

108/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. The curve _____ is commonly used in teeth profile of helical gears, profile of cams etc.
(A) Spiral (B) Helix
(C) Involute (D) Cycloid
2. The standard size length to width ratio for all arrow heads in drawings is :
(A) 2:1 (B) 4:1
(C) 3:1 (D) 2:4
3. In a whole circle bearing system, S 25°15' E corresponds to :
(A) 115°15' (B) 154°45'
(C) 205°15' (D) 334°45'
4. The image formed by the objective in the plate of cross hairs is :
(A) Real and Straight (B) Real and Inverted
(C) Contour interval (D) Contour gradient
5. The main principal of surveying is to :
(A) Work from left to right (B) Work from right to left
(C) Work from whole to the part (D) Work from part to the whole
6. The plan and elevation of a line segment are seen coincides, the line is situated in the :
(A) First quadrant (B) Second quadrant
(C) Third quadrant (D) Quadrental axis
7. The inner details of an object, not visible from outside are represented by :
(A) Dashed line (B) Dot and dashed line
(C) Chain line (D) Zig-zag line
8. A four sided figure having two pairs of sides parallel is called a :
(A) Rhomboid (B) Regular polygon
(C) Pentagon (D) Trapezoid

9. The center of the super scribed circle is called :
- (A) In center (B) Circum center
(C) Center of curvature (D) Center of vision
10. _____ is used to read up to three dimensions.
- (A) Plain scale (B) Diagonal scale
(C) Offset rod (D) Ranging rod
11. RF = 200:1 Represents a :
- (A) Enlarged scale (B) Reduced scale
(C) Full size scale (D) Comparative scale
12. The co-efficient of painting for fully panelled window is :
- (A) 2.25 (B) 2.00
(C) 1.5 (D) 1.00
13. The value at the end of the utility period is :
- (A) Book value (B) Scrap value
(C) Salvage value (D) Market value
14. While submitting tender the contractor is to deposit 2% of estimated cost as :
- (A) Securing money (B) Profit money
(C) Capital money (D) Earnest money
15. All the work executed shall be measured and entered in a permanent record is called :
- (A) Account book (B) Field book
(C) M book (D) Personal book
16. As per is 459-1978, the concrete mix are designed into :
- (A) 4 Grads (B) 6 Grads
(C) 5 Grads (D) 7 Grads
17. The unit of R.C.C work is :
- (A) 1 dm³ (B) 10 dm²
(C) 10 dm³ (D) 1 m³

18. One cubic meter of OPC weights :
- (A) 1200 kg (B) 1300 kg
(C) 1440 kg (D) 1450 kg
19. Spirit varnish consist of :
- (A) Spirit and wax (B) Spirit and shellac
(C) Turpentine, spirit and wax (D) Turpentine ,spirit and shellac
20. As per IS 456 expansion joint provided for a structures when the length exceeds :
- (A) 40 m (B) 45 m
(C) 50 m (D) 55 m
21. As per IS code the ultimate compressive strength is determined at or age of :
- (A) 7 Days (B) 14 Days
(C) 21 Days (D) 28 Days
22. The shape of idealized stress-strain curve for concrete as prescribed by IS 456-1978 is :
- (A) Rectangular (B) Parabolic
(C) Rectangular parabolic (D) None of these
23. The soundness test of cement by Le-Chatlier apparatus gives unsoundness due to :
- (A) Magnesia only (B) Combined lime only
(C) Free lime only (D) Both Magnesia and combined lime
24. Columns with circular section are provided with transverse reinforcement of _____ type only.
- (A) Helical (B) Circular
(C) Spiral (D) Lateral type lines
25. Deflection can be controlled by using the appropriate
- (A) Aspect ratio (B) Modular ratio
(C) Span/ depth ratio (D) Water cement ratio

26. The economic spacing of roof truss depends upon the :
- (A) Cost of purlins and cost of roof covering
 - (B) Cost of roof covering and dead load
 - (C) Dead load and live load
 - (D) Live load and cost of purlin
27. Lime mortar is made by :
- (A) Quick lime
 - (B) Fat lime
 - (C) Hydraulic lime
 - (D) White lime
28. The ultimate tensile strength of the structural mild steel :
- (A) 160 N/mm²
 - (B) 260 N/mm²
 - (C) 420 N/mm²
 - (D) 520 N/mm²
29. The percentage of the Alumina in a good brick earth lies between :
- (A) 5 – 10%
 - (B) 20 – 30%
 - (C) 50 – 60%
 - (D) 70 – 80%
30. The major ingredient of Portland cement are :
- (A) Lime and Silica
 - (B) Lime and Alumina
 - (C) Silica and Alumina
 - (D) Lime and Iron
31. The common admixture used to accelerate the initial set of concrete is :
- (A) Gypsum
 - (B) calcium chloride
 - (C) Bitumen and inert material
 - (D) By product of bitumen
32. The seasoning of timber is used to :
- (A) Soften the timber
 - (B) Harden the timber
 - (C) Straighten the timber
 - (D) Remove sap from timber
33. Plywood is specified :
- (A) Weight
 - (B) Volume
 - (C) Thickness
 - (D) Number of layers

34. The distemper is used to coat :
- (A) External concrete surface
 - (B) Interior surface not-exposed to weather
 - (C) Wood work
 - (D) Compound wall
35. The ratio of different ingredient in M20 mix is :
- (A) 1:4:8
 - (B) 1:2:4
 - (C) 1:1.5:3
 - (D) 1:1:2
36. The fineness modules of fine aggregate is :
- (A) 2.0 to 3.0
 - (B) 3.5 to 5.0
 - (C) 5.0 to 7.0
 - (D) 6.0 to 8.5
37. By passing the irrigation canal over the drainage is known as :
- (A) Super passage
 - (B) Level crossing
 - (C) Canal drop
 - (D) Aqueduct
38. Of the water fall irrigation has to be lifted before it run to fields is :
- (A) Flow irrigation
 - (B) Perennial irrigation
 - (C) Sprinkler irrigation
 - (D) Lift irrigation
39. Rivers having flow for all the twelve months is :
- (A) Perennial river
 - (B) Non-Perennial river
 - (C) Flashy river
 - (D) Virgin river
40. Impermeable formation like clay which mountain water but not capable of transmitting water :
- (A) Aquifer
 - (B) Aquicludes
 - (C) Aquifuge
 - (D) Ground water
41. Over irrigation results in :
- (A) Water logging
 - (B) Wilting
 - (C) Fertility
 - (D) Seepage

42. Delta of crop means :
- (A) Degree under the crops (B) Crop-Period
(C) Depth of water required by the crop (D) Crop production
43. The extent of land that get irrigated from a water source is :
- (A) Anicut (B) Ayacut
(C) Catchment area (D) Duty
44. Irrigation canals are generally aligned along :
- (A) Contour line (B) Distributary canal
(C) Straight line (D) Valley line
45. This theorem proves that the energy head at any section in a flowing stream will be same :
- (A) Darcy's Theorem (B) Bernoulli's Theorem
(C) Chezy's Theorem (D) Manning's Theorem
46. Fluid's include :
- (A) Liquid only (B) Liquid and gas
(C) All matter (D) Liquids and semi liquids
47. The intensity of pressure at any point in a fluid at rest, is the same in all directions is :
- (A) Bernoulli's theorem (B) Newton's law
(C) Pascal's law (D) Archimedes principle
48. The density of a liquid at standard temperature and pressure is defined as:
- (A) The weight per unit volume (B) Mass per unit volume
(C) Force per unit area (D) The specific weight
49. For a liquid the variation in its volume with the variation of pressure is known as :
- (A) Viscosity (B) The mass density
(C) The compressibility (D) Liquid pressure
50. The surface tension of a liquid is its property which enable it to resist :
- (A) Tensile stress (B) Compressive stress
(C) Proof stress (D) None of the above

51. The ratio of inertia force to viscous force :
- (A) Froude's number (B) Ellery's number
(C) Reynolds's number (D) Kinematic viscosity
52. The phenomenon of rising water in the tube of smaller diameter is called :
- (A) The water column (B) The gauge reading
(C) The capillary rise (D) Piezometer reading
53. The pitot tube is used for measurement of :
- (A) Velocity at a point (B) Pressure at a point
(C) Energy at point (D) Pressure difference
54. The sheet of liquid flowing over a notch is known as :
- (A) Nappe (B) Jet
(C) Vena contracta (D) Strip of water
55. The path followed by a fluid particle in motion is called :
- (A) Path line (B) Stream line
(C) Steak line (D) Filament line
56. The slope of road payment in the longitudinal direction is :
- (A) Alignment (B) Super elevation
(C) Gradient (D) Length of summit
57. The major structural component of a road composed of stone aggregate is :
- (A) The sub-grade (B) The base course
(C) The surfacing (D) Wearing surface
58. The thickness of road surface depends upon :
- (A) Type of traffic (B) Intensity of traffic
(C) Type of material (D) All of these
59. Which structure is recommended to prevent the cut hill from sliding when hill roads are in cutting?
- (A) Retuning wall (B) Curtain wall
(C) Breast wall (D) Wing wall

60. The convexity provided to the cross section of the surface of carriage way is termed as :
- (A) Gradient (B) Super elevation
(C) Camber (D) Curvature
61. The road connecting district head quarters of a state is :
- (A) Bypass road (B) District road
(C) State highway (D) National highway
62. The rate of rise or fall of a road along its alignment is :
- (A) Camber (B) Gradient
(C) Super elevation (D) Curvature
63. For computing the quantity of earth work using prismoidal formula the number of required sectional area :
- (A) Any number (B) Even
(C) Odd (D) Four
64. If the perimeter of a circular ground is 31.416 m then the area of the ground is :
- (A) 783.4 m² (B) 78540 m²
(C) 78.54 m² (D) 7.859m²
65. The eccentricity of parabola will be :
- (A) Less than one (B) Equal to one
(C) Greater than one (D) Zero
66. The point on which both back sight and fore sight are taken :
- (A) Change point (B) Bench mark
(C) Station (D) Intermediate point
67. The instrument used to reproduce plan in a different scale is called :
- (A) Planimeter (B) Clinometer
(C) Ghat tracer (D) Pentagraph

68. The weight per meter of 10 mm dia bar is :
- (A) 0.62 kg (B) 0.89 kg
(C) 0.22 kg (D) 0.39 kg
69. The volume of one bag of cement weight 50 kg is :
- (A) 0.04 m³ (B) 0.025 m³
(C) 0.0345 m³ (D) 0.05 m³
70. The concrete pile with one or more enlarged bulb on its stem is called :
- (A) Franki pile (B) Simplex pile
(C) Under reamed pile (D) Vibro pile
71. The end support of a bridge is called :
- (A) Abutment (B) Wing wall
(C) Foundation (D) Pier
72. Margin between water level and top of dam is called :
- (A) Free board (B) Span
(C) Afflux (D) Rise
73. The first stage in water treatment is :
- (A) Purification (B) Filtration
(C) Sedimentation (D) Disinfection
74. The Force of friction is always :
- (A) Opposes motion (B) Producer motion
(C) Slops (D) Producer acceleration
75. The value of broad gauge adopted in Indian railway :
- (A) 1.0 M (B) 0.762 M
(C) 0.6696 M (D) 1.676 M
76. One yard is equal to :
- (A) 0.8144 M (B) 0.9244 M
(C) 0.9144 M (D) 0.9344 M

77. The under surface of an arch is called :
- (A) Skew back (B) Haunch
(C) Intrados (D) Spandrin
78. Side of a square equal in area of circle having diameter 2 cm is :
- (A) $\sqrt{\pi/4}$ cm (B) $\sqrt{\pi}$ cm
(C) $2\sqrt{\pi}$ cm (D) π cm
79. Ornamental moulded course placed on the top of the wall is :
- (A) Cornice (B) Corbel
(C) Coping (D) Lintel
80. Maximum permissible FAR for Residential building shall be :
- (A) 3 (B) 1.5
(C) 2 (D) 2.5
81. The fundamental rights are enshrined in part :
- (A) III (B) II
(C) IV (D) I
82. Battle of Buxar fought in :
- (A) 1857 (B) 1757
(C) 1764 (D) 1767
83. Silver Revolution related to :
- (A) Edible oil (B) Fish
(C) Milk (D) Egg and Poultry
84. Who founded the 'Samathva Samajam' :
- (A) Vagbhatananda (B) Vaikunta Swamikal
(C) Sree Narayana Guru (D) Chattampi Swamikal

85. Vijay Hazare Trophy related to which sports?
(A) Football (B) Badminton
(C) Cricket (D) Hockey
86. The first Vice chairman of NITI Aayog :
(A) Ajith Doval (B) Aravind Panagariya
(C) Ashok Lahiri (D) Y.V. Reddy
87. The Prathyaksha Raksha Daiva Sabha (PRDS) was founded by :
(A) Poikayil Yohannan (Sree kumara guru)
(B) Karunakara Guru
(C) Pandit Karuppan
(D) Thycaud Ayya
88. Who was the 14th Prime Minister of India?
(A) Narendra Modi (B) Narasimha Rao
(C) I.K Gujral (D) Manmohan Singh
89. 'The father of political movement' in modern Travancore was :
(A) T.K. Madhavan (B) E.J. John
(C) G.P. Pillai (D) C. Kesavan
90. Which of the following rivers crosses the Equator twice?
(A) Amazon (B) Tigris
(C) Nile (D) Congo
91. 'Swaraj is my birthright, and I shall have it.' Who declared this words?
(A) Gokhale (B) Tilak
(C) Bhagat singh (D) L.L. Rai
92. When the 'Internal Emergency' declared by Indira Gandhi?
(A) 28 May 1975 (B) 28 June 1975
(C) 26 May 1975 (D) 26 June 1975

93. Middle Path (Ashtangamarga) related to :
- (A) Jainism (B) Hinduism
(C) Buddhism (D) Sikhism
94. Karthika Thirunal Ramavarma, popularly known as :
- (A) Dharma Raja (B) Marthanda Varma
(C) Swathi Tirunal (D) Raja Kesavadas
95. 'Theyyam' is the art form originated in :
- (A) Kasaragod (B) Kannur
(C) Kozhikode (D) Pattanamthitta
96. The oldest mountain range of India :
- (A) Himalaya (B) Western Ghats
(C) Eastern Ghats (D) Aravali
97. Where is the head quarter of Reserve Bank India?
- (A) Kolkatta (B) Delhi
(C) Mumbai (D) Chennai
98. National Voters Day is observed on :
- (A) 12th Jan (B) 24th Jan
(C) 30th Jan (D) 25th Jan
99. Which acid is present in tomato?
- (A) Oxalic (B) Citric
(C) Tartaric (D) Lactic
100. The book 'Aarachaar' authored by :
- (A) Subash Chandran (B) Ashita
(C) Benyamin (D) K.R. Meera