25/2019

Question Booklet Alpha Code

A

Question Booklet Serial Number

Total No. of Questions: 100

Maximum : 100 Marks

Time : 75 Minutes

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. Blank sheets of paper is attached to the question booklet. These 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. In a gear, the pitch diameter divided by <u>number</u> of teeth is called

   (A) Module   (B) Root dia.

   (C) Addendum   (D) Dedendum

2. Clearance between mating part is measured by

   (A) Dial gauge   (B) 'Go' gauge

   (C) Feeler gauge   (D) Calliper gauge

3. A dimension is stated as 25 ± 0.02 mm in a drawing, what is the tolerance ?

   (A) 25.00 mm   (B) +0.02 mm

   (C) −0.02 mm   (D) 0.04 mm

4. Which is the purest form of iron ?

   (A) Cast iron   (B) Wrought iron

   (C) Pig iron   (D) Steels

5. Which one of the following metals is drilled without coolant or cutting fluid ?

   (A) Copper   (B) Tin

   (C) Low carbon steel   (D) Grey cast iron

6. Which is a non-ferrous alloy ?

   (A) Brass   (B) Aluminium

   (C) Copper   (D) Lead

7. One micron = _____ mm

   (A) 0.01   (B) 0.001

   (C) 0.02   (D) 0.002

8. Which heat treatment process is suitable to relieve internal stress ?

   (A) Tempering   (B) Hardening

   (C) Annealing   (D) Normalising

9. What does the designation Ml6 × 2 indicate ?

(A) ISO metric fine thread
(B) ISO metric coarse thread
(C) B.S.F metric fine thread
(D) B.S.F metric coarse thread

10. A high percentage of carbon content in steel tends to make it _____

(A) Soft and malleable
(B) Hard and ductile
(C) Soft and tough
(D) Hard and brittle

11. What is the outer diameter of washer when a nominal diameter of bolt is 5 mm ?

(A) 15 mm
(B) 13 mm
(C) 10 mm
(D) 12 mm

12. What is name of the nut which is a hexagonal nut with washer ?

(A) Flanged nut
(B) Dome nut
(C) Wing nut
(D) Cap nut

13. What type of failure will occur when rivets are smaller than necessary ?

(A) Tearing of plate between the holes
(B) Tearing of plate between the edges
(C) Shearing of rivet
(D) Crushing of plate

14. A high speed steel has to be forged. Which colour indicates the most suitable forging temperature ?

(A) Yellow
(B) Light Blue
(C) Dark, Cherry Red
(D) White

15. Which one of the following threads is used on mechanical jack ?

(A) Acme
(B) B.S.F
(C) Buttress
(D) Square

16. The Pitch diameter of the external screw thread is checked by

(A) Screw pitch gauge
(B) Screw thread micrometer
(C) Thread ring gauge
(D) Vernier calliper

17. In triple start thread if the pitch is 4 mm then the lead is _____

(A) 8 mm
(B) 12 mm
(C) 16 mm
(D) 4 mm

18. Cast iron cannot be forged because it has the property of _____
    (A) Stiffness   (B) Softness
    (C) Brittleness   (D) Toughness

19. In a single-start thread
    (A) Lead and pitch are equal   (B) Lead is double the pitch
    (C) Pitch is double the lead   (D) Lead is half the pitch

20. The most important quality of any lubricant is _____
    (A) Specific gravity   (B) Viscosity
    (C) Specific heat   (D) Emulsification

21. The position in which it is easiest to weld is _____
    (A) Flat   (B) Overhead
    (C) Vertical   (D) Horizontal

22. The unit of power is _____
    (A) Watt per second   (B) Joule
    (C) kilo Joule   (D) Joule per second

23. What is brazing filler rod made of ?
    (A) Brass   (B) Lead
    (C) Tin   (D) Iron

24. If the shaft dia. is 60 mm, how many bolts are recommended for rigid flange coupling ?
    (A) 2   (B) 5
    (C) 3   (D) 4

25. A double cut file is used for filing on
    (A) hard board   (B) steel
    (C) wood   (D) leather

26. While grinding one must use
    (A) Dark glass screen   (B) Mask
    (C) Safety goggles   (D) Sun goggles

27. The point angle of centre punch is

    (A) 30°   (B) 60°

    (C) 90°   (D) 120°

28. The box nut of a bench vice is made of

    (A) Alloy steel   (B) Mild steel

    (C) White metal   (D) Phosphorous bronze

29. The hand vice is used for

    (A) Tightening nuts and bolts   (B) Fixing heavy jobs

    (C) Doing minute work   (D) Holding round jobs

30. The least count of a Vernier Calliper is

    (A) 0.02 mm   (B) 0.01 mm

    (C) 0.10 mm   (D) 0.05 mm

31. Which of the following is a direct measuring tool ?

    (A) Ring gauge   (B) Straight edge

    (C) Steel rule   (D) Try square

32. Ratchet stop in the micrometre helps to

    (A) lock the spindle   (B) control the pressure

    (C) adjust zero error   (D) hold the work-piece

33. A cutting tool used to finish and enlarge a hole is known as

    (A) Tap   (B) Drill

    (C) Die   (D) Reamer

34. The body of a flat chisel is usually made in the shape of

    (A) Rectangular   (B) Octagonal

    (C) Square   (D) Hexagonal

35. A hole which is not made through full depth of the component is known as

    (A) Blind hole   (B) Core hole

    (C) Pin hole   (D) Bore hole

36. The piles which are used to transfer load through water or soft soil to a suitable bearing stratum.

    (A)   Compaction pile   (B)   End bearing pile

    (C)   Friction pile   (D)   Franki pile

37. Which foundation is a special type of isolated footing, generally provided for heavily loaded steel stanchions, specially in those location where bearing capacity of the soil is poor ?

    (A)   Grillage foundation   (B)   Raft or mat foundation

    (C)   Cantilever footing   (D)   Inverted arch footing

38. The termination of the wall in a stepped fashion, it is termed as

    (A)   Toothing   (B)   Housing

    (C)   Mitring   (D)   Racking back

39. In which bond the header course is provided only after 3-5 stretcher courses ?

    (A)   Dutch bond   (B)   English cross bond

    (C)   Garden wall English bond   (D)   Garden wall Flemish bond

40. Which roof is economically suitable for spans upto 4.2 m ?

    (A)   Lean to roof   (B)   Couple roof

    (C)   Couple close roof   (D)   Collar beam roof

41. Which plaster is provided in X- rooms ?

    (A)   Acoustic plaster   (B)   Barium plaster

    (C)   Gypsum plaster   (D)   Granite silicon plaster

42. The formation of very loose mass of plastered surface due to poor bond between successive coats. It is termed as

    (A)   Cracking   (B)   Crazing

    (C)   Peeling   (D)   None of these

43. The pipe provided to preserve the water seal of trap is termed as

     (A) Anti-siphonage pipe   (B) Soil pipe

     (C) Vent pipe   (D) Waste pipe

44. A simply supported beam of span 'l' and carrying a uniformly distributed load of 'W' per unit length, then the maximum bending moment is

     (A) $Wl^2/4$ (B) $Wl/4$

     (C) $Wl^2/8$ (D) $Wl/8$

45. The smallest division on the graduated jar of the Symon's rain gauge is

     (A) 0.1 mm   (B) 0.2 mm

     (C) 0.8 mm   (D) 0.5 mm

46. The difference of level between the top of the dam and maximum water level is termed as

     (A) Dead storage   (B) Live storage

     (C) Gross free board   (D) Net free board

47. The free board of earth dam ranges from

     (A) 0.3m – 0.75m   (B) 1.25m – 3.5m

     (C) 3.5m – 5m   (D) None of these

48. The lining is carried out by forcing a slurry of cement mortar under pressure through a nozzle on the canal surface is termed as

     (A) Shotcrete lining   (B) Cement mortar lining

     (C) Cement concrete lining   (D) None of these

49. What is the maximum flood discharge by Ryve's formulae ?

     (A) $Q = 124A/\sqrt{A} + 10.4$ (B) $Q = \sqrt{A} + 10.4/124A$

     (C) $Q = CM^{2/3}$ (D) $Q = CM^{3/4}$

50. The minimum concentration of dissolved oxygen is required in water for the sustenance of fish life is ranges from

(A) 0.5 to 2.5 mg/l

(B) 2.5 to 3.75 mg/l

(C) 4 to 5 mg/l

(D) 7 to 8 mg/l

51. The density of concrete may be taken as

(A) 1440 kg\m^3

(B) 7850 kg\m^3

(C) 2440 kg\m^3

(D) 1000 kg\m^3

52. As per IS : 456 the minimum depth required to simply supported beams are

(A) Span/10

(B) Span/20

(C) Span/30

(D) Span/40

53. In the absence of detailed design the percentage of steel for concrete may be taken approximately for column is

(A) 0.5 to 0.72%

(B) 1 to 2%

(C) 0.5 to 0.8%

(D) 1 to 5%

54. Strength of weld is equal to

(A) Permissible stress × Throat area

(B) Permissible stress × Throat thickness

(C) Permissible stress × Length of weld

(D) Throat thickness × Length of weld

55. The width of carriage way is 10 m and the rise of camber is 1m, then what is the rate of the camber ?

(A) 1 in 10

(B) 1 in 5

(C) 10 in 1

(D) 5 in 1

56. The headquarters of the southern central railway is

(A) Chennai

(B) Secunderabad

(C) Mumbai

(D) Calcutta

57. After the outer signal towards station in a stop signal and exactly placed at the station limit is called

(A) Outer signal   (B) Starter signal

(C) Advanced starter signal   (D) Home signal

58. A line was shown to a magnetic bearing of 35°15' in an old map, when the declination was 13°45'E. To what bearing should it to be set now if the present magnetic declination is 4°15'W ?

(A) 49°   (B) 39°30'

(C) 43°15'   (D) 18°

59. Combined correction of levelling is

(A) $-0.0673 \, D^2 m$ (B) $-0.0785 \, D^2 m$

(C) $0.0673 \, D^2 m$ (D) $0.0112 \, D^2 m$

60. For important traverse survey's, the permissible angular error is

(A) $1'\sqrt{N}$ (B) $30''\sqrt{N}$

(C) $15''\sqrt{N}$ (D) $45''\sqrt{N}$

61. Line AB and BC intersect at B and < B is measured by theodolite, then the deflection angle of line BC is given by

(A) $180° - <B$ (B) $270° - <B$

(C) $90° + <B$ (D) $180° + <B$

62. If 'f' be the focal length of the objective and 'f_1' that of the eye piece, then magnifying power is given by

(A) f/f_1 (B) f_1/f

(C) $f \times f_1$ (D) None of these

63. The plane perpendicular to both the horizontal and vertical planes is known as

(A) Horizon plane   (B) Picture plane

(C) Both (A) and (B)   (D) None of these

64. A solid having twelve equal and regular pentagons is known as

    (A)   Tetrahedron   (B)   Octahedron

    (C)   Dodecahedron   (D)   Icosahedron

65. The point of the conic at which the conic cuts its axis is known as

    (A)   Directrix   (B)   Focus

    (C)   Ordinate   (D)   Vertex

66. Minimum crushing strength of 'A' grade brick is

    (A) $3.5 - 5$ N/mm^2 (B) $7 - 14$ N/mm^2

    (C)   Above 14 N/mm^2 (D)   None of these

67. The first Indian cement factory was installed in

    (A)   Kerala   (B)   Uttar Pradesh

    (C)   Karnataka   (D)   Tamil Nadu

68. Recommended slumps of concrete for road construction is

    (A) $20 - 40$ mm   (B) $40 - 50$ mm

    (C) $70 - 80$ mm   (D) $90 - 100$ mm

69. The lime which contains mainly calcium oxide and is capable of slacking with water is

    (A)   Quick lime   (B)   Fat lime

    (C)   Poor lime   (D)   Hydraulic lime

70. Corrosion resistance of stainless steel is due to the presence of

    (A)   Manganese   (B)   Chromium

    (C)   Carbon   (D)   Nickel

71. Which one of the following is an example of primary memory of a computer ?

  (A) RAM
  (B) Floppy Disk
  (C) Hard Disk
  (D) Pen drive

72. The extension of word document is

  (A) .xlsx
  (B) .pptx
  (C) .jpeg
  (D) .docx

73. Malayalam typing software 'ISM' stands for

  (A) Institute for Supply Management
  (B) Implicit Shape Model
  (C) International Safety Management
  (D) Intelligent Script Manager

74. Shortcut used for 'paste'

  (A) ctrl+C
  (B) ctrl+V
  (C) ctrl+N
  (D) ctrl+P

75. What is the default font size of a word document based on normal computer ?

  (A) 14 pt
  (B) 10 pt
  (C) 12 pt
  (D) 8 pt

76. 1 KB is

  (A) 1024 × 1024 bytes
  (B) 1024 bytes
  (C) 1024 MB
  (D) 1024 bits

77. A large capital letter at the beginning of a text block that has the depth of two or more regular lines.

  (A) Superscript
  (B) Subscript
  (C) Drop cap
  (D) Capitalize

78. Send a similar letter or document to multiple recipients

  (A) Document
  (B) Personal letter
  (C) Template
  (D) Mail merge

79. A network of computers and other devices that is confined to a relatively small space is called

  (A) LAN
  (B) Global network
  (C) WAN
  (D) Peer to Peer network

80. The brain of any computer system is

  (A) ALU
  (B) Memory
  (C) CPU
  (D) Control Unit

81. How many percentage of total population in Kerala living in Urban Area ?
   (A) 52.3% (B) 25.46%
   (C) 47.7% (D) 35%

82. 'Chavala Koothu' is a folk art form performs during Vishu celebration in which district of Kerala ?
   (A) Thiruvananthapuram (B) Kollam
   (C) Ernakulam (D) Kozhikode

83. Climate of Kerala is known as
   (A) Temperate (B) Tropical Monsoon
   (C) Torrid (D) Monsoon

84. Dr. Palpu was a Physician who worked under which state ?
   (A) Travancore (B) Cochin
   (C) Mysore (D) Madras Presidency

85. Who published the magazine 'Sadhujan Dootan' ?
   (A) Mar Kuriakose Elias Chavara (B) Pampady John Joseph
   (C) Ayyankali (D) K. Kelappan

86. Who was related to Muthukulam Speech of 1947 ?
   (A) Mannathu Padmanabhan (B) E.M.S. Namboodiri
   (C) C. Kesavan (D) K.P. Kesava Menon

87. Who told the message "No caste, No religion, No god for mankind" ?
   (A) Sree Narayanguru (B) V.T. Bhattathirippad
   (C) Ayyankali (D) Sahodaran Ayyappan

88. Who is the author of the book "Jathikummi"?
   (A) Velukutty Arayan (B) Pandit Karuppan
   (C) M.C. Koman (D) Ayyankali

89. World Radio Day is observed on
   (A) February 10 (B) February 11
   (C) February 13 (D) February 14

90. Who is the present Chief Election Commissioner of India ?
   (A) Achal Kumar Jyoti (B) Om Prakash Rawat
   (C) Sunil Arora (D) H.S. Brahma

91. 15th Pravasi Bharatiya Divas was held at
    (A) Varanasi   (B) Bengaluru
    (C) New Delhi   (D) Jaipur

92. Who won the Australian Open Women's Singles, 2019 ?
    (A) Karolina Pliskova   (B) Naomi Osaka
    (C) Patra Kvitova   (D) Maria Sharapova

93. Who was the recipient of Odakkuzhal Award in 2018 ?
    (A) S. Joseph   (B) K.R. Meera
    (C) E.V. Ramakrishnan   (D) T.D. Ramakrishnan

94. Southern part of Eastern coast
    (A) Coromandel Coast   (B) Malabar Coast
    (C) Konkan Coast   (D) Circar Coast

95. Javadi Hills, Shevroy Hills and Pachaimal Hills lies in the
    (A) Eastern Hills   (B) Deccan Plateau
    (C) Meghalaya Plateau   (D) Aravalli Hills

96. The Amaravathi river is the longest tributary of
    (A) Mahanadi   (B) Krishna
    (C) Godavari   (D) Kaveri

97. What is the other name for Regur soil ?
    (A) Black soil   (B) Red soil
    (C) Forest soil   (D) Arid soil

98. Who founded "Bharat Naujawan Sabha" ?
    (A) Bhagat Singh   (B) Surya Sen
    (C) Sukh Dev   (D) Rajguru

99. "India Today" a book written by
    (A) R.C. Dutt   (B) R.P. Dutt
    (C) M.N. Roy   (D) Dadabhai Naoroji

100. Among the following lakes which is not located in Thiruvananthapuram ?
    (A) Thiruvallam   (B) Kappil
    (C) Akkulam   (D) Mooriyad

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SPACE FOR ROUGH WORK

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