051/2022

Question Booklet Alpha Code	**A**	Question Booklet Serial Number

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 unnumbered, 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 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. Size of Bo-drawing board in mm is _____

   (A) 1500 × 1000 × 25   (B) 1000 × 700 × 25

   (C) 700 × 500 × 15   (D) 500 × 350 × 15

2. Trimmed size A4 drawing sheet in mm is _____

   (A) 841 × 1189   (B) 594 × 841

   (C) 420 × 594   (D) 210 × 297

3. In lettering the height to width ratio for the letter 'w' is

   (A) 6:4   (B) 6:5

   (C) 6:7   (D) 6:9

4. In _____ system of dimensioning all the figures and notes are lettered horizontally and are read from the bottom of the drawing.

   (A) Aligned   (B) Unidirectional

   (C) Both   (D) None of these

5. Which of the following is an enlarged scale?

   (A) 2:1   (B) 1:2

   (C) 1:1   (D) 1:100

6. A plane figure having 10 sides is known as _____

   (A) Octagon   (B) Hexagon

   (C) Double pentagon   (D) Decagon

7. Which type of line is applicable for dimension lines?

   (A) Continuous thick   (B) Continuous thin

   (C) Continuous thin wavy   (D) Long chain thick

8. In third angle projection plan is placed

   (A) Above front view   (B) Below front view

   (C) Left side   (D) Right side

A

9. In 1ˢᵗ angle projection right side view is placed

   (A) Above elevation   (B) Below elevation

   (C) Left side   (D) Right side

10. Hyperbola, Parabola and the ellipse are known as

    (A) Projections   (B) Plan

    (C) Plane figures   (D) Conic sections

11. The main principle of surveying is to work from

    (A) Triangulation   (B) South to North

    (C) Part to whole   (D) Whole to part

12. Length of one link in 30 mtr. chain

    (A) 10 cm   (B) 20 cm

    (C) 30 cm   (D) 60 cm

13. One hectare is _____ acres.

    (A) 100   (B) 40.47

    (C) 2.471   (D) 1.5

14. The size of field book is

    (A) 30 × 15 cm   (B) 20 × 15 cm

    (C) 20 × 12 cm   (D) 30 × 12 cm

15. At magnetic poles, dip of a magnetic needle is

    (A) 0° (B) 30°

    (C) 45° (D) 90°

16. The bearing of a line taken in the progress of the survey is _____

    (A) Dip   (B) Declination

    (C) Fore bearing   (D) Back bearing

A

17. If the WCB of a line is 270° its reduced bearing is

(A) N 90° W   (B) S 90° W

(C) N 90° E   (D) S 90° E

18. The size of a theodolite is fixed by measuring

(A) Diameter of graduated circle of horizontal plate

(B) Diameter of graduated circle of vertical plate

(C) Length of Telescope

(D) Length of Eye Piece

19. Accurate centering of a plane table is done by

(A) Alidade   (B) Plumbing fork

(C) Centering   (D) Levelling

20. The working edge of an alidade is known as _____

(A) Fiducial edge   (B) Working edge

(C) Back edge   (D) Front edge

21. Arithmatical check used while taking reduced level

(A) Σ B.S. — Σ F.S. = Last RL — Ist RL

(B) Σ F.S. — Σ B.S. = Last RL — Ist RL

(C) Σ B.S. — Σ F.S. = Ist RL — Last RL

(D) Σ F.S. — Σ B.S. = Ist RL — Last RL

22. Assumed level surface from which vertical measurements are measured is _____

(A) Benchmark   (B) Datum

(C) Level surface   (D) Reduced level

23. An imaginary line which joints the points of same elevations in the ground is called

(A) Tie line   (B) Contour

(C) Chain line   (D) Baseline

A

24. A fixed point of known elevation is called _____

   (A) Fixed point   (B) Change point

   (C) Benchmark   (D) Base point

25. An EDM is the major part of _____

   (A) Plane table   (B) Tacheometer

   (C) Theodolite   (D) Total station

26. Full form of CAD

   (A) Computer-aided drawing   (B) Computer and Design

   (C) Computer and Drawing   (D) Computer aided design

27. AutoCAD command for boundary

   (A) BA   (B) BO

   (C) BU   (D) BD

28. MO stands for which command in autoCAD?

   (A) Match   (B) Multiline

   (C) Multitext   (D) Properties

29. _____ Tool bar is icons in autoCAD to work with Copy, Mirror, array, offset, move etc.

   (A) Draw tool bar   (B) Main tool bar

   (C) Modern tool bar   (D) Modify tool bar

30. _____ generate text only and _____ would generate vector graphics

   (A) Printers, plotters   (B) Plotters, printers

   (C) Printers, printers   (D) Plotters, plotters

31. _____ provide one of several customizable ways to start commands and change settings

   (A) Tool bars   (B) Mouse

   (C) Menu bars   (D) Cursor

32. PL is a command for _____ in AutoCAD

(A) Plan   (B) Plot

(C) Polyline   (D) Print

33. The command for polygon is _____ in AutoCAD

(A) PL   (B) PO

(C) POL   (D) PG

34. Crystalline rocks formed due to slow cooling of magma.

(A) Basalt   (B) Granite

(C) Limestone   (D) Marble

35. A temporary structure in which bricks are burnt once at a time

(A) Clamp   (B) Kiln

(C) Cupola   (D) Blast furnace

36. The building bricks can resist temperature up to,

(A) 100°C   (B) 250°C

(C) 1220°C   (D) 500°C

37. The minimum thickness of machine made tiles is,

(A) 10 mm   (B) 1 mm

(C) 25 mm   (D) 2.5 mm

38. The process of burning limestone is called,

(A) Hydration   (B) Slaking

(C) Calcination   (D) Blending

39. The percentage of silica in cement ranges from

(A) 60% to 67%   (B) 18% to 25%

(C) 5% to 9%   (D) 30% to 35%

40. A type of cement containing small percentage of Gypsum

    (A) Portland pozzolana   (B) Low heat cement

    (C) White cement   (D) Quick setting cement

41. Cement used for emergency repair work and underwater constructions is

    (A) Low heat cement   (B) Portland pozzolana

    (C) High alumina cement   (D) Quick setting cement

42. The process of maintaining moisture and temperature of freshly placed concrete for proper hardening is called

    (A) Watering   (B) Curing

    (C) Tempering   (D) Binding

43. The separation of course aggregate from concrete mix is called,

    (A) Seggregation   (B) Honey combing

    (C) Bleeding   (D) Swelling

44. The height of slump for R.C.C. slab and beam in millimeter should be,

    (A) 20 to 30   (B) 50 to 100

    (C) 25 to 50   (D) 12 to 25

45. The inner part of a timber surrounding the pith, which is dark in colour, compact and strong,

    (A) Pith   (B) Sap

    (C) Heartwood   (D) Cambium

46. A natural defect caused by the rupture of tissues resulting in partial or complete separation of the fibres along the grain.

    (A) Shakes   (B) Foxiness

    (C) Rind galls   (D) Knots

47. A board formed by three or more layers of veneers is called

    (A) Timber   (B) Hard board

    (C) Plywood   (D) Lamination

48. A small groove cut underside of a structure to discharge the rain water without trickling down to the wall,

    (A) Corbel   (B) Throating

    (C) String course   (D) Cornice

49. A masonry similar to coursed or random rubble masonry except that no mortar is used to bond the stones together,

    (A) Random Rubble masonry

    (B) Dry Rubble masonry

    (C) Coursed Rubble masonry

    (D) Ashlar masonry

50. A brick part which is obtained by cutting a brick lengthwise

    (A) Queen closer

    (B) King closer

    (C) Header

    (D) Stretcher

51. A rafter shorter than the common rafter is known as

    (A) Hip Rafter

    (B) Jack Rafter

    (C) Common Rafter

    (D) Principal Rafter

52. A concrete floor finished with special type of aggregates of marble

    (A) Terrazo floor   (B) Concrete floor

    (C) Tiled floor   (D) R.C.C. Floor

53. The phenomenon appeared on plastered surface in whitish patches and produce ugly appearance

(A) Cracks
(B) Bleeding
(C) Efflorescence
(D) Painting

54. According to use and occupancy Type B building refers to,

(A) Educational building
(B) Residential building
(C) Assembly building
(D) Business building

55. The minimum side open space provided for building upto a height of 10 meters is

(A) 10 m
(B) 3 m
(C) 1.5 m
(D) 1.0 m

56. The ratio between total covered area of all floors to the plot area is

(A) F.S.I.
(B) F.A.R.
(C) R.F.
(D) F.I.R.

57. The minimum depth of foundation below ground level is

(A) 15 cm
(B) 45 cm
(C) 60 cm
(D) 30 cm

58. The minimum clear headroom for residential building is

(A) 1.00 m
(B) 2.20 m
(C) 1.90 m
(D) 1.50 m

59. The effect produced by deriving maximum benefit from the minimum dimensions of the room is,

(A) Aspect
(B) Prospect
(C) Privacy
(D) Roominess

60. Aspect desirable for kitchen is

(A) North
(B) South
(C) East
(D) West

61. In detailed estimate the contractor's profit should be taken as

(A) 10%
(B) 20%
(C) 5%
(D) 25%

62. Decrease or Loss in the value of a property due to structural deterioration

(A) Valuation (B) Depreciation

(C) Scrap value (D) Dismantling

63. Plan prepared for major project work like Road, Irrigation, sanitary works etc. is

(A) Site plan (B) Building plan

(C) Index plan (D) Service plan

64. Rate of various works prepared and maintained by engineering department in the form of printed books is,

(A) Schedule of rate book (B) Data book

(C) M-book (D) Bill of materials

65. An estimate prepared from practical knowledge, experience and from cost of similar work is

(A) Detailed estimate (B) Preliminary estimate

(C) Plinth area estimate (D) Cubical content estimate

66. Unit of measurement of plastering is

(A) M^3 (B) M^2

(C) M (D) Kg

67. 1440 Kg volume of cement equals to

(A) 10 bag cement (B) 35 bag cement

(C) 15 bag cement (D) 30 bag cement

68. The normal Lead and Lift of earthwork is

(A) 30 m and 1.5 m respectively

(B) 30 m and 2.0 m respectively

(C) 50 m and 1.5 m respectively

(D) 50 m and 2.0 m respectively

69. The capacity of doing work by a labour per day in the form of quantity is

(A) Work done (B) Task work

(C) Employment (D) Job

70. The value of a property at the end of its useful life without dismantling

(A) Market value

(B) Salvage value

(C) Book value

(D) Sale amount

71. The volume of dry material required for one cubic meter of wet concrete is

(A) 1.54 m^3

(B) 2.0 m^3

(C) 1.0 m^3

(D) 3.0 m^3

72. The multiplying constant for painting doors and windows fully panelled for both side is

(A) 1.0

(B) 2.0

(C) 2.25

(D) 3.0

73. No deduction is made for brickwork for opening up to

(A) 1.0 sq.m

(B) 0.10 sq.m

(C) 10 sq.m

(D) 100 sq.m

74. The total depth of water required by a crop during the entire crop period is

(A) Duty

(B) Delta

(C) Base period

(D) Depth

75. Fall of moisture from the atmosphere to earth

(A) Precipitation

(B) Run off

(C) Evaporation

(D) Transpiration

76. A barrier constructed across the river to raise the water level is

(A) Shutter

(B) Bridges

(C) Weir

(D) Dam

77. The opening provided in the body of a weir to remove silt is

(A) Divide wall

(B) Fish Ladder

(C) Gate

(D) Scouring sluices

78. The margin provided to prevent overtopping of dam during flood, between the F.R.L. and the top of dam is

(A) Margin level

(B) Maximum water level

(C) Free board

(D) Spill way

79. A cross drainage work where the drain pass over the canal without lowering the bed level of the canal

    (A) Aqueduct   (B) Super passage

    (C) Level crossing   (D) Syphon

80. Excessive moisture present in the soil, causing the soil non-productive and anaerobic condition is

    (A) Porosity   (B) Capillarity

    (C) Waterlogging   (D) Flood

81. A canal which is active throughout the year is

    (A) Main canal   (B) Permanent canal

    (C) Ridge canal   (D) Inundation canal

82. An hydraulic structure disposes surplus water from the reservoir is

    (A) Canal   (B) Under sluices

    (C) Spill way   (D) Head regulator

83. Structures constructed transverse to the river flow and extended from bank into the river

    (A) Meandering   (B) Spurs

    (C) Marginal bund   (D) Wing wall

84. Simplest form of instrument used for measuring high as well as negative pressure

    (A) Piezometer   (B) Simple manometer

    (C) Thermometer   (D) Barometer

85. The property of water which enables it to resist tensile stress

    (A) Viscosity   (B) Capillarity

    (C) Surface tension   (D) Pressure head

86. The energy possessed by a liquid particle by virtue of its position

    (A) Pressure energy   (B) Potential energy

    (C) Kinetic energy   (D) Total energy

87. A flow of liquid in which each liquid particle does not have a definite path and the path of individual particle also cross each other

    (A) Non-uniform flow   (B) Streamline flow

    (C) Turbulant flow   (D) Uniform flow

A

88. An apparatus for finding out the discharge of a liquid flowing in a pipe

    (A) Manometer   (B) Piezometer

    (C) Venturimeter   (D) Pitot tube

89. One metric Horse Power is equal to _____ Watts.

    (A) 745.5   (B) 735.5

    (C) 0.7455   (D) 0.7355

90. Maximum size (Area) of the circle that can be cut from a square sheet of size 100 mm is

    (A) 7850   (B) 31400

    (C) 10000   (D) 3140

91. A lead pellet of mass 5g leaves an air gun with a velocity of 60 m/s. What is the magnitude of Potential Energy stored by the spring of air gun?

    (A) 9000 J   (B) 2943 J

    (C) 300 J   (D) 9 J

92. The ratio between change in cross-sectional area of a material to its original cross-sectional area is

    (A) Volumetric strain   (B) Linear strain

    (C) Lateral strain   (D) Shear strain

93. Circumference of a circle is 314 cm, then its area is ....

    (A) 2500π cm^2 (B) 3140π cm^2

    (C) 184π cm^2 (D) 2412π cm^2

94. A load of 12000 N acts on a hollow pipe of external diameter 20 mm and internal diameter 16 mm. Then the compressive stress is ____ N/mm^2.

    (A) 38.21   (B) 59.71

    (C) 106.16   (D) 600

95. Which one is a vector quantity?

    (A) Mass   (B) Velocity

    (C) Area   (D) Volume

96. 75 m^3 is equivalent to ..... cm^3.

    (A) 75   (B) 7500

    (C) 750000   (D) 75000000

97. How many litres of water a cylindrical vessel of radius 50 cm and height 100 cm can hold?

    (A) 785000   (B) 7850

    (C) 785   (D) 78500

98. Mechanical Advantage is the ratio of _____

    (A) Effort to load   (B) Load to effort

    (C) Force to Area   (D) Area to force

99. In a cantilever beam the Bending Moment at the free end is

    (A) 0   (B) L

    (C) L/2   (D) WL/2

100. A force of 50 kg is required to pull a weight of 500 kg on a horizontal plane. The co-efficient of friction is

    (A) 10   (B) 4

    (C) 0.1   (D) 1.0

_____

SPACE FOR ROUGH WORK