. II only
 - C. I & II both
 - D. None of the above
7. Abrasion and Plucking are erosional processes related to which landform process?
 - A. Aeolian
 - B. Glacial
 - C. Karst
 - D. Coastal

8. Residual hills in the desert region are known as:

- A. Palaya
- B. Pediment
- C. Inselberg
- D. Inlinear

9. Rock bolting is very common in:

- A. Mining
- B. Tunneling
- C. Reservior construction
- D. Both mining and tunnelling

10. Bad-land Topography is the product of the combined action of:

- A. Wind and Glacier
- B. Wind and Water
- C. Wind and temperature
- D. Glacier and water

11. Fiord shorelines are formed due to:

- A. Submergence of sub aerially eroded coast
- B. Marine deposits
- C. Submergence of Glacial coast
- D. Fluvial deposits

12. Match the followings and choose correct codes:

- | | |
|-------------|--------------|
| a. Barchans | I. Coastal |
| b. Meander | II. Glacial |
| c. Saddle | III. Aeolian |
| d. Stalk | IV. Fluvial |

Codes:

- a. a-II, b-III, c-I, d-IV
- b. a-II, b-IV, c-III, d-I
- c. a-I, b-III, c-II, d-IV
- d. a-III, b-IV, c-II, d-I

13. Which one of the following feature is formed when the roof of a limestone cavern collapses?

- A. Tarn
- B. Polje
- C. Swallow hole
- D. Doline

14. Which of the following statement(s) is/are correct?

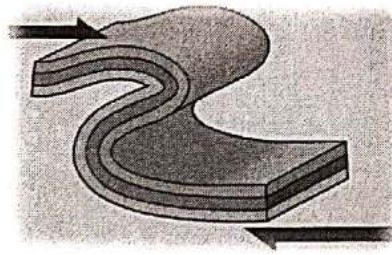
- a. Himalayas were formed due to faulting of the earth's crust
- b. Himalayas have the highest peaks of the world
- c. Himalayas belong to the Caledonian mountain system
- d. Himalayas have risen from the Tethys Sea when the sea got compressed

Codes:

- A. Only d
- B. a and b
- C. b and d
- D. b, c and d

15. Chromites show which type of structure?
- Granular
 - Globular
 - Reniform
 - Mammillary
16. Process of metamorphism causes.....of rock material:
- Crystallization
 - Recrystallization
 - Lithification
 - Diagenesis
17. Igneous rocks that have lowest content of silica are known as:
- Mafic rock
 - Felsic rock
 - Porphyry
 - Ultramafic rock
18. Debris avalanche can be included in the category of:
- Landslide
 - Rapid flow mass movement
 - Slow flow mass movement
 - Subsidence
19. The nature of slope includes:
- Type of material and angle of mass
 - Mass of material and type of material
 - Type of material and shape of mass
 - Mass of material and angle of mass
20. Which of the followings is/are not related to the denudational action of mass movement?
- Exfoliation
 - Landslide
 - Basal sapping
 - Mud flow
- Codes:*
- A and B
 - B and C
 - A, B and C
 - A only
21. Which of the following is caused by the submarine earthquakes?
- Hurricanes
 - Tsunamis
 - Cyclones
 - Tornados

22. Identify the following fold type:



- A. Recumbent fold
- B. Isoclinal fold
- C. Monoclinial fold
- D. Plunging fold

23. Two volcanic islands in the territory of India are:

- A. Kavaratti and New Moor
- B. Bitra and Kavaratti
- C. Narcondam and Barren
- D. Barren and New Moor

24. A lines joining points of equal thickness of rock strata is called:

- A. Isopach
- B. Isochors
- C. Isograd
- D. Isohyets

25. Arrange the time periods from oldest to latest.

- a. Achaean
- b. Alpine
- c. Hercynian
- d. Caledonian

Codes:

- A. a-c-b-d
- B. a-b-c-d
- C. a-d-c-b
- D. c-b-a-d

26. Stalactites and stalagmites in caves are composed of:

- A. Quartz
- B. Calcite
- C. Halite
- D. Alkali feldspar

27. Which of the following is most prone to the earthquakes?

- A. Coastal plains
- B. Old sheilds
- C. Plateaus
- D. Young folded mountains

28. In 2016, a major forest fire occurred in which state of India?
- Uttarakhand
 - Himachal Pradesh
 - Jharkhand
 - Karnataka
29. Tropical Cyclones are intense low pressure areas confined to the area lying between
- 5 degree north and 5 degree south
 - 50 degree north and 50 degree south
 - 50 degree north and 30 degree south
 - 30 degree north and 30 degree south.
30. Which Indian River has ravine topography?
- Kosi
 - Chambal
 - Narmada
 - Son
31. Monsoon is caused by which one of the following?
- Seasonal reversal of wind
 - Movement of cloud
 - Summer temperature
 - All of above
32. Hydrograph which is obtained from one cm of effective rainfall for unit duration, is known as:
- Hyetograph
 - Semi-graph
 - Unit hydrograph
 - Hydrograph
33. Interception losses include:
- Evaporation loss only
 - Evaporation through flow and stream
 - Evaporation and transpiration losses
 - Stream flow only
34. Rate of evaporation from a water surface increases if:
- Difference of vapour pressure between water and air is increased
 - Velocity of wind is increased
 - Concentration of soluble solids in water is decreased
- Codes:*
- i and ii
 - i and iii
 - ii and iii
 - i, ii, and iv

35. When transpiration surface is submerged under the water, then potential evapotranspiration is:
- Much more than evapotranspiration
 - Less than evapotranspiration
 - Equal to evapotranspiration
 - Half of evapotranspiration
36. Match the following:
- | | |
|--------------------|--|
| I. Mango Shower | a. Helps in blossoming of coffee flowers |
| II. Blossom Shower | b. Helps in the ripening of mangoes |
| III. Norwesters | c. Hot and dry winds of Northern plains |
| IV. Loo | d. Evening thunderstorms in Bengal and Assam |
- Codes:
- I-a, II-b, III-c, IV-d
 - I-d, II-c, III-b, IV-a
 - I-c, II-b, III-d, IV-b
 - I-b, II-a, III-d, IV-c
37. The runoff increases with the:
- Increase in intensity of rain
 - Increase in infiltration capacity
 - Increase in permeability of soil
 - All of the above
38. The rate of infiltration is always:
- More than the infiltration capacity
 - Less than infiltration capacity
 - Equal to or less than infiltration capacity
 - Equal to or more than infiltration capacity
39. The percentage of a rock's total volume that is taken up by pore space, is called the:
- Porosity
 - Permeability
 - Aquifer
 - Recharge
40. The boundary between the saturated zone and the unsaturated zone is called the:
- Aquifer
 - Water table
 - Aquiclude
 - Zone of Aeration
41. Climate refers to:
- Pattern of weather for a year
 - Weather of a day
 - Pattern of weather for a longer period of time
 - All

42. Which of the following is not an element of weather and climate?
- Temperature
 - Atmospheric pressure
 - Humidity
 - Altitude
43. Consider the following statements
- Lines of equal pressure on a map are known as isobars.
 - Widely spaced isobars indicate a high pressure gradient and high wind speeds.
 - The pressure gradient force acts parallel to the isobars
- Choose correct statements:*
- Only 1
 - 1 and 3
 - 2 and 3
 - All are true
44. The horizontal movement of air is called..... and the vertical movement of air is called.....
- Current, Air mobility
 - Air current, Air turbulence
 - Wind, Air current
 - Air mobility, Wind
45. A heavy snowstorm is called:
- Hurricane
 - Blizzard
 - Tornado
 - Thunderstorm
46. Tamil Nadu coasts receive most of its rainfall in which months?
- June-July
 - August-September
 - October-November
 - January-February
47. Threat to global warming is increasing due to increasing concentration of:
- Nitrous oxide
 - Ozone
 - Sulphur dioxide
 - Carbon dioxide
48. Paleo-climatology is reconstruction of ancient climates by means of:
- Water
 - Snow melt measurement
 - Ice-core measurement
 - Ocean rise

49. A broad trough of low pressure in equatorial latitudes is known, as:
- A. Jet stream
 - B. Continentality
 - C. ITCZ
 - D. Break
50. Magnitude and rate of climate change are important in determining :sensitivity..... and.....:
- A. Adaptability and vulnerability of a system
 - B. Vulnerability and change
 - C. Change and adaptability
 - D. Pressure
51. A rise in sea level near shore due to strong wind, is called:
- A. Tsunami
 - B. Whitecap
 - C. Swell
 - D. Storm surge
52. If there is no carbon dioxide in the earth's atmosphere, the temperature of earth's surface would be:
- A. Less than present
 - B. Higher than present
 - C. Unchanged as it depends on amount of Oxygen
 - D. None of above
53. Which of the following is not a green house gas?
- A. Methane
 - B. Hydrogen
 - C. Carbon dioxide
 - D. Nitrous oxide
54. In which year The Environmental (Protection) Act was enacted?
- A. 1972
 - B. 1980
 - C. 1984
 - D. 1986
55. Remote sensing technology uses which part of EMS?
- A. Gamma rays
 - B. U-V rays
 - C. Visible and infrared
 - D. X-rays

56. In disaster management and planning, GIS can be helpful in:

- a) Search and rescue operations
- b) Identifying areas that are disaster prone
- c) Hazard mapping
- d) Risk zoning

Codes:

- A. a and b
- B. b only
- C. b and c
- D. b, c & d

57. Information in GIS is entered and stored as

- A. Panels
- B. Complex strata
- C. Layers
- D. Grids

58. Vector and raster data are examples of:

- A. Spatial data
- B. Attribute data
- C. Binary data
- D. Computer data

59. Method of representing numbers such as '0s' and '1s', is called

- A. Primary Notation
- B. Binary Notation
- C. Secondary Notation
- D. Variable Notation

60. Spatial databases are also known as:

- A. Mono databases
- B. Concurrent databases
- C. GIS databases
- D. Geo databases

61. Imaging in geological exploration, mining and medicine uses

- A. Sound
- B. Light
- C. Laser
- D. Sunlight

62. Which waves can penetrate through clouds:

- A. Ultrasonic
- B. Radar
- C. Visible and infrared
- D. Gamma

63. Image enhancement and restoration are used to process:
- Degraded images
 - High resolution images
 - Low resolution images
 - Brighter images
64. A map projection that shows an area between latitude and longitude equal in size to area on globe, is known as
- Cylindrical projection
 - Conical projection
 - Equal area projection
 - Azimuthal projection
65. Maps showing both natural as well as cultural features are known as:
- Cadastral maps
 - Topographical maps
 - Chorographical maps
 - Thematic maps
66. Which of these is used to show height on a map?
- Benchmark
 - Spot Height
 - Contour lines
 - All of above
67. Bifurcation Ratio refers to:
- Ratio between number of streams of a given order and number of stream segments of next higher order.
 - Ratio between number of streams of a given order and number of stream segments of next lower order
 - Ratio between total number of streams to the total stream length
 - Stream land ratio
68. Match the following and choose the correct code:
- | | | |
|----|----------|------------------------|
| a. | Isoneph | I. Equal sunshine |
| b. | Isohels | II. Cloud cover |
| c. | Isotach | III. Depth below water |
| d. | Isobaths | IV. Wind speed |
- Codes:*
- a-II, b-III, c-IV, d-I
 - a-II, b-I, c-IV, d-III
 - a-III, b-I, c-IV, d-II
 - a-I, b-II, c-IV, d-III

69. Choose correct statements about electromagnetic radiation from the followings:
- Produces a time varying magnetic field and vice versa
 - Once generated, remains self propagating
 - Capable to travel across space
 - Consists of magnetic and electric fields

Codes:

- a and b
- a, b and c
- b, and d
- All of the above

70. Which of the following is true about Remote Sensing:

- It is the science and art of acquiring data about earth's objects.
- It acquires data without any physical contact with the object.
- Data collections are conducted by means of remote sensors.
- It directly provides fully processed data to the users.

Codes:

- a and b are true
- a, b and c are true
- b and c are true
- All are true

71. Which of the following diagrams are called Pie-diagrams?

- Ring diagram
- Sphere diagram
- Circle and sector diagram
- Pictorial diagram

72. In cartography R.F refers to:

- Ratio Fraction
- Representative Fraction
- Radio Frequency
- Region Formation

73. Contour lines can never:

- Intersect
- be parallel
- be straight lines
- Hull

74. Median refers to:

- Half of total
- Average of total
- Mid value
- Sum

75. If arithmetic mean is 12 and number of observations are 20, then sum of all values will be:
- 32
 - 120
 - 180
 - 240
76. Cumulative frequency distribution is shown by:
- Histogram
 - Frequency curve
 - Pie diagram
 - Ogive Curve
77. Which ONE of the following methods is generally used in qualitative sampling?
- Random sampling
 - Stratified sampling
 - Quota sampling
 - Simple sampling
78. Which of these is not measures of central tendency?
- Variance
 - Median
 - Average
 - Mode
79. A coefficient of correlation is computed to be -0.95, what does this mean:
- The relationship between 2 variables is weak
 - The relationship between 2 variables is strong and positive
 - Correlation coefficient cannot have this value
 - The relationship between 2 variables is strong but negative
80. The value of coefficient of correlation lies between:
- 0 to 1
 - 0 to -1
 - 1 to 1
 - 1 to 10
81. If arithmetic mean is multiplied to coefficient of variation, then resulting value is classified as
- Coefficient of deviation
 - Standard deviation
 - Variance
 - Mean deviation
82. Which of the following can be categorized as disaster?
- An earthquake in open desert
 - An avalanche in Antarctica
 - Flood in high density urban area
 - All of the above

83. National Institute of Disaster Management established in 1995 is located at?
 A. Poona
 B. New Delhi
 C. Dehradun
 D. Indore?
84. For coordinating disaster management activities for all natural hazards, the Nodal Agency at the Central Govt is the:
 a. Ministry of Home Affairs
 b. Ministry of Defence
 c. Ministry of Information and Broadcasting
 d. Ministry of Rural Development
85. The Disaster Management Act was made in which year?
 A. 1998
 B. 2004
 C. 2005
 D. 2007
86. Match the following disasters with their types and choose the correct code:
 a. Landslide I. Anthropogenic
 b. Tsunami II. Plates movement
 c. Dust Bowl III. Geological
 d. Dam breaks IV. Environmental
- Codes:*
 A. a-II, b-III, c-IV, d-I
 B. a-III, b-II, c-IV, d-I
 C. a-I, b-III, c-IV, d-II
 D. a-IV, b-II, c-III, d-I
87. According to the United Nations, between 1992 and 2000 there were approximately _____ disasters per year throughout the world.
 A. 100
 B. 300
 C. 500
 D. 800
88. The name of poisonous gas, which was leaked and caused the Bhopal Gas tragedy in 1984.
 A. Ethyl Isocyanate
 B. Methyl Isocyanides
 C. Methyl Isocyanate
 D. Hydrogen cyanide

89. Which of the following condition(s) is/are conducive for the formation of tropical cyclone? Choose the correct codes:

- a. Large and continuous supply of warm and moist air
- b. Large value of coriolis force
- c. Inflow of air in the upper atmosphere

Codes:

- A. a and b
- B. b only
- C. b and c
- D. All of the above

90. By what measures can we significantly reduce the impact of disasters on our people? Choose the correct code.

- a. Better planning
- b. Preparedness awareness
- c. Mitigation measures
- d. Modernization

Codes:

- A. a and b
- B. a, b and c
- C. b and c
- D. All of the above

91. Consider the following statements:

- 1. Natural Hazards are elements of circumstances in the Natural environment that have the potential to cause harm to people or property or both.
- 2. Natural disasters are relatively sudden and cause large scale, widespread death, loss of property and disturbance to social systems and life over which people have a little or no control.

Which of the statement/s given above is/are correct?

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

92. Which of these is/are flood prevention and mitigation strategy? Choose the correct code:

- a. Construction of flood protection embankments
- b. De-populating the flood plain
- c. Deforestation

Codes:

- A. a only
- B. a and b
- C. b and c
- D. All of the above

93. According to scientific community.....gas from the ground can accurately predict an earthquake.

- A. Methane
- B. Boron
- C. Neon
- D. Radon

94. The intensity of an earthquake is measured on which scale?
- A. Richter scale
 - B. Canard scale
 - C. Vernier scale
 - D. Mercalli scale

95. Consider the following statement.
- a. The movement of Inter Tropical Convergence Zone (ITCZ) plays an important role in the Indian Monsoon.
 - b. The ITCZ is a zone of low pressure which attracts inflow of winds from different directions.
 - c. ITCZ is also called Horse Latitude.

Which statements above are correct?

- A. a and b
 - B. b and c
 - C. a and c
 - D. All of the above
96. Greatest damage to life and property from a Hurricanes is due to:
- A. Wind Circulation
 - B. Torrential rain
 - C. Strong wind
 - D. Strom surge
97. Who is the Chairman of the National Disaster Management Authority (NDMA)?
- A. Vice-president
 - B. Prime Minister
 - C. Home Minister
 - D. HRD Minister
98. Which of the following is post disaster measure?
- A. Early warning
 - B. Relief and aid
 - C. Reconstruction
 - D. Planning
99. What is the important role of media and NGOs in disaster management?
- a. Public awareness and communication
 - b. Assessment of damage and evacuation plans
 - c. Early warning system
 - d. All of above
100. The Indian Tsunami Early Warning Centre (ITEWC) established at Indian National Centre for Ocean Information Sciences, is located in:
- A. Kochi
 - B. Chennai
 - C. Madurai
 - D. Hyderabad