

MIZORAM PUBLIC SERVICE COMMISSION

COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POSTS OF ASSISTANT PROFESSOR STAGE-I (GEOGRAPHY) UNDER HIGHER & TECHNICAL EDUCATION DEPARTMENT, SEPTEMBER, 2017

TECHNICAL PAPER - I

Time Allowed : 2 hours

Full Marks : 200

Attempt all questions.

All questions carry equal marks of 2 each.

1. The semi-plastic layer below the crust is called as
 - (a) Exosphere
 - (b) Aesthenosphere
 - (c) Plagioclase
 - (d) Pyroclastic layer
2. The material found in the rift valleys is from
 - (a) Aesthenosphere
 - (b) Core
 - (c) Continental crust
 - (d) Upper crust
3. The average density of the earth's core is
 - (a) 12 g cm^{-3}
 - (b) 11 g cm^{-3}
 - (c) 5.5 g cm^{-3}
 - (d) 2.6 g cm^{-3}
4. The earth was believed to be originated by accretion and aggregation of solid dust particles known as
 - (a) Planetesimals
 - (b) Mountains
 - (c) Crust
 - (d) Molten layer
5. The dominant chemical constituents in 'Sima'
 - (a) Silica and magnesium
 - (b) Silica and manganese
 - (c) Silica and ferrium
 - (d) Silica and aluminium
6. According to Daly how many layers are present in the interior of the earth ?
 - (a) 3
 - (b) 4
 - (c) 5
 - (d) 2
7. Which of the following is an example for diastrophic force?
 - (a) Orogenesis
 - (b) Landslides
 - (c) Soil creep
 - (d) Mudflow
8. Which of the following is an example for epeirogenetic movement?
 - (a) Subsidence
 - (b) Landslide
 - (c) Soil creep
 - (d) Mudflow
9. The process of collision of oceanic and continental plates is known as
 - (a) Divergence
 - (b) Subduction
 - (c) Convergence
 - (d) transformation

10. The divergent plate boundary is also known as
 - (a) Subduction zone
 - (b) Spreading centre
 - (c) Collision zone
 - (d) Elastic zone
11. The rift valley of East Africa is an example for
 - (a) Convergent margin
 - (b) Divergent margin
 - (c) Collision zone
 - (d) Submergence zone
12. The point of the occurrence of an earthquake is called
 - (a) Epicentre
 - (b) Focus
 - (c) Tremor
 - (d) Main tremor
13. Secondary seismic waves are also known as
 - (a) Compressional waves
 - (b) Longitudinal waves
 - (c) Transverse waves
 - (d) Surface waves
14. Conservative plate margins are also known as
 - (a) Shear plate margins
 - (b) Consuming plate margins
 - (c) Accreting plate margins
 - (d) Parallel fault boundaries
15. The other name for the zone of collision of convergent plates
 - (a) Benioff zone
 - (b) Obduction zone
 - (c) Shear zone
 - (d) Accretion zone
16. Isochrons are the lines which join points of equal
 - (a) Dates of humidity
 - (b) Dates of magnetic stripes
 - (c) Dates of rainfall
 - (d) Dates of temperature
17. The volcanic lava occur along the constructive plate margins is called
 - (a) Tholeiite
 - (b) Aa aa lava
 - (c) Tephra
 - (d) Phreatic lava
18. 'Mid-Continental Belt' is also known as
 - (a) The volcanic zones of convergent continental plate margins
 - (b) The volcanic zones of divergent continental plate margins
 - (c) The volcanic zones of parallel plate margins
 - (d) The volcanic zones of transform plate margins
19. Volcanic neck is also known as
 - (a) Plug dome
 - (b) Diatreme
 - (c) Parasite cone
 - (d) Caldera
20. The volcanic cones formed due to accumulation of different layers of volcanic materials are known as
 - (a) Ant mount
 - (b) Strato-cones
 - (c) Plug dome
 - (d) Craterlets
21. The active volcano in the Mediterranean sea is
 - (a) Strombolian
 - (b) Visuvius
 - (c) Peleean
 - (d) Fissure

22. The process of change of feldspar minerals into kaolinite clays is called
(a) Chelation (b) Oxidation
(c) Hydration (d) Carbonation
23. Which of the following is an example for very rapid mass movement?
(a) Slump (b) Soil creep
(c) Rock creep (d) Solifluction
24. Who proposed slope decline theory?
(a) R.A.Savigear (b) W.M.Davis
(c) W.Penck (d) A.W.Wood
25. Whose slope model reveals that the mechanism of surface process is affected and controlled by the properties of forms?
(a) W.M.Davis (b) A.W.Wood
(c) W.Penck (d) R.A.Savigear
26. The upward movement of base level leads to formation of
(a) Ria coasts (b) Waterfalls
(c) Canyons (d) Cascades
27. Which one of following is a depositional landform?
(a) Structural bench (b) Natural levee
(c) River terrace (d) River meander
28. In glacial areas the higher peaks and mounds are surrounded by ice from all sides are called
(a) Tarn (b) Nunatak
(c) Crag and tail (d) Moraines
29. Which of the following is a depositional landform of glacial topography?
(a) Nunatak (b) Horn
(c) Drumlins (d) Tarn
30. Insebergs are also called
(a) Bornhardts (b) Yardangs
(c) Cockscomb (d) Ergs
31. Dunes formed in deserts due to the presence of obstacles of shrubs are called
(a) Dune chain (b) Nebkhas
(c) Dune colony (d) Inselbergs
32. A bar connecting two headlands is called
(a) Island (b) Tombolo
(c) Hook (d) Bar
33. Beach ridges are also known as
(a) Beach cusps (b) Berms
(c) Barriers (d) Offshore bars
34. Pinnacles are found in
(a) Coastal areas (b) Glaciers
(c) Deserts (d) Limestone areas

35. The mobile sands in deserts are called
(a) Inselbergs (b) Ergs
(c) Buffalo wallows (d) Yardangs
36. According to Pettersen which of the following is the third layer in the atmosphere from the earth's surface?
(a) Troposphere (b) Exosphere
(c) Stratosphere (d) Ozonosphere
37. The Pettersen's atmospheric composition is mainly based on
(a) Humidity (b) Temperature
(c) Precipitation (d) Wind speed
38. Which layer of the atmosphere is called Convective region?
(a) Stratosphere (b) Troposphere
(c) Exosphere (d) Ionosphere
39. The other name for Ozonosphere is
(a) Exosphere (b) Troposphere
(c) Mesosphere (d) Stratosphere
40. G layer is found in
(a) Mesosphere (b) Ionosphere
(c) Exosphere (d) Stratosphere
41. Which of the following factors affects the distribution of insolation?
(a) Transparency of atmosphere (b) Vegetation
(c) Soils (d) Water bodies
42. According to Kendrew, about 43% of the insolation is received through
(a) Longer infra-red waves (b) Ultraviolet waves
(c) Shorter gamma waves (d) Longer micro-waves
43. The total solar radiation reflected back to space is about
(a) 10 units (b) 7 units
(c) 12 units (d) 9 units
44. The solar radiation reflected back to the space is due to
(a) Air and fine dust (b) Thick green vegetation
(c) Light coloured soils (d) Land-sea surfaces
45. Diffusion of solar radiation occurs when the particle size is
(a) Larger than wave length of light (b) Smaller than wave length of light
(c) Very smaller than wave length of light (d) None of these
46. The size of the freezing nucleus in the atmosphere is about
(a) 1 micrometer (b) 5 micrometers
(c) 4 micrometers (d) 6 micrometers
47. Who propounded the theory of collision- coalescence of formation of precipitation?
(a) TorBergerson (b) Talor
(c) E.G.Boven (d) Charles B.Moore

48. The size of the water drops in drizzle is
(a) Less than 5 mm (b) Between 5 mm and 6.5 mm
(c) Exactly 6.5 mm (d) Between 6.25mm and 6.65mm
49. Which type of precipitation is associated with the salient feature of *inversion of rainfall*?
(a) Convectonal (b) Cyclonic
(c) Orographic (d) Both convectonal and cyclonic
50. The direction of circulation of low pressure in a cyclone in northern hemisphere is
(a) Anticlockwise (b) Clockwise
(c) Both clockwise and anticlockwise (d) None of these
51. Thermal lows in the continental areas are due to
(a) Intense daytime heating (b) Intense daytime cooling
(c) Intense night time heating (d) Intense night time cooling
52. Persian Gulf is an example for
(a) Tropical depressions (b) Thermal lows
(c) Lee depressions (d) Polar air-depressions
53. Lee depressions are seen in
(a) Persian Gulf (b) Alps
(c) Northwestern Europe (d) North Atlantic
54. The word monsoon is derived from the Arabic word
(a) Mausim (b) Mausem
(c) Mausuum (d) Mauseum
55. Who propounded the thermal concept of the origin of Asiatic monsoon for the first time ?
(a) Trewartha (b) Halley
(c) Peirre Pedelaborde (d) Niewolt
56. The period of retreating south-west monsoon in India is
(a) September to early October (b) July to early September
(c) August to early September (d) July to early August
57. Pseudo monsoons are seen in
(a) Northern Australia (b) Southern United States of America
(c) Sri Lanka (d) Bangladesh
58. According to Koppen's climatic classification the group of plants of the Arctic region are called
(a) Megatherms (b) Microtherms
(c) Mesotherms (d) Hekistotherms
59. Thornthwaite's 1948 classification is based on
(a) Temperature (b) Potential evaporation
(c) Potential evapotranspiration (d) Actual Evapotranspiration

60. According to Koppen's climatic classification the Megatherms require
- (a) High temperature and Abundant supply of moisture
 - (b) Low temperature and Abundant supply of moisture
 - (c) High temperature and less supply of moisture
 - (d) Low temperature and less supply of moisture
61. The upper surface of the ground water in an unconfined aquifer is known as
- (a) Ground water table
 - (b) Ground surface
 - (c) Aquifer
 - (d) Aquiclude
62. The process of downward entry of water into the ground is called
- (a) Interception
 - (b) Infiltration
 - (c) Interflow
 - (d) Capillary fringe
63. In the water balance equation $Q = P - E \pm S$, "S" indicates
- (a) Evaporation
 - (b) Change in storage
 - (c) Runoff
 - (d) Water surface
64. Abyssal plain is found between
- (a) Continental slope and continental rise
 - (b) Continental shelf and continental slope
 - (c) Below continental rise
 - (d) Above Continental rise
65. Abyssal plains occupy an area of the oceans of about
- (a) 80%
 - (b) 40%
 - (c) 80% – 85%
 - (d) 90%
66. The main mid-oceanic ridge in the southern part of Indian Peninsula is known as
- (a) Laccadive -Chagos ridge
 - (b) Andaman- Chagos ridge
 - (c) Maldive- Chagos ridge
 - (d) Nicobar-Chagos ridge
67. The tides caused when the Sun, Moon, and the Earth are in same line are called
- (a) Neap tides
 - (b) Spring tides
 - (c) Diurnal tides
 - (d) Daily tides
68. The general movement of ocean currents in the northern hemisphere is
- (a) Clockwise
 - (b) Anticlockwise
 - (c) Sometimes north direction
 - (d) No prominent direction
69. The average salinity of the sea water is
- (a) 35 ‰
 - (b) 25 ‰
 - (c) 20 ‰
 - (d) 28 ‰
70. The average annual temperature of the ocean water is about
- (a) 10°F
 - (b) 18°F
 - (c) 15°F
 - (d) 6°F
71. The scale of national high altitude aerial photographs is
- (a) 1 :40,000
 - (b) 1:80,000
 - (c) 1:50,000
 - (d) 1:1,20,000

72. Atmospheric blinds are also known as
(a) Absorption bands (b) Atmospheric windows
(c) Transmission bands (d) Diversions
73. Spatial resolution is also known as
(a) Brightness value (b) Ground element
(c) Spectral change (d) Grey level
74. Geostationary satellites are also known as
(a) Sun-synchronous (b) Geo-synchronous
(c) GPS satellites (d) Natural resource satellites
75. The term 'training sites' is associated with which image classification ?
(a) Supervised (b) Unsupervised
(c) Both supervised and Unsupervised (d) None of these
76. The beginning point of an arc in GIS is known as
(a) FNODE (b) TNODE
(c) VERTEX (d) LABEL
77. Scanner resolution is expressed in
(a) DPI (b) DPF
(c) DIP (d) DPM
78. The basic unit of an image is
(a) Pixel (b) Point
(c) Line (d) Polygon
79. Vectorization is also known as
(a) Digitization (b) Scanning
(c) Rasterization (d) Imaging
80. Scanner uses the following device
(a) CCD (b) Imaging tube
(c) Toner (d) Vidicon
81. On a 1:1000 scale map 1 centimetre represents how many kilometres on the ground?
(a) 0.001 (b) 0.01
(c) 0.1 (d) 1
82. Which scale provides more accuracy?
(a) Plain scale (b) Diagonal scale
(c) Vernier scale (d) Pace scale
83. The closely spaced contours indicate
(a) Gentle slope (b) Steep slope
(c) Flat (d) Nearly levelled
84. Which profile gives panoramic effect?
(a) Composite profile (b) Projected profile
(c) Serial profile (d) Superimposed profile

85. The other name for simple cylindrical projection is
(a) Cylindrical equi-distance projection (b) Cylindrical equal area projection
(c) Natural cylindrical projection (d) Cylindrical orthomorphic projection
86. The instrument used for reduction and enlargement of plans, charts and maps is
(a) Planimeter (b) Pantograph
(c) Opisometer (d) Altimeter
87. Which maps are best to show field boundaries with ownership details
(a) Cadastral maps (b) Topographical maps
(c) Soil maps (d) Land utilization maps
88. Which method is ideal to represent statewide population data ?
(a) Dot (b) Choropleth
(c) Isopleth (d) Sphere
89. Population density can be shown accurately by
(a) Choropleth maps (b) Isopleth maps
(c) Dot maps (d) Flow diagram
90. The area of a single crop in different states can be shown by
(a) Choropleth (b) Proportional circle
(c) Bargraph (d) Pie diagram
91. Which of the following is a purposive sampling method?
(a) Snow ball (b) Random
(c) Stratified (d) Systematic
92. 'The number eight is half of sixteen' is an example for
(a) Nominal scale (b) Ratio scale
(c) Ordinal scale (d) Interval scale
93. Frequency distributions are mostly used for the analysis of
(a) Qualitative data (b) Quantitative data
(c) Both qualitative and quantitative data (d) None of these
94. Frequency distribution can be represented by
(a) Choropleth (b) Isopleth
(c) Histogram (d) Sphere diagram
95. Which measure of central tendency indicate size of a variable?
(a) Arithmetic mean (b) Geometric mean
(c) Mode (d) Median
96. Which of the following is a measures of central tendency of mathematical average ?
(a) Geometric mean (b) Median
(c) Mode (d) Range
97. Standard deviation is also known as
(a) Standard co-efficient of deviation (b) Mean deviation
(c) Average deviation (d) Root mean square deviation

- 98.** Which statistical technique is useful for comparing the degree of variation from one data series to another
- (a) Co-efficient of variation
 - (b) Standard deviation
 - (c) Mean deviation
 - (d) Co-efficient of Quartile deviation
- 99.** Which of the following is a probability sampling method?
- (a) Purposive
 - (b) Systematic
 - (c) Snow ball
 - (d) Convenience
- 100.** In which sampling method every member of the population being studied has an equal chance of being studied?
- (a) Random
 - (b) Stratified
 - (c) Stratified
 - (d) Purposive

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