

Total Number of Questions : 100
Time : 90 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.

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1. Gross income - outgoings =
A) Net income
B) Net return
C) Both A) and B)
D) None of these
2. A semi Corrugated or Tafford sheet has a standard width of
A) 0.9 m
B) 1 m
C) 1.05 m
D) 1.10 m
3. Painting coefficient for partly panelled and partly glazed or gauged doors and windows
A) $21 / 4$ times one surface area for both sides
B) 1 time one surface area for both sides
C) 3 times one surface area for both sides
D) 2 times one surface area for both sides
4. In measuring formwork, no deduction is made for opening upto (IS 1200 - Part 5 1982)
A) $1 \mathrm{sq} . \mathrm{m}$
B) $0.5 \mathrm{sq} . \mathrm{m}$
C) $0.4 \mathrm{sq} . \mathrm{m}$
D) $0.7 \mathrm{sq} . \mathrm{m}$
5. $\qquad$ estimate is required to decide the financial position and policy for administrative sanction by the competent administrative authority.
A) Detailed estimate
B) Revised estimate
C) Approximate estimate
D) All of the above
6. Quantity of cement required for one unit of RCC $1: 1.5: 3$
A) 3.3 kg
B) 3.8 kg
C) 4.32 kg
D) 4.83 kg
7. The multiplying factor which when multiplied by the net income gives capitalized value of the property of the present time
A) Year's purchase
B) Sinking fund
C) Capital cost
D) Rate of interest

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8. Density of mild steel
A) 0.785 gram/cum
B) 7850 sq.cum
C) $78.5 \mathrm{~kg} . \mathrm{cum}$
D) All of these
9. Earth work for open-well excavation of diameter 6 m , the rate increased for the first 1.5 m depth after the initial depth of 1.5 m is
A) $10 \%$
B) $15 \%$
C) $20 \%$
D) $25 \%$
10. Pick up the right statement regarding deduction in plastering.
A) No deduction made on area of opening exceeding $3 \mathrm{~m}^{2}$
B) Deductions are made on area of openings of $0.5 \mathrm{~m}^{2}$
C) Deductions made on one side for area of opening $0.5 \mathrm{~m}^{2}$ to $3 \mathrm{~m}^{2}$
D) Deductions on both sides are made for area of opening of $0.5 \mathrm{~m}^{2}$
11. If the payments of annuity continue for a indefinite period it is known as
A) Annuity due
B) Deffered annuity
C) Perpetual annuity
D) Annuity certain
12. For the supply of stiff paint, unit of measurement in MKS system is
A) Litre
B) Per bottle
C) Kg
D) None of these
13. In a map, if 20 miles is represented as 5 cm . Find the length of kilometre scale if maximum length to be measured is 5 km .
A) 4 cm
B) 64.36 cm
C) 6.436 cm
D) 0.7768 cm
14. A line of length $X$ cm lied on HP turned $60^{\circ}$ with respect to HP keeping one of its ends fixed and attained inclined length of $Y$ cm from top view. True statement is
A) $X=Y$
B) $X=2 \times Y$
C) $X=X Y$
D) $X>Y$
15. The ratio of long to short dashes in a chain line ranges from
A) $3: 1$ to $2: 1$
B) $6: 1$ to $4: 1$
C) $8: 1$ to $10: 1$
D) $5: 1$ to $7: 1$
16. Folding method of drawing sheet as per method 1 is
A) $297 \times 210$
B) $297 \times 190$
C) $185 \times 65$
D) $240 \times 330$
17. The asymptotes of any hyperbola intersects at
A) On the directrix
B) On the axis
C) At focus
D) Centre
18. Which of the following grades of leads is the hardest?
A) 4 B
B) F
C) HB
D) 6 B
19. For an ellipse, the sum of the distances to a point on the curve from the foci is
A) Not a constant
B) Constant and is equal to the length of the major axis
C) Constant and is equal to the length of the minor axis
D) None of these
20. In lettering A the height of capital letters is divided into
A) 10 equal parts
B) 8 equal parts
C) 14 equal parts
D) 12 equal parts
21. Impact test is used to find the
A) The hardness of a stone
B) The toughness of a stone
C) Compressive strength of stone
D) Rate of wear of stones
22. Which of the following constituents imparts the uniform shape to the bricks ?
A) Lime
B) Oxide of iron
C) Silica
D) Alumina
23. The commonly used lime in white washing
A) Fat lime
B) Hydraulic lime
C) Lean lime
D) Quick lime
24. How many operations are involved in the manufacture of fat lime?
A) 1
B) 2
C) 3
D) 4
25. The defect which is denoted by the presence of original rounded surface on a manufactured piece of timber is known as
A) Chip mark
B) Torn grain
C) Wane
D) Diagonal grain
26. Aldural is also known as
A) Aluminium bronze
B) Alclad
C) Delta metal
D) Autoclave
27. The name of burning zone of blast furnace
A) Hearth
B) Throat
C) Bosh
D) Tuyeres
28. Which type of water reducing admixtures usually retard the setting time of concrete by one to three hours?
A) Type A
B) Type B
C) Type C
D) Type D
29. Recommended Slump of normal RCC work
A) 20 to 40 mm
B) 80 to 150 mm
C) 40 to 50 mm
D) 90 to 100 mm
30. The first burning of polished terracotta is known as
A) Biscuiting
B) Faience
C) Zircon porcelain
D) Static porcelain
31. The bulk density of heavy mortar is more than
A) $50 \mathrm{KN} / \mathrm{mm}^{3}$
B) $15 \mathrm{KN} / \mathrm{mm}^{3}$
C) $500 \mathrm{KN} / \mathrm{mm}^{3}$
D) $115 \mathrm{KN} / \mathrm{mm}^{3}$
32. The workability of concrete is determined by
A) Voids test
B) Slump test
C) Arbitrary test
D) Compressive strength test
33. Which type of paint is widely used for showrooms, auditoriums etc. ?
A) Plastic paint
B) Oil paint
C) Luminous paint
D) Inodorous paint
34. In coursed rubble masonry II sort the thickness of the mortar joints is
A) 12 mm
B) 10 mm
C) 14 mm
D) 16 mm
35. The termination of a wall in a stepped fashion is known as
A) Squint quion
B) Bullnose
C) Toothing
D) Racking back
36. The maximum safe bearing capacity value for soft rocks is
A) $150 \mathrm{KN} / \mathrm{m}^{2}$
B) $50 \mathrm{KN} / \mathrm{m}^{2}$
C) $450 \mathrm{KN} / \mathrm{m}^{2}$
D) $250 \mathrm{KN} / \mathrm{m}^{2}$
37. Example of four centred arch is
A) Drop arch
B) Segmental arch
C) Tudor arch
D) Bull's eye arch
38. The usual concrete mix for RCC lintel is
A) $1: 2: 4$
B) $1: 3: 4$
C) $1: 3: 5$
D) $1: 4: 6$
39. The angle of inclination of the stair with the floor is known as
A) Run
B) Scotia
C) Pitch
D) Nosing
40. Which of the following is the vertical member carrying the axial load?
A) Cantilever beam
B) Slab
C) Column
D) One way slab
41. The window project outside the external walls of a room is known as
A) Dormer window
B) Corner window
C) Bay window
D) Clerestorey window
42. Name of a two storey truss
A) Truncated truss
B) Bel-fast truss
C) Mansard truss
D) Steel truss
43. The size of rivet is expressed by
A) Diameter of shank
B) Diameter of head
C) Shape of head
D) Length of shank
44. The minimum clear cover required for column is
A) 25 mm
B) 15 mm
C) 40 mm
D) 50 mm
45. Weight/m of 6 mm diameter round bar is
A) $0.22 \mathrm{~kg} / \mathrm{m}$
B) $0.62 \mathrm{~kg} / \mathrm{m}$
C) $2.45 \mathrm{~kg} / \mathrm{m}$
D) $0.39 \mathrm{~kg} / \mathrm{m}$
46. Suitable span for a double joint timber floor is
A) 3.60 m to 7.50 m
B) 8 m to 12 m
C) 12 m to 14 m
D) 14 m to 16 m
47. Number of Mangalore tiles required for covering one square meter of roof area is
A) 50
B) 15
C) 40
D) 25
48. Which pile is to be preferred for foundation in black cotton soil ?
A) Franke pile
B) Under reamed pile
C) Fender pile
D) Friction pile
49. A flexible damp proofing material which is easy to lay and available in rolls
A) Bricks
B) Stones
C) Hot bitumen
D) Bituminous felt
50. The inclined member of a stair which supports the ends of steps is known as
A) Tread
B) Winder
C) String
D) Walking line
51. How much yield stress does a twisted bar have more than an ordinary mild steel bar ?
A) $50 \%$
B) $10 \%$
C) $20 \%$
D) $30 \%$
52. In a cantilever beam the main reinforcement should be provided in
A) Top at free end of beam
B) Middle at free end of beam
C) Top at fixed end of beam
D) Bottom at free end of beam
53. Type of survey used to determine different strata of earth's crust is
A) Geological survey
B) Mine survey
C) Topographical survey
D) Geodetic surveying
54. In prismatic compass, when the needle points north, the reading under the prism should be
A) $180^{\circ}$
B) $90^{\circ}$
C) $0^{\circ}$
D) $270^{\circ}$
55. The point on which both the fore sight and back sight readings are taken from the previous and new positions of instrument is
A) Bench Mark
B) Datum
C) True Meridian
D) Change point
56. The bearing of line $A B$ expressed in the direction $A$ to $B$, then the bearing is
A) Fore bearing of $A B$
B) Back bearing of $A B$
C) Fore bearing of $B A$
D) Reduced bearing
57. Orientation by back sighting is done by using
A) Trough compass
B) Alidade
C) Spirit level
D) Prismatic compass
58. The process of placing the contour lines proportionally between the plotted ground points is known as
A) Interpolation
B) Estimation
C) Reconnaissance
D) Relief
59. An imaginary line joining the intersection of the cross hairs with optical centre of the object glass and its continuation, is called
A) Vertical axis
B) Axis of level tube
C) Axis of telescope
D) Line of collimation
60. When the vertical circle on the left of the telescope and the target on telescope is up, then it is called
A) Telescope normal
B) Least count
C) Resection
D) Traversing
61. A circular curve which is comprised of a series of two or more simple curves of different radii which turn in the same direction is called
A) Simple curve
B) Reverse curve
C) Summit curve
D) Compound curve
62. An electronic optical instrument widely used in modern surveying is
A) Digital theodolite
B) Auto level
C) Plane table
D) Total station
63. Where is data stored in Total Station ?
A) Pen drive
B) Data card
C) Micro processor
D) External hardware
64. Which equipment is used to reflect rays back precisely in the same direction ?
A) Micro processor
B) Prism
C) Tilting level
D) Theodolite
65. What is meant by GPS ?
A) Global Processing System
B) Geographic Positional System
C) Global Positioning System
D) Geodetic Positional System
66. How many GPS satellites are available in space segment?
A) 33
B) 21
C) 48
D) 28
67. In autocad effective diameter of the cursor on the screen is called
A) Aperture
B) Coordinate
C) Origin
D) Spline
68. What is the full form of GUI ?
A) Graphical User Installation
B) Global User Installation
C) Graphical User Interface
D) Geometrical User Information
69. The command used in autocad to erase a part of an object between two points is called
A) Chamfer
B) Break
C) Extend
D) Mirror
70. What is the use of function key F8 in autocad?
A) Osnap
B) Ortho
C) Print
D) Save as
71. What is the use of shortcut key ' $M$ ' ?
A) Multi text
B) Modify text
C) Move
D) Offset
72. In autocad the method for indicating point locations using existing drawing objects as references is called
A) Object snap
B) Aperture
C) Array
D) Offset
73. In autocad the origin of drawing is
A) 1,1
B) 1,0
C) 0,0
D) 0,1
74. Which command is used to copy the properties from one object to one or more objects?
A) Match properties
B) Copy
C) Property palette
D) Grid
75. What denotes letter K in MKS system ?
A) Kilogram
B) Kilometer
C) Kelvin
D) Millimetre
76. What is the ratio of power output to power input?
A) Work
B) Efficiency
C) Acceleration
D) Energy
77. What is the name of fixed or supporting point of a lever?
A) Mechanical advantage
B) Effort
C) Load
D) Fulcrum
78. When $\theta$ increases, sine value
A) Increases
B) Decreases
C) Constant
D) 0
79. Curved area of cylinder is
A) $4 / 3 \pi r^{3}$
B) $2 \pi r$
C) $2 \pi \mathrm{rh}$
D) $2 \mathrm{~h}(l+\mathrm{b})$
80. How many millimetres are there in 1 inch ?
A) 2.54 mm
B) 25.4 mm
C) 24.5 mm
D) 2.45 mm
81. The irrigation capacity of unit quantity of water
A) delta
B) duty
C) base period
D) crop period
82. The canal aligned at right angles to the Contour of a Country is known as
A) side slope canal
B) contour canal
C) water shed canal
D) branch canal
83. The season in which the crops are sown by the beginning of south - west monsoon and they are harvested in autumn
A) rabi
B) kharif
C) both A) and B)
D) none of these
84. The device which is placed infront of head regulator for silt removal is
A) weir
B) barrage
C) silt excluder
D) silt extractor

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85. With reference to hydro power station, the graphical representation of discharge and time is
A) hyetograph
B) load duration curve
C) load curve
D) hydrograph
86. Check flooding method of irrigation is used for
A) closed growing crops
B) crops which can stand in undulation of water for some time
C) tracks with flat gradients
D) none of these
87. On the recommendations of Indian Road Congress, the ruling gradient in plains, is
A) 1 in 15
B) 1 in 20
C) 1 in 30
D) 1 in 45
88. A curve whose radius gradually changes from an infinite value to a finite value or vice-versa is called
A) circular curve
B) transition curve
C) simple curve
D) compound curve
89. The stopping sight distance depends upon the
A) reaction time
B) braking time
C) speed of vehicle
D) all of these
90. The standard size of wooden sleepers on broad gauge railway track
A) $152 \mathrm{~cm} \times 15 \mathrm{~cm} \times 10 \mathrm{~cm}$
B) $183 \mathrm{~cm} \times 20 \mathrm{~cm} \times 11 \mathrm{~cm}$
C) $275 \mathrm{~cm} \times 25 \mathrm{~cm} \times 13 \mathrm{~cm}$
D) None of these
91. Minimum packing space provided between two sleepers is
A) 250 mm to 300 mm
B) 350 mm to 400 mm
C) 300 mm to 350 mm
D) None of these
92. The width of top portion of a flat - footed rail, is
A) 66.68 mm
B) 69.80 mm
C) 73.25 mm
D) 75.87 mm

A
93. Skew bridge has an angle
A) 0 degree
B) 90 degree
C) both A) and B)
D) other than right angle
94. Which is the temporary pier made in the river bed ?
A) kerb
B) scuppers
C) abutment
D) cribs
95. The effluent from the septic tank is discharged into
A) drainage
B) oxidation pond
C) sewer
D) soak pit
96. Permanent hardness of water can be removed by
A) adding alum
B) adding chlorine
C) zeolite process
D) boiling
97. The pipe through which liquid waste carrying human excreta flows.
A) waste pipe
B) soil pipe
C) vent pipe
D) all of these
98. In India which type of sewer system are preferred?
A) partial
B) combined
C) direct
D) separate
99. Garbage is a
A) semi liquid waste
B) liquid waste
C) dry waste
D) none of these
100. Design period for slow sand filters as suggested
A) 30 years
B) 50 years
C) 25 years
D) 10 years

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## Space for Rough Work

