058/2017

Question Booklet Alpha Code

A

Question Booklet Serial Number

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. M$_{25}$ Grade concrete approximates

   A) 1 : 3 : 6 mix

   B) 1 : 1 : 2 mix

   C) 1 : 2 : 4 mix

   D) 1 : 1$^{1}/_{2}$: 3 mix

2. The centre of gravity of an equilateral triangle with each side (a) is

   A) $\dfrac{a\sqrt{3}}{2}$

   B) $\dfrac{a\sqrt{2}}{3}$

   C) $\dfrac{a}{2\sqrt{3}}$

   D) $\dfrac{a}{3\sqrt{2}}$

3. The instrument used for reducing and enlarging a plan is

   A) Pentagraph

   B) Planimeter

   C) Isograph

   D) Isogonic

4. The volume of 50 Kg cement (1 bag) is

   A) 0.035 m^3

   B) 0.35 m^3

   C) 0.0035 m^3

   D) 3.5 m^3

5. The ratio of total quantity of water supplied to a crop during its base period to the area is called

   A) duty

   B) base depth

   C) delta

   D) crop factor

6. The road connecting district headquarter of a State is

   A) State highways

   B) National highways

   C) Minor district road

   D) District road

7. Primary function of a sleeper is to

   A) Take loads from rails

   B) Maintain gauge

   C) Stability to track

   D) Giving direction

8. The underground conduit conveying sewage is called

   A) vetilation pipe

   B) cowl

   C) collection line

   D) sewer

9. For all events along the critical path, the slake is

   A) maximum

   B) negative

   C) minimum or zero

   D) none of the above

A

10. Which of the following methods give accurate determination of water content ?

    A) Sand bath method

    B) Alcohol method

    C) Calcium oxide method

    D) Oven dried method

11. A 15 cm theodolite means

    A) length of telescope is 15 cm

    B) height of standard is 15 cm

    C) diameter of lower plate is 15 cm

    D) radius of upper plate is 15 cm

12. The resultant force at the bottom of the retaining wall lies outside the middle third, the failure will be due to

    A) crushing   B) sliding   C) upthrust   D) overturning

13. Stone generally preferred for railway ballast is

    A) basalt and granite

    B) marble

    C) sandstone

    D) slate

14. Contour lines are never intersect each other except in the case of an

    A) vertical cliff

    B) overhanging cliff

    C) ridge

    D) valley

15. The unit of moment of Inertia is

    A) mm^2 B) mm^3 C) mm^4 D) mm

16. The dry zone pitching on a sloping face of an earth dam is known as

    A) revetment

    B) lining

    C) crushing

    D) reinforcement

17. The overlapping of bricks stones in masonry is called

    A) frog   B) bond   C) jamb   D) joint

A

18. The type of foundation recommended for heavily loaded steel stanchions in soils with poor bearing capacity

A) Raft   B) Pile   C) Well   D) Grillage

19. Interlocking is mostly a

A) Mechanical device   B) Electrical device

C) Safety device   D) Operational device

20. The technique of finding the fair price of an existing building or property is known as

A) valuation   B) estimation   C) pricing   D) costing

21. Maximum permissible turbidity for drinking water is

A) 1 to 4 ppm   B) 5 to 10 ppm   C) 15 to 20 ppm   D) 25 to 30 ppm

22. Purpose of seal coat is to provide

A) an even surface   B) required grade

C) camber   D) an impervious layer

23. The water content at which the maximum dry density is attained is called

A) optimum water content

B) dry density

C) bulk density

D) degree of saturation

24. The strength of cement concrete depends on

A) quality of aggregate   B) quality of cement

C) moisture content   D) water cement ratio

25. Heating of limestone to redness in contact with air is known as

A) burning   B) hydration

C) calcination   D) oxidation

26. The ratio of actual discharge to the theoretical discharge is known as

    A) coefficient of velocity

    B) coefficient of discharge

    C) coefficient of contraction

    D) coefficient of resistance

27. In a closed traverse the arithmetic sum of deflection angle is

    A) 90°   B) 270°

    C) 360°   D) (n – 2) 90°

28. A vertical window provided on the sloping roof is known as

    A) dormer window   B) lantern window

    C) gable window   D) bay window

29. White cement should have least percentage of

    A) aluminium oxide   B) silica

    C) iron oxide   D) magnesium

30. The main reinforcement in a simply supported RCC member is placed at

    A) top fibre   B) side fibre

    C) bottom fibre   D) top and bottom fibre

31. If the sum of all forces acting on a body is zero, then the body may in equilibrium provided the forces are

    A) concurrent   B) parallel

    C) like parallel   D) unlike parallel

32. If a level is in permanent adjustment, its line of collimation is parallel to

    A) horizontal axis   B) bubble tube

    C) vertical axis   D) line of sight

33. The value of the property without being dismantled at the end of the useful period is known as

A) scrap value   B) book value

C) salvage value   D) net value

34. When the canal runs below the drain, the cross drainage work is provided is called

A) aqueduct   B) super passage

C) level crossing   D) syphon aqueduct

35. The primary object of providing camper is

A) improve appearence

B) easy separation

C) easy drainage

D) easy overtaking facility

36. In which sewerage system only one set of sewers is laid to carry domestic sewage, industrial sewage and storm water ?

A) Partially combined system

B) Combined system

C) Separate system

D) Partially separate system

37. The time by which the completion of an activity can be delayed without affecting the start of succeeding activities is called

A) free float   B) total float

C) interfering float   D) independent float

38. A concrete or masonry structure built across a stream of river to raise water level on the upstream side and allow excess water to flow to the downstream side is called

A) channel   B) weir

C) mouthpiece   D) notch

39. The desirable multiplying and additive constants for a tacheometer is

   A) 100 and 0.3   B) 50 and 0.3

   C) 100 and zero   D) 200 and 1.5

40. A stair in which all the steps are winders is

   A) Circular   B) helical   C) bifurcated   D) spiral

41. A sample of cement is said be sound when it does not contain free

   A) lime   B) alumina   C) iron oxide   D) silica

42. The inert material in the concrete is

   A) water   B) aggregate

   C) cement   D) all the above

43. The moment of inertia of a circular section of diameter (d) is given by the relation

   A) $\dfrac{\pi}{96} d^4$ B) $\dfrac{\pi d^4}{16}$ C) $\dfrac{\pi d^4}{32}$ D) $\dfrac{\pi d^4}{64}$

44. The approximate weight of 1 m^3 of mild steel is

   A) 1000 kg   B) 7850 kg   C) 3800 kg   D) 2400 kg

45. The difference in elevation of top of bank and full supply level of a canal is called

   A) berm   B) critical depth

   C) free board   D) depth of canal

46. The best road suited to pneumatic and iron wheeled traffic is

   A) earthen road   B) WBM road

   C) BBM road   D) cement concrete road

47. Fast moving train should be received on

   A) main line   B) loop line

   C) trap siding   D) sick siding

48. The coagulant which is generally used in purification of water is

    A) ozone   B) alum

    C) chlorine   D) bleaching powder

49. The water content which the soil changes from the semisolid state to the solid state is known as

    A) plastic limit   B) liquid limit

    C) shrinkage limit   D) plasticity index

50. The equation for loss of head duli to friction hf is

    A) $\dfrac{4f/v^2}{2gd}$ B) $\dfrac{4f^2/v^2}{2gd}$ C) $\dfrac{2gd}{4f/v^2}$ D) $\dfrac{2f/v}{4gd}$

51. The rate of hydration of the cement depend upon its

    A) soundness   B) cement

    C) consistency   D) setting time

52. Separation of water from a freshly mixed concrete is known as

    A) creeping   B) separation   C) bleeding   D) segregation

53. The ratio of lateral strain to linear strain is called

    A) Modulus of elasticity   B) Modulus of rigidity

    C) Bulk modulus   D) Poisson's ratio

54. The reduced bearing of a line whose whole circle bearing is 270° is

    A) W 90° S   B) W 90° N   C) N 90° W   D) N 90° E

55. In a cement concrete road expansion joints are provided at intervals of

    A) 4 m   B) 20 m   C) 10 m   D) 50 m

56. Disinfection of drinking water involves the removal of

    A) turbidity   B) colour   C) bacteria   D) odour

57. The unit weight of 10mm dia. mild steel rod is

    A) 0.22 kg   B) 0.32 kg   C) 0.42 kg   D) 0.62 kg

58. Standard gauge is

    A) 1435 mm   B) 1676 mm   C) 1524 mm   D) 1000 mm

59. A layer that is directly coming in contact with the traffic is

    A) base course   B) wearing coat

    C) sub-base   D) subgrade

60. When a branch sewer at a higher level to joining a main sewer at lower level, which device is constructed ?

    A) flushing tank   B) catch basin

    C) inlet   D) drop manhole

61. Gauge pressure is 15 m of water and atmospheric pressure is 10.33 m of water. The absolute pressure is

    A) 25.33 m of water   B) 24.6 m of water

    C) 10.33 m of water   D) 15 m of water

62. The correction for curvature for a distance of 1 km is

    A) 0.112m   B) 0.0785 m

    C) 0.0673 km   D) 0.0673 m

63. The bending moment at the free end of a cantilever beam carrying any type of load is

    A) minimum   B) maximum

    C) zero   D) equal to load

64. The main component of mineral in granite is

    A) mica   B) felspar   C) quartz   D) free silica

65. The proper and accurate measurement of concrete ingredients for uniformity of proportion is known as

A) grading   B) mixing

C) batching   D) none of the above

66. A simply supported beam of 5m long is carrying a uniformly distributed load of 2 kN/m over entire of the beam. The shear force value is

A) 0.1 kN   B) 5 kN   C) 25 kN   D) 2.5 kN

67. When a staff is held on a BN of RL 50.000 m. The staff reading was 1.500 m. When the staff is held on a station P, the reading was 2.000 m. Then the height of instrument is

A) 50.000 m   B) 53.000 m

C) 48.500 m   D) 51.500 m

68. The highest point of extrados of the arch is known as

A) summit   B) ridge   C) crown   D) peak

69. Two forces 6N and 8N acting simultaneously at right angles to a point, the resultant is

A) 12.8 N   B) 14 N   C) 12 N   D) 10 N

70. An inverted reading is taken when the point is

A) higher elevation

B) above the line of sight

C) below line of sight

D) ground level

71. Point of contra flexure is a point when

A) shear force changes sign

B) bending moment maximum

C) shear force maximum

D) bending moment changes sign

72. If the bearing of two lines AB and CB are S45° E and N45° W, the ∠ABC equals

    A) 180°   B) 235°   C) 270°   D) 45°

73. The pipe which is installed in the house drainage to preserve the water seal of the trap is known as

    A) soil pipe   B) waste water pipe

    C) anti siphonage pipe   D) vent pipe

74. The maximum slope of a cantilever carrying a point load at its free end is

    A) at the fixed end   B) at the free end

    C) centre of the span   D) none of the above

75. The best known abrasive is

    A) mild steel   B) brass

    C) diamond   D) high carbon steel

76. The length of a line measured with a 30 m chain was found to be 425 m. If the chain was 4cm too short, what is the true length of the line ?

    A) 425.57 m   B) 433.5 m   C) 424.43 m   D) 419.33 m

77. The vertical distance between the tops of two successive treads is called

    A) flight   B) soffit   C) run   D) rise

78. No deduction is made in the masonry for the openings if the area of the opening d

    A) 0.10m^2 B) 0.25m^2 C) 0.5m^2 D) 0.15m^2

79. When the timber is attached by fungus and reduced to powder is called

    A) wet rot   B) dry rot

    C) star shakes   D) chip mark

80. Turbidity is mainly due to

    A) floating solids   B) suspended solids

    C) colloidal solids   D) dissolved solids

81. Name the project inaugurated by Prime Minister Narendra Modi on 4th November 2016.

    A) Atal Pension Yojana   B) Swathandra Bharat

    C) Digital India   D) Swach Bharat

82. The winner of J. C. Daniel Puraskaram in 2016

    A) I. V. Sasi   B) T. V. Chandran

    C) K. G. George   D) Hariharan

83. Who among the social reformer is associated to 'Jnana Prajagara Sangham ?

    A) Vaikunta Swamikal   B) Thycaud Ayyaguru

    C) Swami Anandatirtha   D) Swami Agamananda

84. 'Faster, sustainable and more inclusive growth' is the subtitle of

    A) 11th Five Year Plan   B) 10th Five Year Plan

    C) 8th Five Year Plan   D) 12th Five Year Plan

85. Who wrote 'Muslim Janavum Vidyabhyasavum' ?

    A) Makti Tangal   B) P. P. Ummerkoya

    C) Vakkom Moulavi   D) Dr. P. A. Kareem

86. 'Right to service' is an important part of which among the following Bills/Act ?

    A) Right to information Act

    B) Lokpal Bill

    C) Citizen's Charter and Grievance Redressal Bill

    D) I.T. Act

87. _____ is the First Indian State to ratify G.S.T. Bill.

    A) Assam   B) Delhi

    C) West Bengal   D) Kerala

88. Which among the following is the autobiography of A. K. Gopalan ?

   A) Ente Samarangal

   B) Ente Porattangal

   C) Jeevitha Samarangal

   D) Ente Jeevithakatha

89. The Champions of IPL season 2016

   A) Delhi Daredevils

   B) Sun risers Hyderabad

   C) Kolkata Night Riders

   D) Mumbai Indians

90. Name the socio reformer who founded 'Kathakali Yogam' for Ezhavas ?

   A) Dr. Palpu

   B) Brahmananda Sivayogi

   C) Arattupuzha Velayudhapanicker

   D) Chattampi Swamikal

91. 'Mission Bhageeratha' is the water supply project of

   A) Andhra Pradesh   B) Karnataka

   C) Chattisgarh   D) Telengana

92. Which among the following is known as 'Nalanda of Kerala' ?

   A) Kodungallur   B) Thrikkanamatilakam

   C) Sukapuram   D) Kadavallur

93. National Statistical Day is observed on

   A) July 29   B) June 29

   C) April 19   D) August 29

94. 'Adukkalayil Ninnu Avangathekku' of V. T. Bhatathirippadu was firstly performed in

   A) 1929   B) 1927   C) 1928   D) 1926

95. _____ is the venue of 11th summit of G20 Nations.

   A) Goa   B) Beijing

   C) Hangshu   D) Delhi

96. Which among the following start ups is headed by Sachin Banzal ?

   A) Flipcart   B) Quicker

   C) Snap Deal   D) Paytm

97. Name the First Kerala Cricketer who scored 4,000 Runs in First Class Cricket ?

   A) Sunil Oasis   B) Sree Kumar Nair

   C) Firoz V. Rasheed   D) Rohan Prem

98. Which among the following is the publication of Kerala Vanitha Commission

   A) Jagratha   B) Sthree Shakti

   C) Sakhi   D) Angana

99. "Thiruvithamkoor Thiruvithamkooru – Karkku" is the slogan of

   A) Ezhava Memorial

   B) Nivarthana Samaram

   C) Malayali Memorial

   D) Punnapra Vayalar

100. Iringal Craft village is in _____ district of Kerala.

   A) Kannur   B) Malappuram

   C) Thrissur   D) Kozhikode

_____

Space for Rough Work