MIZORAM PUBLIC SERVICE COMMISSION

COMMON COMPETITIVE EXAMINATION FOR GROUP 'B' NON-GAZETTED (TECHNICAL)

SURVEYOR UNDER LAND REVENUE & SETTLEMENT DEPARTMENT, GOVERNMENT OF MIZORAM, NOVEMBER-2024

PAPER-III (TECHNICAL SUBJECT)

Time Allowed : 2 hours   FM : 200

All questions carry equal mark of 2 each.
Attempt all questions.

1. The main principle of Surveying is to work from –
   - (a) Whole to part.
   - (b) The centre to the boundary.
   - (c) The part of whole.
   - (d) From boundary to centre.

2. The scale on which three dimension can be measured is known as –
   - (a) Plain scale
   - (b) Diagonal scale
   - (c) Chord scale
   - (d) Vernier scale

3. Which of the following is not included in the office work in Surveying?
   - (a) Processing
   - (b) Analyzing
   - (c) Calculation of observed data
   - (d) Setting of instrument

4. The methods to be adopted for surveying come under –
   - (a) Setting out works
   - (b) Field observations
   - (c) Planning
   - (d) Office work

5. Hydrographic survey deals with mapping of –
   - (a) Large water bodies
   - (b) Rainfall data
   - (c) Wave movement
   - (d) None of these

6. _____ are the basic requirements for preparations of plan and maps.
   - (a) Scales
   - (b) Angles
   - (c) Graph
   - (d) Polygons

7. The object of surveying is to prepare a –
   - (a) Drawing
   - (b) Cross-Section
   - (c) Map
   - (d) Model

8. In an optical square, the mirror are fixed at an angle of –
   - (a) 30°
   - (b) 60°
   - (c) 45°
   - (d) 90°

9. The method of plane surveying can be used when the area is less than -
   - (a) 250 Sq km
   - (b) 500 Sq km
   - (c) 2500 Sq km
   - (d) 5000 Sq km

10. In chain surveying, cumulative source of error is –
    (a) Sag
    (b) Fag
    (c) Rag
    (d) Lag

11. A metallic tape is made of –
    (a) Metallic wires and cloth
    (b) Steel
    (c) Metal
    (d) Copper and steel

12. A 20m chain is divided into –
    (a) 150 links
    (b) 100 links
    (c) 200 links
    (d) 250 links

13. Engineer's chain is _____ long.
    (a) 90 feet
    (b) 100 feet
    (c) 60 feet
    (d) 30 feet

14. Metallic tapes are made of –
    (a) Steel
    (b) Invar
    (c) Cloth and Wire
    (d) Nickel

15. The length of arranging rod should be –
    (a) 1.5 m to 2 m
    (b) 2 m to 3 m
    (c) 3 m to 4 m
    (d) 2.5 m to 4.5 m

16. Which type of survey relies on measurement and deeds?
    (a) Geodetic survey
    (b) Hydrographic survey
    (c) Cadastral survey
    (d) None of the above

17. What is CRM?
    (a) Cadastral Reference Mark
    (b) Cadastral Rigid Mark
    (c) Cadastral Reference Metadata
    (d) Cadastral Rigid Database

18. 'Mauza' means the same thing as –
    (a) Village
    (b) Gram
    (c) Both (a) & (b)
    (d) None of these

19. Planimeter is an instrument used for measuring –
    (a) Length
    (b) Weight
    (c) Volume
    (d) Area

20. One Acre = _____ Square Yards.
    (a) 4480
    (b) 4840
    (c) 4048
    (d) 4084

21. The most important consideration for preparation of map is –
    (a) Scale
    (b) Plotting accuracy
    (c) Generalization
    (d) Contour Interval

22. Diagonal scale is used to read –
    (a) One Unit
    (b) Two unit
    (c) Three consecutive unit
    (d) Four units

23. On a plain scale it is possible to read only –
    (a) One
    (b) Three
    (c) Four
    (d) Two

24. The curvature of earth is considered in –
    (a) Plain surveying
    (b) Geodetic surveying
    (c) Hydrographic survey
    (d) Aerial survey

25. What does GIS Stand for?
    (a) Geographical Information System
    (b) Geographical Intelligence System
    (c) Geographical Interferometry System
    (d) Geographical Information Seismography

26. The base line is measured with –
    (a) Metallic tape
    (b) Steel tape
    (c) Invar tape
    (d) Chain

27. Principle of chain surveying in which area is divided into –
    (a) Rectangle
    (b) Straight lines
    (c) Triangles
    (d) Squares

28. _____ is a line which is provided to check the accuracy of the fields.
    (a) Base line
    (b) Survey line
    (c) Offset
    (d) Check line

29. An obstacles which obstructs both chaining and raging may be a –
    (a) River
    (b) Lake
    (c) Hillock
    (d) Building

30. The size of field book and opening length wise –
    (a) 20 cm x 12 cm
    (b) 20 cm x 10 cm
    (c) 25 cm x 12 cm
    (d) 25 cm x 15 cm

31. Which of the following is not used in measuring perpendicular offsets?
    (a) Line ranger
    (b) Steel tape
    (c) Optical square
    (d) Cross staff

32. The angle of Intersection of the two plane mirror of an optical square is –
    (a) 30°
    (b) 45°
    (c) 60°
    (d) 90°

33. Surveyor's chain length is –
    (a) 66 feet; 100 links
    (b) 100 feet; 100 links
    (c) 33 feet; 10 links
    (d) 10 feet; 10 links

34. Short offsets are measured with –
    (a) An ordinary chain
    (b) An invar chain
    (c) A metallic tape
    (d) A steel tape

35. In a field book, booking is commenced at the _____ of the page.
    (a) Middle
    (b) Bottom
    (c) Top
    (d) None of these

36. Open traverse is suitable in the survey of –
    (a) Ponds
    (b) Lakes
    (c) Estates
    (d) Rivers

37. The compass box is made of –
    (a) Steel
    (b) Iron
    (c) Brass
    (d) Aluminium

38. At the magnetic poles the dip is –
   (a) 0°
   (b) 45°
   (c) 60°
   (d) 90°

39. Principle of compass surveying -
   (a) Traversing
   (b) Triangulation
   (c) Chaining
   (d) Surveying

40. Which of the following instruments is used for measurement of angles?
   (a) Geodimeter
   (b) Tellurometer
   (c) Sextant
   (d) Telecope

41. The direction of a line relative to a given median is called –
   (a) Angular direction
   (b) Bearing
   (c) Deviation
   (d) Inclination

42. The horizontal angle between the true meridian and the magnetic meridian is called –
   (a) Fore bearing
   (b) Longitude
   (c) Magnetic declination
   (d) Magnetic bearing

43. A bearing of a line is also known as –
   (a) True bearing
   (b) Magnetic bearing
   (c) Azimuth
   (d) Reduced bearing

44. Least count of prismatic compass is -
   (a) 30 seconds
   (b) 45 seconds
   (c) 60 seconds
   (d) None of the above

45. Agate cap is fitted with a –
   (a) Cross staff
   (b) Level
   (c) Chain
   (d) Prismatic compass

46. _____ Survey is a graphical method in which the field observations and are plotted.
   (a) Chain
   (b) Compass
   (c) Plane Table
   (d) Contour

47. There are _____ types of Plane Tabling.
   (a) 1
   (b) 2
   (c) 3
   (d) 4

48. _____ is used when it is required to take inclined sights.
   (a) Alidade
   (b) Telescopic alidate
   (c) Plumbing fork
   (d) Leveling

49. There are _____ types of three point problem.
   (a) 1
   (b) 2
   (c) 3
   (d) 4

50. Alidade is used in –
   (a) Tacheometry
   (b) Plane tabling
   (c) Chaining
   (d) Compass surveying

51. Three points problem can be solved by –
   (a) Tracing paper method
   (b) Bassels method
   (c) Lehman's method
   (d) All of these

52. The two point problems and three point problems are methods of –
  (a) Resection
  (b) Orientation
  (c) Traversing
  (d) Resection and Orientation

53. In _____ method, a ray is drawn from the instrument station towards the point to be located.
  (a) Radiation
  (b) Intersection
  (c) Traversing
  (d) Plane table

54. A triangle is said to be well conditioned if one of its angles is less than –
  (a) 20°
  (b) 30°
  (c) 45°
  (d) 60°

55. Plane Table Traverse involves the same principles as a –
  (a) Compass
  (b) Theodolite
  (c) Radiation
  (d) None of these

56. Mean Sea Level for India is –
  (a) MSL at Karachi
  (b) MSL at Bombay
  (c) MSL at Chennai
  (d) MSL at Bangalore

57. Arithmetic check is to check the accuracy of –
  (a) Calculation
  (b) Field work
  (c) Plotting work
  (d) None of the above

58. Bench mark at the end of days work is called –
  (a) Present BM
  (b) Arbitrary BM
  (c) Temporary BM
  (d) GTS BM

59. An example for a level surface is –
  (a) Surface of earth
  (b) Surface of still pond
  (c) Surface of reservoir
  (d) Surface of sea

60. The first reading taken in leveling is called –
  (a) Back sight
  (b) Fore sight
  (c) Intermediate sight
  (d) Invert

61. The line of collimation method of reduced of levels, does not provide a check on –
  (a) Intermediate sights
  (b) Fore sight
  (c) Back sight
  (d) Reduced level

62. _____ is used to find elevations of given points with respect to a given or assumed datum.
  (a) Leveling
  (b) Surveying
  (c) Contouring
  (d) Level of surface

63. The rise and full method of reduction of levels, provides a check on –
  (a) Back sight
  (b) Fore sights
  (c) Intermediate sights
  (d) All of these

64. Collimation method is used in
  (a) Profile levelling
  (b) Differential levelling
  (c) Check levelling
  (d) Both (a) & (b)

65. The vertical distance above or below the datum is called –
    (a) Reduced level of the point   (b) Elevation of the point
    (c) Height of the Instrument   (d) Either (a) or (b)

66. The operation of forming the clear image of the object in the place cross hairs is known as –
    (a) Line sight   (b) Parallax
    (c) Focusing   (d) Eye piece

67. The levelling head generally consists of two parallel plates, upper plate is known as –
    (a) Trivet   (b) Tribrach
    (c) Clamp   (d) Dumpy level

68. Most telescopes are also equipped with two more horizontal hairs called –
    (a) Focusing   (b) Diaphragm
    (c) Cross hair   (d) Stadia hair

69. The deflection angle may have any value between –
    (a) 0° and 45°   (b) 0° and 90°
    (c) 0° and 120°   (d) 0° and 180°

70. The deflection angle may be directly obtained by setting the instrument to read –
    (a) 0°   (b) 90°
    (c) 180°   (d) 270°

71. The axis of the telescope and the line of collimation are –
    (a) Perpendicular   (b) One of the same
    (c) Different   (d) Parallel

72. In a closed traverse, the algebraic sum of latitude and departure must be equal to –
    (a) 90   (b) 180
    (c) 360   (d) 0

73. Reading both the Vernier eliminates the _____ error.
    (a) Personal   (b) Observation
    (c) Eccentricity   (d) Graduation

74. Balancing the traverse is done by –
    (a) Prismoldal Rule   (b) Transit Rule
    (c) Trapezoidal rule   (d) Simpsom's Rule

75. The temporary adjustment of the instrument is to be done –
    (a) On the station   (b) Before going on the station
    (c) After going from the station   (d) None of these

76. How many types of EDM instruments are there based on wavelength?
    (a) 2   (b) 4
    (c) 5   (d) 3

77. A total station is a combination of –
    (a) EDM and Theodolite   (b) Compass and EDM
    (c) Electronic Theodolite and EDM   (d) EDM and electronic Compass

78. Which unit in total station processes data collected?

    (a) Data collector   (b) EDM

    (c) Storage system   (d) Microprocessor

79. Which is the latest development in total station?

    (a) High resolution   (b) High accuracy

    (c) Robotic   (d) Automatic

80. What is the range of non prism mode?

    (a) 200 m   (b) 300m

    (c) 350 m   (d) 325 m

81. What is the range of prism mode?

    (a) 500 m   (b) 1 km

    (c) 2 km   (d) 1.5 km

82. Total battery backup of total station?

    (a) 7 hrs   (b) 8 hrs

    (c) 9 hrs   (d) 10 hrs

83. Vertical axis of total station is known as –

    (a) Trunnion   (b) Sighting

    (c) Upper clamp   (d) Lower clamp

84. Accuracy of 'fix' by two points problem, is –

    (a) Bad   (b) Good

    (c) Not reliable   (d) Unique

85. The value of pressure constant in total station is –

    (a) 1013 Mba   (b) 1023 Mba

    (c) 1033 Mba   (d) 1003 Mba

86. Global Positioning System (GPS) is a –

    (a) Satellite Word Station   (b) Satellite System

    (c) Satellite Signal   (d) Satellite Solution

87. Global Positioning Service (GPS) uses 24 satellites in –

    (a) 9 Orbits   (b) 8 Orbits

    (c) 7 Orbits   (d) 6 Orbits

88. Global Positioning Service (GPS) is based on a principle called –

    (a) Arbitration   (b) Trilateration

    (c) Orbiteration   (d) Globalization

89. How many GPS Satellites are currently in orbit around the earth?

    (a) 12   (b) 16

    (c) 22   (d) 24

90. What year did the GPS satellite launches begin?

    (a) 1960   (b) 1978

    (c) 1989   (d) 1995

91. The _____ may be defined as the representation of the earth's pattern as a whole or a part of it –
    - (a) Scale
    - (b) Diagram
    - (c) Map
    - (d) Map projection

92. The amount of information to be represented on the map depends on –
    - (a) Scale
    - (b) Projection
    - (c) Conventional sign
    - (d) All of these

93. The word 'Map' derived from Mappa of –
    - (a) Greek word
    - (b) German word
    - (c) Latin word
    - (d) French word

94. Wall maps are actually –
    - (a) Geographical maps
    - (b) Atlas maps
    - (c) Topographical maps
    - (d) Cadastral maps

95. Which of the following map is also known as Chrographical map?
    - (a) Cadastral map
    - (b) Wall map
    - (c) Atlas map
    - (d) Planimetric map

96. Which of the following is not an example of Economic map?
    - (a) Land use map
    - (b) Transport map
    - (c) Agricultural map
    - (d) Vegetative map

97. The size of the Indian map drawn on a Scale 1:15000000 is –
    - (a) 36 x 30 cm
    - (b) 38 x 30 cm
    - (c) 32 x 30 cm
    - (d) 34 x 30 cm

98. In which of the following maps, main stress is given on the determination of Topographical features and relief –
    - (a) Geological
    - (b) Planimetric
    - (c) Hypsometric
    - (d) Thematic

99. Which of the following maps is also known as Morphographic map?
    - (a) Landslope map
    - (b) Landform map
    - (c) Flatland-ratio map
    - (d) Isogonic map

100. Which of the following map not comes under the category of Physical map?
    - (a) Mineral map
    - (b) Astronomical map
    - (c) Soil map
    - (d) Vegetation map

* * * * * * *