082/22

Question Booklet Alpha Code

A

A

Total Number of Questions : 100	Time : 90 Minutes

Maximum Marks : 100

A

INSTRUCTIONS TO CANDIDATES

1. The Question Paper will be given in the form of a Question Booklet. There will be four versions of Question Booklets with Question Booklet Alpha Code viz. **A, B, C** & **D**.

2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the Question Booklet.

3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.

4. If you get a Question Booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator IMMEDIATELY.

5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your Question Booklet is un-numbered, please get it replaced by new Question Booklet with same alpha code.

6. The Question Booklet will be sealed at the middle of the right margin. Candidate should not open the Question Booklet, until the indication is given to start answering.

7. Immediately after the commencement of the examination, the candidate should check that the Question Booklet supplied to him/her contains all the 100 questions in serial order. The Question Booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.

8. A blank sheet of paper is attached to the Question Booklet. This may be used for rough work.

9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**

10. Each question is provided with four choices **(A), (B), (C)** and **(D)** having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.

11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**

12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.

13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

1. The following line is used for dimension line
   A) Continuous thick
   B) Continuous thin
   C) Chain thin line
   D) Short zig zag thin

2. In aligned system of dimensioning the dimension may be read from
   A) Bottom or right hand edges
   B) Bottom or left hand edge
   C) Only from bottom
   D) Only from left side

3. The length : width in case of an arrow head is
   A) 1 : 1
   B) 2 : 1
   C) 3 : 1
   D) 4 : 1

4. The internal angle of regular hexagon is _____ degree.
   A) 72
   B) 108
   C) 120
   D) 150

5. A line of 6 m is shown by 6 cm on a scale, its Representation Factor (RF) is
   A) 1
   B) 600
   C) 1/600
   D) 1/30

6. A point p is above Horizontal Plane (HP) and in front of Vertical Plane (VP). The point is
   A) First quadrant
   B) Second quadrant
   C) Third quadrant
   D) Fourth quadrant

7. The section cut by a plane on a right circular cone are called as
   A) Parabolic section
   B) Conic sections
   C) Elliptical section
   D) Hyperbolic sections

8. In conics the _____ is revolving to form two anti parallel cones joined at the apex.
   A) Ellipse
   B) Circle
   C) Generator
   D) Parabola

9. If a plane is perpendicular to vertical and inclined to horizontal plane with 30 degrees then the vertical trace makes _____ of xy reference.
   A) 30 degrees
   B) 60 degrees
   C) 150 degrees
   D) 90 degrees

A

-3-

10. The preferred size of the drawing sheets is recommended by the
    A) BIS   B) ASME   C) ASTM   D) NIST

11. The error due to bad ranging is
    A) Cumulative (+ve)   B) Cumulative (–ve)
    C) Compensating   D) Cumulative (+ve and –ve)

12. The smallest length that can be drawn on a map is
    A) 0.2 mm   B) 0.5 mm
    C) 10 mm   D) 15 mm

13. The difference between the most probable value of a quantity and its observed value is
    A) True error   B) Weighted observation
    C) Conditional error   D) Residual error

14. The degree of precision required in survey work mainly depends upon the
    A) Purpose of survey   B) Area to be surveyed
    C) Source of error   D) Nature of the field

15. The relative horizontal positions of various points in surveying are determined by
    A) Traversing   B) Triangulation
    C) Trigonometric levelling   D) Reconnaissance survey

16. Prolongation of a chain line across an obstruction in chain survey is done by
    A) Marking angular observation
    B) Drawing perpendicular with a chain
    C) Solution of triangle
    D) All of the above

17. Geodimeter is based on
    A) Propagation of modulated light waves
    B) Propagation of infrared radiation
    C) The visible light as carrier waves with frequency of the order $5*10^{14}$ Hz
    D) High frequency ratio waves

A

18. True bearing of a line is 10 degree and the magnetic declination is 2 degree W its magnetic bearing is
    A) 2 degree W   B) 2 degree
    C) 2 degree N   D) 2 degree S

19. Which of the following reference direction is used in a geodetic survey ?
    A) True   B) Magnetic
    C) Arbitrary   D) None of these

20. LCD in the control panel of a total station stands for
    A) Light Control Device   B) Liquid Crystal Display
    C) Light Centered Device   D) Lasting Calibrated Device

21. Laser plummet in total station is used for
    A) Centering   B) Leveling
    C) Orientation   D) Bisection on point sighted

22. A mosque is situated on the far side of a river and is inaccessible it can be located by
    A) Radiation   B) Traversing
    C) Intersection   D) Resection

23. For surveying of broken boundaries with a plane table most appropriate method will be
    A) Open traverse   B) Intersection
    C) Radiation   D) Resection

24. For mountainous region, a suitable contour interval may be
    A) 0.2 m   B) 2 m
    C) 20 m   D) 200 m

25. Removal of parallax may be achieved by
    A) Refocusing the objective
    B) Refocusing the eyepiece
    C) Refocusing the eyepiece and the objective
    D) Moving the shifting center

A

26. A polar array creates new objects

    A) In a horizontal pattern

    B) In parallel pattern

    C) In a circular pattern

    D) In inclined pattern

27. How many point do you need to define for rectangle command ?

    A) One   B) Two

    C) Three   D) Four

28. Which command creates a new object parallel to the object ?

    A) Trim   B) Cut

    C) Offset   D) Rotate

29. Which command converts discrete object in polyline ?

    A) Join   B) Cut

    C) Undo   D) Trim

30. Maximum length of a construction line

    A) No limit   B) 100 m

    C) 1000 m   D) 10000 m

31. Functional key F9 stands for

    A) Help   B) Object snap

    C) Dynamic UCS   D) Snap on/off

32. Extend is _____ type of command.

    A) Drawing command   B) Modify command

    C) Both A) and B)   D) None of these

33. Command which is used to erase part of an object between two points

    A) Break   B) Trim

    C) Mirror   D) Copy

A

34. Which of the following is an igneous rock ?

    A) Slate
    B) Kankar
    C) Gneiss
    D) Basalt

35. Which test is used to determine the rate of wear of stones ?

    A) Crushing test
    B) Attrition test
    C) Impact test
    D) Smith's test

36. In which process in the manufacturing of brick the clay is brought to a proper degree of hardness ?

    A) Weathering
    B) Blending
    C) Tempering
    D) Moulding

37. Which of the following bricks are used as aggregate for concrete in foundation, floors etc. ?

    A) First class
    B) Second class
    C) Third class
    D) Fourth class

38. The minimum compressive strength of lime mortar 1 : 3 with Class A lime at the end of 14 days is

    A) 1.75 N/mm^2
    B) 1.25 N/mm^2
    C) 2.8 N/mm^2
    D) 1.5 N/mm^2

39. Burning of cement is carried out in

    A) Hoffman's kiln
    B) Intermittent kiln
    C) Rotary kiln
    D) Clamp

40. Which of the following tiles are conical in shape ?

    A) Corrugated
    B) Guna
    C) Flemish
    D) Flat

41. The alternate dry and wet conditions causes the development of _____ in timber.

    A) Brown rot
    B) Dry rot
    C) Heart rot
    D) Wet rot

A

42. The size of pin knot is
    A) Upto 6.50 mm dia.
    B) Between 6.5 mm and 20 mm dia.
    C) Between 20 mm and 40 mm dia.
    D) Greater than 40 mm dia.

43. The weight of Rose wood after seasoning is
    A) 4500 N/m^3
    B) 6400 N/m^3
    C) 6500 N/m^3
    D) 7900 N/m^3

44. Recommended slump of concrete for normal RCC work is
    A) 40 – 50 mm
    B) 70 – 80 mm
    C) 80 – 150 mm
    D) 90 – 100 mm

45. The nominal mix correspond to M7.5 Grade concrete is
    A) 1 : 5 : 10
    B) 1 : 4 : 8
    C) 1 : 3 : 6
    D) 1 : 2 : 4

46. Permissible stress in compression for M20 grade concrete is
    A) 3 N/mm^2
    B) 5 N/mm^2
    C) 7 N/mm^2
    D) 9 N/mm^2

47. Maximum Safe Bearing Capacity of soft rock in tonne/m^2 is
    A) 45
    B) 55
    C) 65
    D) 75

48. Which of the following foundation is used when hard bearing stratum is at a greater depth ?
    A) Grillage
    B) Raft
    C) Column
    D) Pile

49. In which bond every header is centrally supported over a stretcher below it ?
    A) English bond
    B) Flemish bond
    C) Monk bond
    D) Dutch bond

A

50. A projecting stone which is usually provided to serve as support for joist, Truss etc.

   A) Corbel
   B) Cornice
   C) Coping
   D) Jamb

51. Which of the following flooring is suitable for Warehouses, Stores, Godowns etc. ?

   A) Marble
   B) Tile
   C) Brick
   D) Terrazzo

52. The span of a couple roof is limited to

   A) 2.5 m
   B) 3.6 m
   C) 4.2 m
   D) 4.8 m

53. Which of the following is the most common material used as vehicle in a paint ?

   A) Linseed oil
   B) Tung oil
   C) Poppy oil
   D) Nut oil

54. An intermediate floor in any storey over hanging and over looking a floor beneath is

   A) Balcony
   B) Porch
   C) Loft
   D) Mezzanine floor

55. The site plan shall be drawn to a scale not less than

   A) 1 : 100
   B) 1 : 200
   C) 1 : 300
   D) 1 : 400

56. The area of bathroom shall not be less than

   A) 1.5 m^2
   B) 1.75 m^2
   C) 2 m^2
   D) 2.25 m^2

57. Minimum width of ramp is

   A) 90 cm
   B) 100 cm
   C) 120 cm
   D) 150 cm

58. How many percentage of the estimated cost is provided for work charged establishment ?

   A) 1 – 1½%
   B) 1½ – 2%
   C) 2 – 2½%
   D) 2½ – 3%

A

59. Which of the following is not an approximate estimate ?

    A) Preliminary   B) Plinth area

    C) Cubical content   D) Detailed

60. The unit of measurement of Steel reinforcement in RCC in MKS system is

    A) Kg   B) Quintal

    C) Tonne   D) None of these

61. The multiplication factor of painting for both sides of a venetian door

    A) 2.00   B) 2.25

    C) 3.00   D) 3.50

62. Density of mild steel is equal to

    A) 75 kg/m^3 B) 750 kg/m^3

    C) 7500 kg/m^3 D) 75 Tonne/m^3

63. Which of the following is job overheads ?

    A) Establishment   B) Travelling expenses

    C) Telephone   D) Supervision

64. How much quantity of dry materials is required for cement sand mortar for 1 cu.m. of brick masonry ?

    A) 0.2 cu.m.   B) 0.30 cu.m.

    C) 0.35 cu.m.   D) 0.40 cu.m.

65. Which of the following is not included in floor area of a building ?

    A) Verandah   B) Kitchen

    C) Walls   D) Stair room

66. The value of a property at the end of utility period without being dismantled

    A) Scrap value   B) Salvage value

    C) Market value   D) Book value

A

67. Which term is used to indicate the decrease or loss in the value of a property due to use, life etc. ?
   A) Annuity
   B) Years purchase
   C) Capitalized value
   D) Depreciation

68. What is the clear access width to an individual occupancy of a single storeyed building from the street ?
   A) 1.20 m
   B) 1.30 m
   C) 1.40 m
   D) 1.50 m

69. Which of the following term means side or part of a side of a plot which abuts on a street ?
   A) Front yard
   B) Side yard
   C) Rear yard
   D) Frontage

70. How much percentage of plinth area is taken for calculating carpet area of an office building ?
   A) 40 – 50%
   B) 50 – 65%
   C) 60 – 70%
   D) 65 – 75%

71. What is the permissible covered area for a plot of area more than 1000 m^2 ?
   A) 33% of site area
   B) 40% of site area
   C) 50% of site area
   D) 60% of site area

72. A pier forming part of a wall partially projecting there is
   A) Column
   B) Pilaster
   C) Beam
   D) Stem

73. What is the minimum vertical distance between any accessible part of the building and the electric lines of low voltage ?
   A) 2.5 m
   B) 1.2 m
   C) 3.7 m
   D) 2 m

74. The first watering before sowing a crop is called
   A) Paleo
   B) Core watering
   C) Delta
   D) Duty

A   -11-

75. The amount of water which flows over the surface of earth after all the losses have taken place is called

    A) Rainfall
    B) Precipitation
    C) Run off
    D) Hydroscopic water

76. The relation between base period, delta and duty is given by

    A) $\Delta = 8.64$ B/D
    B) $\Delta = 8.46$ B/D
    C) $\Delta = 8.64$ D/B
    D) $\Delta = 8.46$ D/B

77. The dam which is constructed to store water during floods and releases it gradually at a safe rate when the flood recedes

    A) Diversion dam
    B) Storage dam
    C) Detention dam
    D) Overflow dam

78. The line on a rainfall map joining places having same average annual rainfall is

    A) Isohyets
    B) Isobar
    C) Hydrograph
    D) Isogonic

79. Which of the following is constructed when the HFL of drainage is higher than canal bed level ?

    A) Aqueduct
    B) Syphon aqueduct
    C) Super passage
    D) Syphon super passage

80. The canal which is aligned along a water shed and runs most of its length on a water shed is

    A) Contour canal
    B) Ridge canal
    C) Side slope canal
    D) Main canal

81. The river training work constructed on either bank of river upstream to protect the land and property during floods

    A) Guide bank
    B) Spur
    C) Marginal bank
    D) Head regulator

082/22

82. The structure constructed on a channel to lower down the water level and bed level of the channel is

A) Weir
B) Barrage
C) Notch
D) Canal fall

83. The sheet of liquid flowing over a notch is known as

A) Water cushion
B) Spillway
C) Nappe
D) Crest

84. The property of fluid which controls its rate of flow

A) Density
B) Viscosity
C) Friction
D) Capillarity

85. Unit of specific gravity is

A) kg/m^3
B) N/m^3
C) N/mm^3
D) No unit

86. Which of the following is an instrument used to measure fluid pressure ?

A) Manometer
B) Thermometer
C) Viscometer
D) Hydrometer

87. What is the unit of pressure in S.I. system ?

A) N/mm^2
B) Pascal
C) Kg/cm^2
D) Newton

88. The type of energy possessed by water in an elevated tank is

A) Potential energy
B) Kinetic energy
C) Mechanical energy
D) Dynamic energy

A

89. SI unit of force is

    A) Newton   B) Erg

    C) Dyne   D) Joule

90. A body of mass 10 Kg is moving with a velocity of 2 m/s, then kinetic energy is _____ Kgm/s.

    A) 6   B) 14

    C) 40   D) 20

91. If a car travels a distance of 30 m in 10 second, the speed of the car is

    A) 3 m/s^2 B) 3 m/s

    C) 300 m/s   D) 300 m/s^2

92. If the co-efficient of friction (μ) is 0.3 and normal reaction (R) is 10 N, then the frictional force (F) is

    A) 3 N   B) 30 N

    C) 10.3 N   D) 9.7 N

93. The stress developed, if a force of 250 N is applied on a rod of area of cross section 50 m^2 is _____ N/m^2.

    A) 75   B) 50

    C) 12500   D) 5

94. Mechanical Advantage (MA) of a simple machine is 3 and the load (W) is 9 Kg, then the effort (P) applied is

    A) 3 Kg   B) 9 Kg

    C) 12 Kg   D) 27 Kg

95. In a simple machine, the ratio of distance moved by the effort to the distance moved by the load is called

    A) Mechanical Advantage

    B) Velocity ratio

    C) Efficiency

    D) Load arm

96. The perimeter of an equilateral triangle is 36 cm, then length of its side is

   A) 6 cm   B) 12 cm

   C) 3 cm   D) 9 cm

97. The side of a cube is 7 cm, then its volume is

   A) 49 cm^3

   B) 49 cm^2

   C) 343 cm^2

   D) 343 cm^3

98. The value of acceleration due to gravity is

   A) 9.81 m/s^2

   B) 0.98 m/s^2

   C) 981 m/s^2

   D) 9.81 m/s

99. The perimeter of square of side 12 cm is

   A) 144 cm

   B) 144 cm^2

   C) 48 cm

   D) 48 cm^2

100. The area of a circle whose radius is 7 cm is

   A) 154 cm^2

   B) 44 cm^2

   C) 49 cm^2

   D) 14 cm^2

_____

A

Space for Rough Work