

097/2016

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. One hectare equals :
(A) $100 m^2$ (B) $1000 m^2$
(C) $10,000 m^2$ (D) $100000 m^2$
2. Chain surveying is most suitable for :
(A) forest area (B) hill area
(C) undulating area (D) flat surface
3. If a measuring tape is too long as compared to standard length, the error will be :
(A) Accidental error (B) Instrumental error
(C) Personal error (D) Natural error
4. The boundary of water of a still lake represents :
(A) Level surface (B) Horizontal surface
(C) Contour line (D) Concave line
5. Which method in plane table surveying for locating previous station point?
(A) Intersection (B) Radiation
(C) Resection (D) Traversing
6. Multiplying constant for the tacheometer is generally:
(A) 50 (B) 100
(C) 150 (D) 200
7. The ratio of the length of the object in the drawing to the actual length of the object is called :
(A) full scale (B) least count
(C) diagonal scale (D) representative fraction

8. A 500 sq.m area is represented by 500 sq.mm in a drawing. The scale of the drawing is :
- (A) 1 mm = 100 m (B) 1 mm = 5 m
(C) 1 mm = 1 m (D) 1 mm = 10 m
9. Process of turning the telescope about the vertical axis in a horizontal plane is called :
- (A) reversing (B) transiting
(C) plugging (D) swinging
10. The instrument used for measuring area on a contour map is :
- (A) clinometer (B) planimeter
(C) pantograph (D) graphometer
11. In levelling a station point where :
- (A) Levelling instrument is set up (B) Bench Mark is marked
(C) Levelling staff is placed (D) All of these
12. The last reading of levelling is always a :
- (A) fore sight (B) back sight
(C) intermediate sight (D) change point
13. Levelling across a river is done by :
- (A) fly levelling (B) cross levelling
(C) trigonometrical levelling (D) reciprocal levelling
14. The line of collimation should be parallel to :
- (A) vertical axis (B) bubble axis
(C) plumb axis (D) none of these
15. The height of instrument method is :
- (A) less tedious (B) more rapid
(C) less calculation (D) all of these
16. While traversing anticlockwise a closed traverse of 'N' sides, theoretical sum of included angles should be :
- (A) $(2N - 4) \times 90^\circ$ (B) $(2N + 4) \times 90^\circ$
(C) $(2N \pm 4) \times 90^\circ$ (D) 360°

17. Angle of dip at pole is :
- (A) 0° (B) 30°
(C) 45° (D) 90°
18. An offset more than 15 m in length is called :
- (A) oblique offset (B) short offset
(C) long offset (D) right angled offset
19. To calculate the area, the expression $A = \frac{n}{3} [(F + L) + 2O + 4E]$ where 'F' is first ordinate, 'L' is the last ordinate, 'O' is odd of ordinates 'E' is even ordinates and 'h' is the common distance between the ordinates :
- (A) Average ordinate rule (B) Mid ordinate rule
(C) Trapezoidal rule (D) Simpson's rule
20. The correction for sag is always :
- (A) positive (B) negative
(C) zero (D) none of these
21. Metallic tapes are made of :
- (A) stainless steel (B) nickel
(C) steel and nickel (D) yarn and wire
22. Example for a deep foundation :
- (A) Grillage foundation (B) Well foundation
(C) Mat foundation (D) Step foundation
23. Mechanical advantage equal to :
- (A) $\frac{W}{P}$ (B) $\frac{P}{W}$
(C) $P \times W$ (D) $P - W$
24. The resultant of two forces 'P' and 'Q' acting at angle ' θ ' is equal to :
- (A) $\sqrt{P^2 + Q^2 + 2PQ \sin \theta}$ (B) $\sqrt{P^2 - Q^2 + 2PQ \sin \theta}$
(C) $\sqrt{P^2 + Q^2 + 2PQ \cos \theta}$ (D) $\sqrt{P^2 - Q^2 + 2PQ \cos \theta}$

25. The ratio of stress to strain is :
- (A) Elasticity (B) Modulus of elasticity
(C) Bulk modulus (D) Poisson's ratio
26. In conics the fixed point is called :
- (A) Vertex (B) Apex
(C) Helix (D) Focus
27. A regular solid having six square faces is :
- (A) Hexagen (B) Octa hedron
(C) Cube (D) Tetra hedran
28. The horizontal angle between the true meridian and line is called :
- (A) magnetic bearing (B) azimuth
(C) arbitrary bearing (D) reduced bearing
29. The observed fore bearing of a line is $142^{\circ}18'$ then the back bearing is :
- (A) $322^{\circ}18'$ (B) $37^{\circ}42'$
(C) $322^{\circ}42'$ (D) $232^{\circ}18'$
30. The true bearing of a line is 127° and declination is $2^{\circ}W$. The magnetic bearing equals :
- (A) 125° (B) 131°
(C) 129° (D) 135°
31. The sum of the interior angles of a regular pentagen is :
- (A) 360° (B) 540°
(C) 720° (D) 630°
32. The bearing of a line AB is $152^{\circ}20'$ and the angle BAC is $124^{\circ}38'$. The bearing of AC is :
- (A) $96^{\circ}58'$ (B) $96^{\circ}18'$
(C) $276^{\circ}58'$ (D) $127^{\circ}18'$
33. The inclination of the compass needle with the horizontal is known as:
- (A) Declination (B) Dip
(C) True bearing (D) Magnetic Declination

34. The angle between the reflecting surfaces of a prism square is :
- (A) 45° (B) 60°
(C) 75° (D) 90°
35. The angle of depression in theodolite traverse is :
- (A) positive angle (B) negative angle
(C) both positive and negative angle (D) above horizontal angle
36. The bench mark at A is '200' m and staff reading at A is '3.5' m and the staff reading at B is '2' m. The reduced level at B is :
- (A) 203.5 m (B) 202.0 m
(C) 201.5 m (D) 202.5 m
37. Which method is particularly suitable when a contoured map of a hill required?
- (A) Radial method (B) Square method
(C) Cross-section method (D) Tachometric method
38. The most common Coagulant is :
- (A) Alum (B) Chlorine
(C) Bleaching power (D) All of these
39. The whole circle bearing of a line is 165° . Its reduced bearing is :
- (A) N 75° E (B) N 75° W
(C) S 15° E (D) S 15° W
40. To locate an electric post near the plane table station which of the following method is suitable :
- (A) Intersection (B) Radiation
(C) Resection (D) Traverse
41. If distance between two points A and B is 1 km, then combined correction for curvature and refraction will be :
- (A) $0.0673 D^2$ m (B) $1.0673 D^2$ m
(C) $0.673 D^2$ m (D) $1.673 D^2$ m

42. The process of establishing intermediate points between two end points which are not intervisible, with the help of a theodolite is called:
- (A) Lining-in (B) Ranging
(C) Balancing-in (D) Random line
43. The observation is taken on a change point is :
- (A) fore sight (B) back sight
(C) intermediate sight (D) both fore sight and back sight
44. The isometric projection of a square is :
- (A) Rectangle (B) Rhombus
(C) Parallelogram (D) Trapezoid
45. In a simply supported beam the point where the maximum bending moment occurs is at :
- (A) support point (B) mid point
(C) the point where SF is zero (D) end point
46. Which of the following is used for checking verticality of masonry wall?
- (A) spirit level (B) water level
(C) trowel (D) plumb bob
47. Departure co-ordinate related to :
- (A) North and South (B) East and West
(C) South and West (D) South and East
48. Bureau of Indian standards has recommended the use of folding staff as :
- (A) 2 m (B) 3 m
(C) 4 m (D) 4.5 m
49. The observation with level is :
- (A) Horizontal linear measurement (B) Vertical linear measurement
(C) Angular measurement (D) Horizontal angular measurement

50. The box of the compass is made of :
- (A) Aluminium (B) Iron
(C) Copper (D) Brass
51. A fixed point of known elevation is :
- (A) Bench Mark (B) Station point
(C) Change point (D) Intermediate point
52. Ring contours of higher values interval represents inside :
- (A) Ridge (B) Pond
(C) Hill (D) Valley
53. The closing error of theodolite traverse where 'L' is the latitude and 'D' is the departure :
- (A) $\sqrt{\sum L^2 - \sum D^2}$ (B) $\sqrt{\sum L^2 + \sum D^2}$
(C) $\frac{\sum D}{\sum L}$ (D) $\frac{\sum L}{D}$
54. The horizontal angle between true meridian and a survey line is :
- (A) Dip (B) Magnetic Declination
(C) Magnetic bearing (D) Azimuth
55. The method used for calculating the earth work with more accuracy is :
- (A) Trapezoidal Rule (B) Mid-ordinate rule
(C) Prismoidal rule (D) Average ordinate rule
56. The length of long chord is :
- (A) $2R \cos \theta/2$ (B) $2R \sin \theta/2$
(C) $R \cos \theta/2$ (D) $R \sin \theta/2$
57. An instrument which is used for measuring horizontal angle, vertical angle and direct distance accurately is :
- (A) Tacheometric survey (B) Theodolite survey
(C) Box-sextant (D) Total station

58. The value of deflection angle is :
- (A) 0° to 90° (B) 0° to 180°
(C) 0° to 270° (D) 0° to 360°
59. In telescope the ratio of the focal length of the object to that of an eye-piece is known as :
- (A) Magnification (B) Sensitivity
(C) Definition (D) Brightness
60. For accurate measurement of distance which tape is better?
- (A) Metallic tape (B) PVC coated tape
(C) Steel tape (D) Invar tape
61. The number of links in a 30 m metric chain is :
- (A) 100 links (B) 150 links
(C) 180 links (D) 200 links
62. The process of turning the telescope about the vertical axis in horizontal plane is called :
- (A) Transiting (B) Reversing
(C) Plugging (D) Swinging
63. During chaining a straight line, the leader of the party has 4 arrows in his hand while the follower has 6 arrows in his hand from the starting point is :
- (A) 4 chains (B) 6 chains
(C) 120 metre (D) 180 metre
64. The permissible error in compass survey is :
- (A) 15 minutes (B) 15 seconds
(C) 30 seconds (D) 1 degree
65. In first angle projection the object is place :
- (A) Above HP and behind VP (B) Above HP and in front of VP
(C) Below HP and behind VP (D) Below HP and in front of VP
66. In Engineering drawing chain lines are used for :
- (A) Visible out lines (B) Dimension lines
(C) Hidden lines (D) Centre lines

67. A well conditioned triangle has angles not less than and not more than respectively :
- (A) 10° and 90° (B) 20° and 120°
 (C) 30° and 120° (D) 90° and 120°
68. A scale representing either three units or only one unit and its fractions upto second place of decimal points is :
- (A) Diagonal scale (B) Plane scale
 (C) Vernier scale (D) Comparative scale
69. Important points selected at the ends of the chain lines to command the boundaries of the survey are called :
- (A) Tie stations (B) Subsidiary stations
 (C) Main stations (D) Check stations
70. The error due to bad ranging is :
- (A) Compensating error (B) Cumulative positive error
 (C) Cumulative negative error (D) Both (B) and (C)
71. The reduced bearing of a line whose whole circle bearing is 40° :
- (A) S 40° E (B) S 50° E
 (C) N 40° E (D) N 40° W
72. Fore bearing of a line is S 60° W. The back bearing is :
- (A) N 60° E (B) N 30° E
 (C) S 60° E (D) S 30° W
73. Geocletic survey is different from plane surveying because of :
- (A) Very large area is covered (B) Undulations of the topography
 (C) Curvature of the earth is considered (D) Large difference of elevations
74. The type of theodolite classified as :
- (A) Diameter of upper plate (B) Diameter of lower plate
 (C) Diameter of vertical plate (D) Diameter of telescope
75. The traverse slope provided on the surface of the road to remove the rain water :
- (A) Crown (B) Gradient
 (C) Super elevation (D) Camber

76. Volume of a solid sphere is :
- (A) $3\pi r^3$ (B) $4\pi r^3$
 (C) $4/3\pi r^3$ (D) $3/4\pi r^3$
77. The actual size of standard brick is :
- (A) $20 \times 10 \times 10$ cm (B) $19 \times 9 \times 9$ cm
 (C) $20 \times 20 \times 10$ cm (D) $19 \times 19 \times 9$ cm
78. Full form of "CAD" :
- (A) Computer Aided Drafting (B) Computer Aided Demonstration
 (C) Computer Aided Designing (D) Computer Aided Dimensioning
79. A command which is used to pick points like end point, mid-point, tangent etc. of entities very precisely which geometrical accuracy :
- (A) GRID (B) ZOOM
 (C) DIM (D) OSNAP
80. The Bench Marks established by the survey of India Department :
- (A) Permanent Bench Marks (B) GTS Bench Marks
 (C) Arbitrary Bench Marks (D) Temporary Bench Marks
81. The pass located at the Southern end of the Nilgiri Hills in South India is called :
- (A) Palghat gap (B) Bhorghat pass
 (C) Thalghat pass (D) Bolan pass
82. The Gulf of mannar is situated along the coast of which state in India?
- (A) Karnataka (B) Kerala
 (C) Andhra Pradesh (D) Tamil Nadu
83. Which of the following rivers originate near Mahabaleshwar?
- (A) Godavari (B) Krishna
 (C) Kaveri (D) Tapti
84. How many National Waterways are there in India?
- (A) 3 (B) 5
 (C) 7 (D) 9

85. Which river is referred as Kalindhi in Puranas?
- (A) Ganga (B) Yamuna
(C) Saraswathi (D) Brahmaputra
86. Bhagat Singh was sentenced to death in which case?
- (A) Kakori case (B) Chauri-Chaura case
(C) Assembly bomb case (D) Lahore conspiracy case
87. Who was the governor general of India when the I war of Indian Independence broke out in 1857?
- (A) Lord Canning (B) Lord Dalhousie
(C) Lord Ripon (D) Lord Dufferin
88. Who was the President of the Indian National Congress in the Gaya Session of 1922?
- (A) Motilal Nehru (B) C.R. Das
(C) Sardar Patel (D) Bal Gangadhar Tilak
89. The founder of Satya Shodhak Samaj :
- (A) Dr. Atmaram Pandurang (B) Gopal Hari Deshmukh
(C) M.G. Ranade (D) JyotiRao Phule
90. Inclusion of the word Fraternity in the preamble of Indian Constitution is proposed by?
- (A) Jawaharlal Nehru (B) Dr. B.R. Ambedkar
(C) Rajendra Prasad (D) J.B. Kripalani
91. The founder of Atma Vidya Sangham?
- (A) Vagbhatananda Gurudeva (B) Vaikunda Swami
(C) Chattampi Swami (D) Sree Narayana Guru
92. Who was the editor of Mitavadi?
- (A) K. Ayyappan (B) C. Krishnan
(C) Rama Krishna Pillai (D) K. Kelappan

93. Who is known as the father of Kerala Renaissance?
(A) Ayyankali (B) Dr. Palpu
(C) Sree Narayana Guru (D) A.K. Gopalan
94. When was the historic Temple Entry Proclamation made?
(A) April 12, 1936 (B) March 12, 1936
(C) June 12, 1936 (D) November 12, 1936
95. Who among the following is the leader of Malayalee Memorial?
(A) C. Kesavan (B) Dr. Palpu
(C) Barister G.P. Pillai (D) Kumaranasan
96. 'Operation protective Edge' is the name of which country's controversial military action launched on its neighbour?
(A) Israel (B) Syria
(C) Jordan (D) Iran
97. Which day is observed as World Population Day?
(A) June 11 (B) July 11
(C) March 11 (D) April 11
98. Who received the Golden Ball award for the best player of FIFA World Cup 2014?
(A) Lionel Messi (B) Karim Bensema
(C) Cristiano Ronaldo (D) Angel D'Maria
99. With which game is Davis cup associated?
(A) Football (B) Cricket
(C) Hockey (D) Lawn Tennis
100. Who is the present united nations deputy secretary General?
(A) Ban-Ki-Moon (B) Jose Graziano
(C) Joan Closi Mathew (D) Jan Eliasson