118/2017

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 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.

A

118/2017

1. Who among the following brought out a journal called "Srimati" for promoting the cause of women's rights ?

   (A) Arya Pallam (B) Lalitha Prabhu

   (C) Lalithambika Antharjanam (D) Anna Chandi

2. Pradhan Mantri Kaushal Vikas Yojana is meant for _____.

   (A) Urban Development (B) Housing

   (C) Pension (D) Skill Development

3. World No Tobacco Day is on _____.

   (A) May 29 (B) May 30 (C) May 31 (D) June 1

4. In which year Mr. Madhavan was elected to the SreeMoolam PrajaSabha, a legislative council of Travancore ?

   (A) 1915 (B) 1918 (C) 1923 (D) 1926

5. The renowned social and educational activist George Kurian is recently appointed as _____.

   (A) Chairman of National Commission for Women

   (B) Vice-Chairman of National Commission for Minorities

   (C) Chairman of National Commission for Child Welfare

   (D) Chairman of National Commission for Scheduled Tribes

6. In which part of the constitution embodied the directive principles of state policy ?

   (A) Part IV (B) Part III (C) Part II (D) Part I

7. The Yachana Yatra led by V.T Bhattathiripad in 1931 was for _____.

   (A) Education of Poor Children

   (B) Employment Opportunities for the Educated

   (C) Protecting the Rights of Namboodiris

   (D) Food for the Needy

8. Which of the following institution is instrumental in starting the Kerala State Literacy Mission, which led Kerala to its universal literacy movement ?

(A) PRATHAM (B) KANFED (C) Samathwa Samajam (D) SPREAD

9. The government scheme providing additional wage employment and food security, alongside creation of durable community assets in rural areas is known as _____.

(A) Swarnajayanti Gram Swarozgar Yojana

(B) Sampoorna Grameen Rozgar Yojana

(C) Swavalamban

(D) Swabhiman

10. The author of Chandramukhi Vilasam is _____.

(A) Kerala Varma Valiya Koi Thampuran

(B) Kodungallur Kochunni Thampuran

(C) C.V. Raman Pillai

(D) K.C. Kesava Pillai

11. Which state government has announced free education for girls in Government Schools and Colleges from Nursery to PhD ?

(A) Kerala (B) Haryana (C) Chandigarh (D) Punjab

12. Headquarter of Asian Development Bank is _____.

(A) Manila (B) Bangkok (C) Jakarta (D) Hanoi

13. P. KesavaDev's book on Russian Revolution is known as _____.

(A) Fire and Spark

(B) The Story of the Russian Revolution

(C) A People's Tragedy

(D) Ten Days That Shook the World

14. Which of the following Article of Indian Constitution deals with the amendment of the Constitution ?

(A) Article 356 (B) Article 359 (C) Article 368 (D) Article 342

15. Malayali Memorial agitation requested _____ to secure jobs for the educated Keralite citizens in the Travancore civil service.

(A) Vishakham Tirunal (B) Pooradom Tirunal

(C) Chithira Tirunal (D) Moolam Tirunal

16. In which year Benjamin Baily established his printing press in Kottayam ?

(A) 1825 (B) 1831 (C) 1835 (D) 1821

17. The Dalit activist, who founded Cheramar Mahajan Sabha is _____.

(A) Moorkoth kumaran (B) Pampady John Joseph

(C) M.C. Joseph (D) Poikayil Yohannan

18. Kerala Granthashala Sangham was initiated by _____.

(A) C. Krishnan (B) V.T. Bhattathiripad

(C) Puthuvayil Narayana Panicker (D) K.P. Vellon

19. Who prepared a "Land Reclamation Scheme" in 1952 and submitted the report to the Tiru-Kochi Government ?

(A) Ayyathan Gopalan (B) Kuroor Neelakandan

(C) Velukkutty Arayan (D) M.C. Joseph

20. Who organized Samathva Samajamto propagate the concept of equality and dignity of all human beings ?

(A) Aiyya Vaikundar (B) C.V. Kunjuraman

(C) G.P. Pillai (D) Brahmananda Sivayogi

21. The number '0' is a :

(A) Rational number (B) Real number

(C) Integer (D) All the above

22. $100 \div 16\frac{2}{3} =$

(A) 2 (B) 4 (C) 6 (D) 8

23. Find 6% of 750.

(A) 45 (B) 75 (C) 70 (D) 50

24. Two third of the square of a certain number is 96. What is the number ?

(A) 16 (B) 32 (C) 12 (D) 14

25. Which of the following cannot be the unit digit in a perfect square ?

(A) 9 (B) 7 (C) 5 (D) 1

26. $\sqrt{1.69} - \sqrt{0.01} =$

(A) 1.20 (B) 1.10 (C) 1.30 (D) 1.40

27. The sum of first 50 natural numbers is :

(A) 1025 (B) 1225 (C) 925 (D) 1275

28. Find the least number which when increased by 8 is exactly divisible by 24, 32 and 36 .

(A) 296 (B) 288 (C) 280 (D) 272

29. Evaluate $\frac{(2.79)^2-(1.71)^2}{2.79-1.71}$.

(A) 2.79 (B) 5.84 (C) 4.50 (D) 5.80

30. $3 - [3 - (3 - 3(3+3))] =$

(A) 14 (B) 24 (C) -6 (D) -15

31. The least number of 4 digits which is a perfect square is :

(A) 1000 (B) 1024 (C) 1444 (D) 1009

32. The difference between a number and its two-fifth is 24. What is the number ?

(A) 20 (B) 16 (C) 24 (D) 40

33. If 6 men working on a job finish it in 40 days. In how many days 10 men will do the same job ?

(A) 20 (B) 22 (C) 32 (D) 24

34. $\left(\frac{m^x}{m^y}\right)^{(x+y)} \left(\frac{m^y}{m^z}\right)^{(y+z)} \left(\frac{m^z}{m^x}\right)^{(z+x)} = ?$

(A) 0 (B) $x+y+z$ (C) 1 (D) m^{xyz}

35. If $\log 2 = 0.3010$ and $\log 3 = 0.4771$; find the value of $\log \sqrt{24}$.

(A) 0.6900 (B) 0.6020 (C) 0.9541 (D) 0.7781

36. The product of two numbers is 90 and the sum of their squares is 349. The sum of the numbers is :

(A) 18 (B) 33 (C) 23 (D) 42

37. $\frac{(0.5)^2+(0.6)^2}{(0.3)^2-0.03+(0.6)^2}$ is equal to :

(A) 2.50 (B) 1.45 (C) 4.12 (D) 0.06

38. $\sin 57° - \cos 33°$

(A) 1 (B) 2 (C) -2 (D) 0

39. Divide $9a^2bc^4$ by $-3abc^2$:

(A) $3abc$ (B) $3ab^2$ (C) $-3ac^2$ (D) $-3ab^2$

40. A man travels 20 km on foot at 5 km/hr and another 10 km at 20 km/hr by bus. What is the average speed ?

(A) 1.5 km/hr (B) 5 km/hr (C) 6 km/hr (D) 6.67 km/hr

41. What will 60% of a number be whose 150% is 120 ?

(A) 36 (B) 48 (C) 64 (D) 42

42. The top of a 20m high tower makes an angle of elevation of 60° with the bottom of an electrical pole and angle of elevation of 30° with the top of the pole. What is the height of the electric pole ?

(A) 5m (B) 6.6m (C) 13.3m (D) 15.2m

43. The smallest fraction among $\frac{3}{5}, \frac{2}{3}, \frac{5}{6}$ and $\frac{7}{10}$ is :

(A) $\frac{3}{5}$ (B) $\frac{2}{3}$ (C) $\frac{5}{6}$ (D) $\frac{7}{10}$

44. If 5 : 4 = 35 : X, then the value of X is :

(A) 42 (B) 70 (C) 32 (D) 28

45. By selling a shirt of Rs. 630, a shopkeeper gains 5%. What is the cost price of the shirt ?

(A) Rs. 600 (B) Rs. 450 (C) Rs. 500 (D) Rs. 605

46. Solve $\frac{x}{3} - \frac{5}{2} = 6$.

(A) $\frac{33}{2}$ (B) $\frac{39}{2}$ (C) $\frac{51}{2}$ (D) $\frac{59}{2}$

47. The capacity of a cuboidal tank is 50,000 Litres. Find the breadth of the tank if the length and depth are 2.5m and 10m respectively.

(A) 1m (B) 1.5m (C) 2m (D) 2.5m

48. If the diameter of a circle is doubled the area is :

(A) quadrupled (B) doubled (C) halved (D) trebled

49. The surface area of a cube is 600 cm^2. The length of its diagonal is :

(A) $10\sqrt{3}$ cm (B) $10\sqrt{2}$ cm (C) $\frac{10}{\sqrt{2}}$ cm (D) $\frac{10}{\sqrt{3}}$ cm

50. Rs. 250 is divided between Arun and Sasi, and Arun gets 100. Find the ratio of division of the amount.

(A) 4 : 3 (B) 5 : 1 (C) 2 : 3 (D) 1 : 3

51. LCM of the numbers 3, 4 and 5 is :

(A) 12 (B) 20 (C) 15 (D) 60

52. 130° F is equal to :

(A) 54.4°C (B) 40.2°C (C) 65.5°C (D) 90°C

53. 20 gallons is equal to :

(A) 10 Litres (B) 9.1 Litres (C) 91.2 Litres (D) 200 Litres

54. S.I unit of force is :

(A) kgf (B) newton (C) pascal (D) kg/cm^2

55. A push of 15 kg and a pull of 20 kg act on a body in different direction. The resultant of two forces is :

(A) 5 kg (B) 35 kg (C) 25 kg (D) 18 kg

56. The permissible variation of a size is called :

(A) Limit (B) Allowance (C) Tolerence (D) Fit

57. The size of the title block for all sizes of drawing sheet is ____mm × ___mm.

(A) 200 × 100 (B) 150 × 100 (C) 200 × 180 (D) 185 × 65

58. Dimension lines, hatching and extension lines are drawn as :

(A) thick lines (B) thin continuous line

(C) long and thin chain line (D) thin and wavy lines

59. The taper on a shaft is indicated along the :

(A) outlines (B) dashed lines (C) dimension lines (D) centre lines

60. Writing of titles, notes etc. on a drawing is called :

(A) Lettering (B) Dimensioning

(C) Marking (D) All of the above

61. In a small size hole, the thread is cut by a tool called _____.

(A) chisel (B) tap (C) die (D) file

62. In a single start thread the lead is _____ the pitch.

(A) one-fourth (B) half (C) twice (D) same as

63. _____ screw is used in the lead screw of a lathe.

(A) square thread (B) V-thread (C) buttres (D) ACME-thread

64. The distance by which the valve moves away from its seat is called :

(A) pitch (B) lead (C) lift (D) shift

65. What is increased in a step down transformer ?

(A) Voltage (B) Current

(C) Wattage (D) None of the above

66. A dynamo converts :

(A) high voltage into low voltage

(B) low voltage into high voltage

(C) electrical energy into mechanical energy

(D) mechanical energy into electrical energy

67. Example for 2nd order lever is :

(A) scissors (B) nutcracker (C) tweezers (D) see-saw

68. 1 kcal is equal to :

(A) 4.2 joules (B) 420 joules (C) 4200 joules (D) 6000 joules

69. Coefficient of friction is equal to the ratio of limiting friction to :

(A) static friction (B) sliding friction (C) kinetic friction (D) normal reaction

70. Specific gravity of kerosene is 0.8 g/cm^3. Then the volume of 1 kg of kerosene is :

(A) 800 cm^3 (B) 1250 cm^3 (C) 8 cm^3 (D) 120 cm^3

71. The property of a material to resist deformation under stress :

(A) Hardness (B) Plasticity (C) Stiffness (D) Brittleness

72. Bronze is an alloy of copper and _____ .

(A) Tin (B) Lead (C) Zinc (D) Aluminium

73. Engine cylinders are made of :

(A) Mild steel (B) Carbon steel (C) High speed steel (D) Cast iron

74. The effective resistance of three resistors 3Ω, 4Ω, 5Ω used in series connection is _____.

(A) 7 Ω (B) 5 Ω (C) 12 Ω (D) 3 Ω

75. A resistance of 900 Ω is connected across 220 V supply. The power of the current is :

(A) 54W (B) 180W (C) 360W (D) 760W

76. The ratio of shear stress to shear strain is :

(A) Youngs modulus (B) Bulk modulus

(C) Rigidity modulus (D) Poisson's ratio

77. Find the amount of heat required to raise the temperature of 3.2 litres of water from 30°C to 48°C.

(A) 42.0 kcal (B) 57.6 kcal (C) 36.5 kcal (D) 78.5 kcal

78. Melting point of Iron is :

(A) 1538°C (B) 2050°C (C) 1538°F (D) 2050°F

79. Specific gravity of mercury is :

(A) 1.36 g/cm^3 (B) 13.6 g/cm^3 (C) 1 g/cm^3 (D) 2.5 g/cm^3

80. Eddy current loss in a transformer is reduced by :

(A) using thick wires (B) using material with low hysteresis loss

(C) having a laminated core (D) using iron core

81. The resistance and tolerance of a yellow, violet, red coded resistor respectively are :

(A) 47 kΩ, 10% (B) 4.7 kΩ, 10% (C) 47kΩ, 20% (D) 4.7 kΩ, 20%

82. If an element of atomic number 15 has an isotope of mass number 32 :

(A) The number of neutrons in the nucleus is 17

(B) The number of neutrons in the nucleus is 15

(C) The number of protons in the nucleus is 17

(D) The number of nucleons in the nucleus is 15

83. The impurity atoms with which a pure silicon be doped to make a p-type semiconductor is :

(A) Aluminium (B) Arsenic (C) Antimony (D) Germanium

84. The range of frequencies allotted for FM radios is :

(A) 88 to 108 kHz (B) 88 to 108 MHz (C) 47 to 230 kHz (D) 47 to 230 MHz

85. The sound produced by a tuning fork is a :

(A) analog signal (B) digital signal

(C) both (A) and (B) (D) pulse signal

86. The graph of the equation $y = 5x^2 + 2$ is a :

(A) Hyperbola (B) Line (C) Circle (D) Parabola

87. If A : B = 3 : 5 and B : C = 4 : 7, then A : B : C = ?

(A) 15 : 20 : 30 (B) 30 : 20 : 35 (C) 12 : 20 : 35 (D) 30 : 10 : 12

88. The sum of four times a number and 9 is same as one-third that number increased by 31. Find the number.

(A) 6 (B) 3 (C) 2 (D) 12

89. Value of tan 300° is :

(A) $\sqrt{2}$ (B) $\sqrt{3}$ (C) $-\sqrt{2}$ (D) $-\sqrt{3}$

90. The quadratic equation $ax^2 + bx + c = 0$ has two distinct real roots. Which of the following statements is true ?

(A) $b^2 > 4ac$ (B) $b^2 = 4ac$ (C) $2b^2 = 4ac$ (D) $b^2 < 4ac$

91. The change in direction of the path of light ray when it passes from one medium to another is called :

(A) Interference (B) Refraction (C) Dispersion (D) Diffraction

92. The least count of a micrometer is :

(A) 0.01mm (B) 0.001mm (C) 0.02mm (D) 0.002mm

93. The binary number equal to the numeral 12 is :

(A) 1001 (B) 1110 (C) 1010 (D) 1100

94. Which among the following is the smallest diameter of a screw thread ?

(A) Major diameter (B) Minor diameter

(C) Internal thread diameter (D) External thread diameter

95. The locus of the tip of a string when it is wound or unwound around a solid keeping it always tight is a :

(A) Cycloid (B) Involute (C) Ellipse (D) Helix

96. The measured size of a finished part is :

(A) Actual size (B) Basic size

(C) Dimensioned size (D) Production size

97. Hygrometer is used to measure :

(A) temperature (B) pressure (C) specific gravity (D) humidity

98. pH value of an acid is :

(A) less than 7 (B) greater than 7 (C) equal to 7 (D) none of the above

99. Resistance of a conductor is directly proportional to :

(A) length (B) area of cross section

(C) time (D) none of the above

100. The curved surface area of a cylindrical roller is 60π cm^2. If the roller is 10cm long, its radius is :

(A) 6.5 cm (B) 3.0 cm (C) 1.6 cm (D) 2.5 cm

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