

109/2024-E

Question Booklet
Alpha Code

A

Question Booklet
Serial Number

130009

Total No. of questions : 100

Time : 75 Minutes

Maximum : 100 Marks

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 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.

SEAL

109/2024-E

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. The error due sag in chain is :
(A) Always positive (B) Always negative
(C) Either positive or negative (D) None of the above
2. The biggest of main survey line with reference to which various survey stations are plotted :
(A) Tie line (B) Check line
(C) Base line (D) None of the above
3. Magnetic Compass gives :
(A) True Bearing of the line (B) Magnetic Bearing of the line
(C) Arbitrary bearing of the line (D) All of the above
4. The axis about which telescope and the vertical circle rotate in vertical plane :
(A) Horizontal axis (B) Vertical axis
(C) Axis of level tube (D) Line of sight
5. The point at which both back sight and fore sight are taken :
(A) Intermediate Station (B) Height of instrument
(C) Change point (D) None of the above
6. Error due to sluggish bubble is :
(A) Personal Error (B) Instrumental Error
(C) Natural Error (D) All of the above
7. Marble is an example of :
(A) Igneous Rocks (B) Sedimentary Rock
(C) Metamorphic Rock (D) All of the above
8. The 7 day briquette strength to determine tensile strength of cement should not be less than :
(A) 7 N/mm² (B) 2.5 N/mm²
(C) 10.5 N/mm² (D) 16 N/mm²

9. The water added to make cement paste for determination of initial setting time of cement is :
 (A) 0.85 times the percentage of water required for normal consistency of cement
 (B) 0.80 times the percentage of water required for normal consistency of cement
 (C) 0.90 times the percentage of water required for normal consistency of cement
 (D) 1.10 times the percentage of water required for normal consistency of cement
10. Linseed oil in paint is an example of :
 (A) Drier (B) Pigment
 (C) Base (D) Vehicle
11. The compaction factor of 0.78 shows :
 (A) Very low degree of workability (B) Low degree of workability
 (C) Medium degree of workability (D) High degree of workability
12. The usual thickness of 3 ply is :
 (A) 6 to 9 mm (B) 9 to 18 mm
 (C) 3 to 5 mm (D) 13 to 19 mm
13. The vertical member provided between top rail and lock rail is called :
 (A) Style (B) Reveal
 (C) Rebate (D) Mullion
14. The stone piece projecting beyond wall to support a structural member such a truss, beam etc. :
 (A) Cornice (B) Frieze
 (C) Coping (D) Corbel
15. The diameter of under ream of under reamed pile is :
 (A) 2 times diameter of pile stem (B) 2.5 times diameter of pile stem
 (C) 1.5 times diameter of pile stem (D) 3 times diameter of pile stem
16. The head room of a stair should not be less than :
 (A) 1.5 m (B) 2.15 m
 (C) 3 m (D) 2.75 m
17. The maximum and minimum dimension of a rise in residential building is :
 (A) 300 mm and 225 mm (B) 300 mm and 250 mm
 (C) 175 mm and 140 mm (D) 200 mm and 140 mm

18. The inclined wooden members laid at regular spacing from ridge to eaves :
 (A) Jack rafter (B) Hip rafter
 (C) Common rafter (D) Principal rafter
19. The standard size of A1 drawing sheet as per BIS is :
 (A) 841 mm × 1189 mm (B) 594 mm × 841 mm
 (C) 420 mm × 594 mm (D) 297 mm × 420 mm
20. As per KMBR the site plan should be drawn to a scale not less than :
 (A) 1 : 200 (B) 1 : 300
 (C) 1 : 150 (D) 1 : 400
21. The colour scheme for a drainage sewerage work as per KMBR is :
 (A) Green line (B) Brown line
 (C) Brown dotted line (D) Red dotted line
22. The amount of water required to create a cement paste for determination of soundness test in Le-Chatelier apparatus is :
 (A) 0.8 times the water required for standard consistency of cement
 (B) 0.78 times the water required for standard consistency of cement
 (C) 0.85 times the water required for standard consistency of cement
 (D) 1.1 times the water required for standard consistency of cement
23. The residue by weight after fineness test of cement by sieving for rapid hardening cement should not be greater than :
 (A) 10% (B) 7%
 (C) 5% (D) 15%
24. The slump recommended for ordinary RCC work for slabs and beam is :
 (A) 20 mm to 30 mm (B) 50 mm to 100 mm
 (C) 75 mm to 150 mm (D) 25 mm to 50 mm
25. The mix proportion of M10 grade concrete is :
 (A) 1 : 5 : 10 (B) 1 : 4 : 8
 (C) 1 : 3 : 6 (D) 1 : 2 : 4
26. 1 bag of cement measures :
 (A) 35 litres (B) 50 litres
 (C) 70 litres (D) 140 litres

27. The function of sand in concrete is to :
- (A) Reduce cost of concrete
 - (B) Increase crushing strength of concrete
 - (C) Reduce shrinkage and cracking of concrete
 - (D) React chemically with cement and thus setting and hardening takes place
28. STOP and GIVE WAY sign are :
- (A) Warning Sign
 - (B) Informatory Sign
 - (C) Regulatory Sign
 - (D) All of the above
29. The important roads within a district serving areas of production and markets and connecting those with each other or with the main highways of a district is called :
- (A) National Highways
 - (B) State Highways
 - (C) Major district road
 - (D) Other district road
30. The binding material used in WBM surface course construction have plasticity index value :
- (A) Less than 6%
 - (B) Less than 20%
 - (C) 4% to 9%
 - (D) Less than 10%
31. The application of bituminous material over an existing pavement which is impervious surface is called :
- (A) Prime coat
 - (B) Tack coat
 - (C) Seal coat
 - (D) Penetration Macadam
32. The mixture of bitumen, fine aggregate, filler in suitable proportion which yields a voidless and Impermeable mass is called :
- (A) Bituminous concrete
 - (B) Bituminous premixed carpet
 - (C) Sheet asphalt
 - (D) Mastic asphalt
33. The members generally laid transverse to the rails on which the rails are supported and fixed to transfer the loads from rails to the subgrade below is called :
- (A) Ballast
 - (B) Subgrade
 - (C) Sleeper
 - (D) Rails
34. The moist air mass gets lifted up to higher altitudes due to the presence of mountain barriers and undergoes cooling, condensation and precipitation. Such precipitation is called :
- (A) Convective precipitation
 - (B) Anticyclone
 - (C) Tropical cyclone
 - (D) Orographic precipitation

35. The plot of discharge in a stream plotted against time chronologically is called :
 (A) Hydrograph (B) Hyetograph
 (C) Flow mass Curve (D) All of the above
36. The area of land draining into a stream or a water course at a given location is known as :
 (A) Catchment area (B) Drainage area
 (C) Water Shed Area (D) All of the above
37. The stream that does not have any base flow contribution is called :
 (A) Perennial Stream (B) Intermittent Stream
 (C) Ephemeral Stream (D) All of the above
38. The Good Catchment according to Strange with total monsoon of 25cm have run off coefficient of :
 (A) 3.2% (B) 2.1%
 (C) 7.5% (D) 4.3%
39. The delayed flow that reaches a stream essentially as ground water flow is called :
 (A) Surface runoff (B) Direct runoff
 (C) Base flow (D) All of the above
40. The total depth of water required by a crop during the entire period of crop in the field is called :
 (A) Duty (B) Delta
 (C) Crop period (D) Base period
41. The solid obstruction put across the river to divert water into canal operated by gates along is called :
 (A) Weir (B) Barrage
 (C) Canal Head Regulator (D) Fish Ladder
42. The dam constructed to store water during floods and release it gradually at safe rate when flood recedes is called :
 (A) Storage Dam (B) Diversion Dam
 (C) Detention Dam (D) All of the above
43. Toe erosion is _____ failure of earth dam.
 (A) Hydraulic failure (B) Seepage failure
 (C) Structural failure (D) All of the above

44. The overflow portion of a dam over which surplus discharge flows from reservoir to downstream is called :
(A) Gallery (B) Spillway
(C) Flash board (D) Shafts
45. The factor of safety against overturning in gravity dam should not be less than :
(A) 2 (B) 1.5
(C) 1 (D) 3
46. In solid gravity dams the height of horizontal joints is usually limited to :
(A) 2 m (B) 3 m
(C) 1.5 m (D) 1 m
47. The elementary profile of a gravity dam is :
(A) Rectangular in section (B) Triangular in section
(C) Trapezoidal in section (D) Parabolic in section
48. Plastering is usually calculated in :
(A) m^2 (B) m^3
(C) m (D) m^4
49. Cornice is measured in :
(A) m^2 (B) m^3
(C) m (D) m^4
50. The total area of floor in between the walls and consist of floors of all rooms, verandas, passages, corridors etc. :
(A) Carpet area (B) Floor Area
(C) Plinth Area (D) Circulation Area
51. The amount provided in the estimate and bill of quantities for some specialised work to be done by a specialised firm whose details are not known at the time of preparing estimate is called :
(A) Provisional sum (B) Day work
(C) Prime cost (D) Bill of quantities
52. The incidental expenses of miscellaneous character which cannot be classified under any distinct item subhead is called :
(A) Lump sum (B) Contingencies
(C) Work charged establishment (D) Centage charges

53. The fresh detailed estimate of the additional work in addition to the original estimate is called :
- (A) Revised Estimate (B) Detailed Estimate
(C) Abstract Estimate (D) Supplementary Estimate
54. Work charge Establishment is provided as :
- (A) 1% to 2% of estimate cost (B) 3% to 5% of estimate cost
(C) 10% of estimate cost (D) 7% of estimate cost
55. Horizontal circulation area is about :
- (A) 10% to 15% of plinth area (B) 20% to 30% of plinth area
(C) 10% to 15% of floor area (D) 20% to 30% of floor area
56. Fresh sewage is :
- (A) Acidic (B) Alkaline
(C) Neutral (D) None of the above
57. The Strong sewage have 5 day BOD of :
- (A) 450 ppm to 550 ppm (B) 350 ppm
(C) 250 ppm (D) 20 ppm
58. The detention period of oxidation ponds is :
- (A) 3 to 5 days (B) 10 to 50 days
(C) 12 to 15 hours (D) 20 to 30 days
59. The uniformity coefficient of filter sand used in slow sand filter is :
- (A) 1.2 to 1.7 (B) 2 to 3
(C) 3 to 5 (D) 5 to 7
60. The treatment required for water containing large amount of suspended solids is :
- (A) Screening
(B) Plain sedimentation
(C) Coagulation followed by sedimentation
(D) Filtration
61. The hardness of water is determined by :
- (A) B-Coli Test (B) EDTA method
(C) pH test (D) Turbidity test

62. For potable water the amount of chlorides should not exceed :
(A) 20 ppm (B) 250 ppm
(C) 500 ppm (D) 1000 ppm
63. The foundation which transmits its load to the soil by means of a continuous slab that covers the entire area beneath a structure is called :
(A) Spread Footing (B) Strap Footing
(C) Combined Footing (D) Mat Foundation
64. The maximum pressure which soil can carry safely without risk of shear failure is called :
(A) Ultimate bearing capacity (B) Net ultimate bearing capacity
(C) Safe bearing capacity (D) Net safe bearing capacity
65. The failure at which the soil properties are assumed to be such that a slight downward movement of footing develops fully plastic zones and the soil bulges out is called :
(A) Local shear failure (B) General shear failure
(C) Punching shear failure (D) All of the above
66. Plate load test is used to determine :
(A) Ultimate bearing capacity (B) Safe bearing capacity
(C) Allowable bearing capacity (D) Net ultimate bearing capacity
67. When a pile passes through poor material but its tip penetrates a small length into a stratum of good bearing capacity is called :
(A) Compaction piles (B) Tension piles
(C) End bearing piles (D) Friction piles
68. A Polyline can be broken into individual lines and arcs using which of the following command?
(A) BREAK (B) TRIM
(C) EXPLODE (D) OVERKILL
69. Shortcut key for Multileader in AutoCAD 2022 :
(A) ML (B) MLN
(C) MLEADER (D) MULTI
70. Shortcut for Trim command is :
(A) T (B) TR
(C) TI (D) X

71. In the sequence

75122874215386217141328675122

How many pairs of successive numbers have a difference of 2 each?

(A) 4

(B) 5

(C) 6

(D) 7

72. Which one of the letters from the alternative answers would come next in the series given below?

$B_3 D_4 F_5 H_6$

(A) I_7

(B) J_7

(C) J_8

(D) K_7

73. A 36 metre long rod is cut into $2\frac{1}{2}$ metre pieces. How long a piece would be left over?

(A) $\frac{1}{2}$ metre

(B) 1 metre

(C) $1\frac{1}{2}$ metre

(D) 2 metre

74. In a mixture of 60 litres of milk and water the ratio of milk and water is 2 : 1. If the ratio of the milk and water is to be 1 : 2, then the amount of water to be further added is :

(A) 20 litres

(B) 40 litres

(C) 30 litres

(D) 60 litres

75. A's salary is 25% more than B's salary. By what percent is B's salary less than A's salary?

(A) 25%

(B) 20%

(C) 15%

(D) 10%

76. The average age of 40 students in a class is 15. If the teacher's age is included the average increases by one. What is the teacher's age?

(A) 55 years

(B) 50 years

(C) 56 years

(D) 57 years

77. A computer was sold for Rs. 45,000 at a gain of $12\frac{1}{2}\%$. Find the cost price of the computer :

(A) Rs. 37,500

(B) Rs. 40,000

(C) Rs. 42,500

(D) Rs. 35,000

78. What is the decimal form of the sum $\frac{2}{100} + \frac{3}{1000}$?

(A) 0.23

(B) 0.023

(C) 2.3

(D) 23

79. The simple interest on a certain sum of money at 8% per annum for 6 years is Rs. 840. At what rate of interest the same amount of interest can be received on the same sum after 5 years?
- (A) 96% (B) 10%
(C) 8% (D) 6%
80. Find out the odd-one :
Sunday, Tuesday, Monday, Friday, Holiday
- (A) Sunday (B) Tuesday
(C) Monday (D) Holiday
81. He knew that it would take him at least _____ year to finish the course.
- (A) a (B) the
(C) an (D) none of the above
82. She had never been to Agra before, _____?
- (A) has she? (B) hasn't she?
(C) had she? (D) hadn't she?
83. What he is doing is contrary _____ what he says?
- (A) of (B) by
(C) to (D) with
84. _____ does not mean a prototype.
- (A) Model (B) Paradigm
(C) Archetype (D) Unique
85. Everyone _____ it is not easy to win the game without practice.
- (A) knew (B) knows
(C) had known (D) have known
86. I would not suggest _____ by bus in this weather.
- (A) to travel (B) for travelling
(C) on travelling (D) travelling

87. The insurance agent could not convince the client to buy a new policy. (Change the voice) :
- (A) The client was not convinced to buy a new policy by the insurance agent.
 - (B) The client had not been convinced to buy a new policy by the insurance agent.
 - (C) The client could be convinced to buy a new policy by the insurance agent.
 - (D) The client could not be convinced to buy a new policy by the insurance agent.
88. The antonym of deprive is :
- (A) seize
 - (B) offer
 - (C) neglect
 - (D) snatch
89. It is more sensible _____ the task to the professionals.
- (A) to leave
 - (B) in leaving
 - (C) having left
 - (D) leave
90. If I recover fast, I would have cancelled my leave and join work. (Correct the sentence) :
- (A) If I recover fast, I would cancel my leave and join work.
 - (B) If I recover fast, I will cancel my leave and join work.
 - (C) If I recover fast, I would have cancelled my leave and joined work.
 - (D) If I recover fast, I will have cancelled my leave and join work.
91. What is the basic feature of Indian Culture?
- (A) Universal Brotherhood
 - (B) Unity in Diversity
 - (C) Social Harmony
 - (D) Social Equality
92. How many 'PARVAS' are there in the Epic Mahabharata?
- (A) 18
 - (B) 20
 - (C) 22
 - (D) 25
93. Swami Vivekananda as representative of Hinduism participated in the World Religious Conference held at Chicago in the year :
- (A) 1885
 - (B) 1893
 - (C) 1895
 - (D) 1897

94. The Travancore Maharaja Sri Chitra Tirunal issued the Temple Entry Proclamation in the year :
- (A) 1928 (B) 1936
(C) 1938 (D) 1942
95. Which is the northern most Devaswom Group under the Travancore Devaswom Board?
- (A) Aluva (B) Vaikam
(C) Thrikkariyoor (D) Parur
96. Which of the following Temples observes "Kathakali" as a daily ritual?
- (A) Chettikulangara (B) Thiruvalla
(C) Aranmula (D) Eattumanoor
97. Vaikam Sathyagraha the famous social reform movement of Kerala commenced in the year :
- (A) 1918 (B) 1921
(C) 1924 (D) 1927
98. The Ayyappa devotees wear common colour dress to express the idea of :
- (A) Fraternity (B) Humility
(C) Equality (D) Liberty
99. The Travancore ruler who prohibited obscene songs in temples :
- (A) Umayamma Rani (B) Sethu Lekshmi Bai
(C) Martanda Varma (D) Swati Tirunal
100. The famous Mural Painting Institute is located in :
- (A) Attingal (B) Chottanikkara
(C) Thrippoonithura (D) Guruvayoor