074/21

Question Booklet Alpha Code

A

Question Booklet Sl. No.

Question Booklet Sl. No.

Total Number of Questions : 100   **Time : 75 Minutes**

Maximum Marks : 100

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. Which method of soil exploration is suitable for a depth of 3 m ?
   A) Open excavation
   B) Probing
   C) Wash boring
   D) Auger boring

2. What is the name of foundation, if the foundation's depth is less than or equal to its width ?
   A) Deep foundation
   B) Will foundation
   C) Pier foundation
   D) Shallow foundation

3. What is a temporary structure, to remove water and soil from an area and make it possible to carry out the construction work under reasonably dry condition ?
   A) Cofferdam
   B) Caisson
   C) Pier foundation
   D) Strip/Pad foundation

4. Which scaffold is suitable, if proper hard ground is not available for standards to rest ?
   A) Cantilever scaffold
   B) Independent scaffold
   C) Bricklayers' scaffold
   D) Suspended scaffold

5. Which plaster material is used for making the room sound proof ?
   A) Barium
   B) Asbestos cement
   C) Acoustic
   D) Granite silicon

6. What is the defect in painting seen as glossy patches ?
   A) Blistering
   B) Flashing
   C) Sagging
   D) Fading

7. Which masonry has regular stones of square or rectangular shape with accurate bed joints ?
   A) Coursed rubble masonry
   B) Uncoursed rubble masonry
   C) Ashlar fine masonry
   D) Random rubble masonry

8. Which bond consists of alternate courses of headers and stretchers ?
   A) Monk bond
   B) Racking bond
   C) English bond
   D) Facing bond

A

9. Which type of foundation is recommended for black cotton soil ?
   A) Combined footing
   B) Under-reamed pile foundation
   C) Spread footing
   D) Well foundation

10. Which pile is used to protect water front structures against impact from ship/floating object ?
    A) Batter pile
    B) Anchor pile
    C) Tension pile
    D) Fender pile

11. What is the percentage gypsum added in manufacture of cement ?
    A) 5 – 10 %
    B) 2 – 3 %
    C) 3 – 4 %
    D) 1 – 2 %

12. What is the classification of marble ?
    A) Metamorphic rock
    B) Foliated rock
    C) Sedimentary rock
    D) Igneous rock

13. The presence of moisture in sand increases the volume of sand is called _____ of sand.
    A) Grading
    B) Freezing
    C) Baulking
    D) Porosity

14. The timber which is fully or partly covered with resin is known as the
    A) Imperg timber
    B) Fibre boards
    C) Glulam
    D) Hard boards

15. _____ defect is indicated by white decayed spots which are concealed by healty wood.
    A) Druxiness
    B) Foxiness
    C) Knots
    D) Dead wood

16. What is the process in manufacturing of bricks if the clay is made loose and any ingredient to be added to it ?
    A) Weathering
    B) Cleaning
    C) Tempering
    D) Blending

A

17. The term _____ is used to indicate fine earthenware which is white, thin and semi-transparent.

    A) Stoneware
    B) Teracotta
    C) Porcelain
    D) Earthenware

18. The _____ mixing gives green colour to ordinary cement.

    A) Cobalt
    B) Chromium oxide
    C) Iron oxide
    D) Manganese dioxide

19. In the following which type of cement used in marine constructions ?

    A) Rapid hardening cement
    B) Pozzolana cement
    C) High alumina cement
    D) Sulphate resisting cement

20. _____ is the chemical most commonly used in accelerating admixtures, especially for nonreinforced concrete.

    A) Calcium chloride
    B) Lignin
    C) Sugars
    D) Polycarboxylates

21. What is the ratio between the area of crop irrigated and the quantity of water required during entire period of growth ?

    A) Delta
    B) Duty
    C) Base period
    D) Crop period

22. The process of loosing water from the leaves of plants is termed as

    A) Surface evaporation
    B) Water surface evaporation
    C) Transpiration
    D) Precipitation

23. A diversion head works is constructed to

    A) Raise water level at the head of the canal
    B) Regulate the intake of water into the canal
    C) Reduce fluctuations in the supply level of the river
    D) All of the above

A

24. A Manometer is used to measure
    A) Atmospheric pressure
    B) Pressure in pipe and channels
    C) Pressure in venturimeter
    D) Difference of pressure between two points in a pipe

25. In a _____, the canal is taken below the drainage and flow in the canal is open channel flow.
    A) Aqueduct
    B) Super passage
    C) Level crossing
    D) Inlet and outlet

26. The function of a _____ is similar to that of weir, but the heading up of water is effected by the gates alone. No solid obstruction is put across the river.
    A) Barrage
    B) Regulator
    C) Gravity dam
    D) Cafferdam

27. What is the first watering before sowing the crop ?
    A) Kor watering
    B) Paleo
    C) Delta
    D) Duty

28. Which is the graphical representation of average rainfall between rainfall excess ?
    A) Hyetograph
    B) Hydrograph
    C) Rain gauge
    D) Unit hydrograph

29. Which is called safety valve of a dam ?
    A) Drainage gallery
    B) Inspection gallery
    C) Spill way
    D) Outlet sluices

30. What is the time between first watering of a crop on sowing to its last watering before harvesting ?
    A) Base period
    B) Rabi season
    C) Kor period
    D) Crop period

31. What is the unit for measuring rainfall ?
    A) Milimeter
    B) Centimeter
    C) Feet
    D) No unit

A

32. Which element of hydroelectric power plant reduce the water hammer pressure formed in the penstock ?
   A) Valves
   B) Surge tank
   C) Turbines
   D) Draft tubes

33. Which is provided in the diversion head work to scour away silt deposited ?
   A) Fish ladder
   B) Groynes
   C) Barrage
   D) Under sluices

34. Which canal is constructed to feed two or more canal ?
   A) Carrier
   B) Feeder
   C) Navigation
   D) Irrigation

35. The property of a liquid which offers resistance to the movement of one layer over another adjacent layer of liquid is called
   A) Surface tension
   B) Compressibility
   C) Capillarity
   D) Viscosity

36. _____ refers to a structure and using process that is environmentally responsible and resource-efficient throughout a building's life-cycle.
   A) Economical building
   B) Green building
   C) Attached building
   D) Detached building

37. _____ area means usable floor area excluding staircase, lift, walls.
   A) Plinth area
   B) Builtup area
   C) Carpet area
   D) Living area

38. A building whose roofs and walls are independent of any other building with open spaces on all sides as specified
   A) Economical building
   B) Green building
   C) Attached building
   D) Detached building

39. A level intermediate floor in any storey over hanging and overlooking a floor beneath
   A) Mezzanine floor
   B) Basement floor
   C) Attached floor
   D) Ground floor

40. As per NBC the site plan shall be drawn to a scale of not less than _____ provided that when circumstances area such as to make a smaller scale necessary or sufficient.
    A) 1 : 500
    B) 1 : 100
    C) 1 : 400
    D) 1 : 800

41. The distance between any accessible part of the building and the electric supply mains should be between _____ horizontally.
    A) 1.2m to 2.0m
    B) 1.5m to 2.0m
    C) 1.0m to 1.5m
    D) 2.0m to 3.0m

42. The area of a bathroom shall not be less than
    A) 2.0 sq.m.
    B) 2.5 sq.m.
    C) 1.5 sq.m.
    D) 1.0 sq.m.

43. _____ estimate is an approximate and is prepared on the basis of cubical content of the building.
    A) Plinth area
    B) Detailed
    C) Abstract
    D) Cubic rate

44. The method of determining the rate of an item considering the cost of materials, cost of labours, hire of tools and plants, supervision charges or overhead charges, contractor's profit etc. is known as
    A) Estimating
    B) Rate analysis
    C) Planning
    D) Designing

45. _____ is the value at the end of utility period without being dismantled.
    A) Scrap value
    B) Salvage value
    C) Book value
    D) Rateable value

46. _____ is the annual periodic payment for repayment of the capital amount invested by a party.
    A) Annuity
    B) Valuation
    C) Years purchase
    D) Capitalized value

A

47. The arrangement of doors and windows in external walls of a buildings which the occupants to receive and enjoy nature's gifts as sunshine, breeze and the beauty of landscape and at the same time protecting the inmates from the effects
    A) Prospect
    B) Roominess
    C) Aspect
    D) Sanitation

48. Placing of different units of building with respect to the sun prevailing wind direction, rain and topography of the locality is called
    A) Ventilation
    B) Roominess
    C) Sanitation
    D) Orientation

49. What is the name of horizontally sliced building viewed from top ?
    A) Section
    B) Elevation
    C) Plan
    D) Sectional elevation

50. What is the full form of FSI ?
    A) Floor Site Index
    B) Floor Space Index
    C) Floor Staircase Index
    D) Floor Storey Index

51. _____ shall be drawn to the same scale as the building plan shall include plans and sections of private water supply and sewage disposal systems.
    A) Service plan
    B) Key plan
    C) Location plan
    D) Site plan

52. _____ means a prescribed building line drawn with reference to the centre line of a street and laid down in each case by the authority on the street side of which nothing can be erected or re-erected.
    A) Street line
    B) Road line
    C) Boundary line
    D) Set back line

53. The clear vertical distance measured from the finished floor surface to the finished ceiling surface
    A) Head room
    B) Height of the room
    C) Clearance
    D) All of the above

A

54. Which type of building comes in group H ?
    A) Hazardous
    B) Industrial
    C) Storage
    D) Business

55. What is the measuring unit for cornice ?
    A) Meter
    B) Centimeter
    C) Sq. meter
    D) Cu.meter

56. Measurements from the scale to the drawing are transferred with the aid of a
    A) Pencil
    B) Divider
    C) Compass
    D) None of them

57. The T-square is used for drawing _____ lines.
    A) Vertical
    B) Curve
    C) Horizontal
    D) Inclined

58. 9 km is represented by 1.8 cm, what is the scale ?
    A) 1 : 500000
    B) 1 : 5
    C) 1 : 2000
    D) 1 : 20000

59. The size of the letter is described by its
    A) Width
    B) Height
    C) Shape
    D) None of them

60. The line connecting a view to a note is called a
    A) Guide line
    B) Outline
    C) Leader line
    D) Centre line

61. The curve generated by a point on the circumference of a circle rolling along a straight line is called a
    A) Hyperbola
    B) Cycloid
    C) Parabola
    D) Epicycloid

62. When a pyramid or a cone is cut by a plane parallel to its base, thus removing the top portion, the remaining portion is called its
    A) Cone
    B) Sphere
    C) Frustum
    D) None of them

A

63. _____ is used to transfer the true or relative dimension of an object to the drawing.
    A) Divider
    B) Scale
    C) Pencil
    D) None of them

64. The projection on the vertical plane is called
    A) Front view
    B) Top view
    C) Plane of projection
    D) None of them

65. The areas of the two subsequent sizes of drawing papers are in the ratio
    A) $1 : \sqrt{2}$
    B) $1 : 2$
    C) $2 : 1$
    D) $\sqrt{2} : 1$

66. The curvature of the earth is taken into account when the extend of area is more than
    A) 50 km^2
    B) 100 km^2
    C) 250 km^2
    D) 300 km^2

67. The magnetic bearing of the line is 55°30′ and the magnetic declination is 4°10′ east. The true bearing of the line will be
    A) 59°40′
    B) 34°30′
    C) 51°
    D) 49°

68. For locating distant and inaccessible points, the method used in plane table surveying is
    A) Radiation
    B) Traversing
    C) Intersection
    D) Resection

69. A line made up of points having zero declination are known as
    A) Zero lines
    B) Agonic lines
    C) Isogonic lines
    D) None of them

70. Turning the telescope about its vertical axis in the horizontal plane is called
    A) Transiting
    B) Reversing
    C) Swinging
    D) Plunging

71. A series of closed contour lines on the map represent a _____ if the higher values are inside.
    A) Pond
    B) Uniform slope
    C) Hill
    D) Flat ground

72. The projection of a traverse on a line perpendicular to the meridian is known as
    A) Latitude of the line
    B) Departure of the line
    C) Bearing of the line
    D) Co-ordinate of the line

73. The backsight reading on a bench-mark of reduced level 100.00 is 1.745. If foresight reading on the point is 0.820, the reduced level of the point is
    A) 101.320
    B) 98.285
    C) 100.925
    D) 104.680

74. The _____ determines the size of the theodolite.
    A) Diameter of the lower plate
    B) Radius of lower plate
    C) Vertical circle
    D) Upper plate

75. The object of surveying is to prepare
    A) Drawing
    B) Plan
    C) Cross section
    D) Elevation

76. The method of surveying in which field work and plotting work are done simultaneously is called
    A) Compass surveying
    B) Plane tabling
    C) Levelling
    D) Chain surveying

77. GPS stands for
    A) Global Positioning System
    B) Geographical Positioning System
    C) General Positioning System
    D) None of these

78. EDM in a total station measures directly
    A) Vertical angle
    B) Horizontal angle
    C) Slope distance
    D) Horizontal distance

79. In levelling, the correction for refraction (in metres) is equal to
    A) $0.0785 \, D^2$ B) $0.0673 \, D^2$
    C) $0.0112 \, D^2$ D) $0.00785 \, D^2$

80. When the angular and linear measurements are equally precise in traversing, the balancing of the traverse is done by
    A) Transit rule   B) Empirical rule
    C) Bowditch's rule   D) Any one of them

81. Short key used to draw a circle is
    A) D   B) C
    C) O   D) L

82. Full form of CPU
    A) Central Performance Unit   B) Chief Performance Unit
    C) Central Processing Unit   D) Chief Processing Unit

83. The command that a computer used to draw parallel lines to the existing one is
    A) Trim   B) Offset
    C) Line   D) Extend

84. A pattern of dots that appears on a screen but that does not print is called
    A) Grid   B) Snap
    C) Limit   D) Ortho

85. The Auto CAD command used for drawing line is
    A) L   B) CL
    C) PL   D) XL

86. The Auto CAD command used for drawing construction line is
    A) L   B) XL
    C) REC   D) CL

87. _____ command is used to erase the unwanted lines.
    A) Trim   B) Move
    C) Copy   D) Stretch

A

88. _____ commands breaks a poly line into its individual segments.

    A) Extend   B) Explode

    C) Break   D) Rotate

89. $-40°C =$ _____ °F.

    A) -40 B) 40

    C) 35   D) -35

90. The length of a metal rod is 86 cm. It is bent into the form of a rectangle so that its length is 7 cm greater than its breadth. The length of the rectangle is

    A) 24   B) 26

    C) 25   D) 21.5

91. A water tank in the shape of square prism has a capacity to hold 36000 lit. of water. What will be the sides of the tank if its height is 4 meter ?

    A) 9   B) 6

    C) 4.5   D) 3

92. Total surface area of a cube of side 'a' is

    A) a^2 B) a^3

    C) $6a^2$ D) $4a$

93. A spherical ball of iron has been melted and recast into smaller balls of half the radius of the original ball. How many such balls can be made if there is no wastage of material ?

    A) 2   B) 8

    C) 4   D) 6

94. A rectangular sheet has a length of 10 cm and breadth 8 cm. Four quadrants of circle each of radius 3 cm are cut away from the corners. What is the area of the remaining portion ?

    A) 69.3 cm^2 B) 55.5 cm^2

    C) 60 cm^2 D) 51.74 cm^2

A

95. In the case of a simple machine, the ratio of load to be lifted to the effort applied is known as
    A) Mechanical advantage
    B) Velocity ratio
    C) Efficiency
    D) Output

96. A mass of 10 kg is placed at a height of 30 m from the ground. The potential energy of the body will be
    A) 2600J
    B) 2500J
    C) 2940J
    D) 300J

97. A metal piece with a weight of 60 kg is resting on an even surface. If a force of 18 kg is able to just produce the motion, find the co-efficient of friction.
    A) 3.33
    B) 0.3
    C) 1080
    D) 1

98. The ratio of lateral strain to the linear strain within the elastic limit is known as
    A) Poisson's ratio
    B) Factor of safety
    C) Bulk modulus
    D) Young's modulus

99. A train having a length of 150 m is moving with a velocity of 10 m/sec. How much time it will take to cross a bridge of length 100 m ?
    A) 15 sec.
    B) 10 sec.
    C) 25 sec.
    D) 20 sec.

100. One joule = _____ Ergs.
    A) 10^5
    B) 10^6
    C) 10^8
    D) 10^7

———————————

A

Space for Rough Work