Lab. Attendent & Fitter Helper - 2019

LAF/19

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO.

2020

TEST BOOKLET

Time allowed : $1\frac{1}{2}$ hours

Full marks : 100

Answer ***all*** the questions.

Questions are of equal value.

TEST BOOKLET SERIES

A

Serial No. 001

Roll No.:

Signature of the Candidate:

INSTRUCTIONS

Candidates should read the following instructions carefully before answering the questions:

1. This booklet consists of 16 pages including this front page, containing 100 questions. **Verify the Page Nos. and Test Booklet Series on each page and bring at once to the Invigilator's notice any discrepancy**.
2. Answers will have to be given in the Special Answer-Sheet supplied for the purpose.
3. Before you proceed to mark in the Answer-Sheet in response to various items in the Test Booklet, you have to fill in some particulars in the Answer-Sheet as per instructions sent to you in the Admit Card. ***Do not fold the Answer-Sheet as this will result in error in your marks.***
4. All questions are of multiple-choice answer-type. You will find ***four*** probable answers **(A)**, **(B)**, **(C)** and **(D)** against each question. Find out which of the four answers appears to you to be correct or the best. Now darken the circle corresponding to the letter of the selected answer in the Answer-Sheet with **Black Ball Point Pen** as per instructions printed on the reverse of the Admit Card and in the Answer-Sheet.
5. One and only one circle is to be fully blackened for answer. Any spot in any other circle (multiple circle) or in wrong circle will be considered as wrong answer. If more than one circle is encoded for a particular answer, it will be treated as a wrong answer.
6. ***There will be negative marking of $\frac{1}{3}$ mark for each wrong answer.***
7. **There are blank pages at the end of this Test Booklet for Rough Work.**
8. ***The Special Answer-Sheet should be handed over to the Invigilator before leaving the Examination Hall. You are permitted to take away the used Test Booklet after completion of the examination.***

1. Change the voice in the following sentence:
Passive voice: Our army has been defeated.
Active voice:

(A) The enemy have defeated our army.
(B) The enemy has defeated our army.
(C) Someone have defeated our army.
(D) The enemy defeats our army.

2. Which of the following is not a synonym of 'dangerous'?

(A) Benign
(B) Perilous
(C) Risky
(D) Hazardous

3. Change into a simple sentence:
I saw a bird that was wounded.

(A) I saw a bird and it was wounded.
(B) I saw a wounded bird.
(C) I saw a bird which had been wounded.
(D) The bird that I saw was wounded.

4. Choose the correct option:

(A) He is not a honourable man.
(B) He is not honourable man.
(C) He is not an honourable man.
(D) He is not the honourable man.

5. One who tests eyesight and sells spectacles is called

(A) Oculist
(B) Surgeon
(C) Optician
(D) Physician

6. Identify the correct sentence:

(A) You will lose the game until you play well.
(B) You will lose the game if you play well.
(C) You will lose the game, otherwise you play well.
(D) You will lose the game unless you play well.

7. He is wanting _____ a little common sense.

(A) for
(B) at
(C) in
(D) of

8. A disease affecting many persons at the same place and time is called

(A) Endemic
(B) Paramedic
(C) Sporadic
(D) Epidemic

9. He has been working _____ 5 o'clock.

(A) for
(B) at
(C) since
(D) on

10. The correct sentence is:

(A) Until he is ill, he must take light food.
(B) As long as he is ill, he must take light food.
(C) Unless he is ill, he must take light food.
(D) So far as he is ill, he must take light food.

11. The facts point _____ a different conclusion.

(A) on
(B) to
(C) for
(D) in

12. Change from direct to indirect speech:

Direct speech: He said, "Let us go out for a walk."

Indirect speech:

(A) He proposed that they should go out for a walk.
(B) He ordered that they should go out for a walk.
(C) He requested that they should go out for a walk.
(D) He wished that they should go out for a walk.

13. Use past perfect tense:

I _____ my work when some visitors came to meet my mother.

(A) have done
(B) did
(C) had done
(D) was doing

14. The opposite of 'arrival' is

(A) coming
(B) departure
(C) embarking
(D) boarding

15. Which sentence is correct?

(A) He is a man who respect his parents.
(B) He is a man who will respect his parents.
(C) He is a man who respects his parents.
(D) He is a man who will respects his parents.

16. Which of the following words means 'helper'?

(A) Ally
(B) Friend
(C) Enemy
(D) Subordinate

17. Choose the correct sentence:

(A) The lion is the king of the forest.
(B) Lion is king of forest.
(C) A lion is a king of forest.
(D) The lion is king of forest.

18. He resembles _____ his brother.

(A) with
(B) to
(C) like
(D) None of the above

19. Give the opposite of 'illiterate'.

(A) intelligent
(B) educated
(C) foolish
(D) uneducated

20. He has bought new _____ for his house.

(A) furniture
(B) furnitures
(C) furniture's
(D) furnitures'

21. Which of the following compunds is known as Milk of Magnesia?

(A) MgO

(B) $Mg(OH)_2$

(C) $MgSO_4$

(D) $Mg_3(PO_4)_2$

22. General formula of an acyclic alkane is

(A) C_nH_{2n}

(B) C_nH_{2n+2}

(C) C_nH_{2n+4}

(D) C_nH_{2n+6}

23. The metal present in chlorophyll is

(A) Fe

(B) Zn

(C) Cu

(D) Mg

24. Density of sea water is greater than river water. Hence on entering a ship from a sea to a river

(A) the fraction of the immerged volume remains unchanged.

(B) fraction of the immerged volume increases.

(C) fraction of the immerged volume decreases.

(D) the ship sinks completely.

25. Which of the following energy conversion occurs during photosynthesis of plant?

(A) Heat $\rightarrow$ light

(B) Light $\rightarrow$ heat

(C) Light $\rightarrow$ chemical

(D) Light $\rightarrow$ mechanical

26. Which of the following allotropic form of carbon conduct electricity?

(A) Diamond

(B) Graphite

(C) Amorphous carbon

(D) None of the above

27. Which of the following is a dibasic acid?

(A) Formic acid

(B) Acetic acid

(C) Oxalic acid

(D) Benzoic acid

28. Water gas is a mixture of

(A) H_2 and O_2

(B) CO and H_2

(C) H_2 and CO_2

(D) O_2 and CO

29. Which of the following statements is true regarding variation of boiling point with altitude?

(A) Boiling point is independent of altitude.

(B) Boiling point is an increasing function of altitude.

(C) Boiling point is a decreasing function of altitude.

(D) At higher altitudes, liquid does not boil.

30. Choose the incorrect statement of the following:

(A) Speed is the rate of change of position of a body with time.

(B) Velocity is the rate of change of position of a body in a particular direction per unit time.

(C) Acceleration is the rate of change of speed with time.

(D) Force is the rate of change of linear momentum with time.

31. If 1 eV=x J; x is given by

(A) $1{\cdot}6\times10^{-20}$

(B) $1{\cdot}6\times10^{-19}$

(C) $1{\cdot}6\times10^{-18}$

(D) $1{\cdot}6\times10^{-17}$

32. An iron ball falls down separately in two liquids, water and glycerine. Choose the correct statement.

(A) The ball will fall faster in water.

(B) The ball will fall faster in glycerine.

(C) The ball will fall with same velocity in either of the liquids.

(D) The ball will float in glycerine.

33. Light and sound both propagate as wave. Choose the correct statement of the following:

(A) Both light and sound needs a medium for their propagation.

(B) Medium is essential for propagation of light but not for sound.

(C) Medium is essential for propagation of sound but not for light.

(D) Neither light nor sound need medium for its propagation.

34. Which of the following quantity is a scalar?

(A) Velocity

(B) Force

(C) Speed

(D) Acceleration

35. Weight of a material is highest at

(A) the center of the earth.

(B) the bottom of a well.

(C) the earth crust.

(D) the stratosphere.

36. You need to prepare a 0·1M solution of sodium hydroxide (Molar Mass 40). Total vol. of the solution is 10L. How much weight of sodium hydroxide you need to take?

(A) 1g

(B) 4g

(C) 40g

(D) 100g

37. Which of the following oxide of nitrogen has a vapour density of 54?

(A) NO

(B) NO_2

(C) N_2O_4

(D) N_2O_5

38. Resistance of a conductor is measured in unit of

(A) ohm

(B) volt

(C) coulomb

(D) ampere

39. Which of the following reactions produces smell of rotten egg?

(A) $C + O_2 \longrightarrow CO_2$

(B) $CuCO_3 \xrightarrow{\Delta} CuO + CO_2$

(C) $NH_4Cl + NaOH \xrightarrow{\Delta} NaCl + H_2O + NH_3$

(D) $FeS + 2HCl \longrightarrow FeCl_2 + H_2S$

40. Which of the following is a unit of pressure?

(A) Ampere

(B) Joule

(C) Kelvin

(D) Pascal

41. A solution of sodium halide when added to a solution of aquous lead nitrate solution produces brilliant yellow precipitate. The halide is

(A) Fluoride
(B) Chloride
(C) Bromide
(D) Iodide

42. Which of the following metals is the best conductor of electricity?

(A) Iron
(B) Copper
(C) Silver
(D) Zinc

43. Which of the following is an amphoteric oxide?

(A) Na_2O
(B) Al_2O_3
(C) Fe_2O_3
(D) NO_2

44. What is glancing angle in case of reflection?

(A) The angle between incident ray and the reflecting surface.
(B) The angle between incident ray and perpendicular drawn at the point of incidence.
(C) The angle between incident ray and reflected ray.
(D) The angle between the perpendicular drawn at the point of incidence and the reflecting surface.

45. Which of the following reactions produces a brown gas?

(A) $CaCO_3 \xrightarrow{\Delta} CaO + CO_2$
(B) $2KClO_3 \xrightarrow{\Delta} 2KCl + 3O_2$
(C) $2Pb(NO_3)_2 \xrightarrow{\Delta} 2PbO + 4NO_2$
(D) $2H_2O_2 \longrightarrow 2H_2O + O_2$

46. Addition of hydrochloric acid to a dispersion of Limestone produces effervescence. The gas coming out is

(A) Oxygen
(B) Carbon monoxide
(C) Carbon dioxide
(D) Helium

47. A stone is thrown upward. Which of the following statements is correct with increasing height of the stone?

(A) Kinetic energy and potential energy increases.
(B) Kinetic energy increases and potential energy decreases.
(C) Potential energy increases and kinetic energy decreases.
(D) Both Kinetic energy and potential energy decreases.

48. Choose the correct statement regarding isotopes.

(A) Both atomic no. & mass no. same.
(B) Mass no. same but different atomic number.
(C) Atomic no. same but different mass no.
(D) Both atomic no. and mass no. different.

49. What is the unit of specific gravity of a substance in cgs system?

(A) g
(B) cm^3
(C) s/g
(D) unit less

50. Choose the atomic no. of a nucleus which is a noble gas.

(A) 8
(B) 9
(C) 10
(D) 11

51. On electrolysis of water, what accumulates at the electrodes?

(A) H_2 and O_2

(B) H^+ and OH^-

(C) H_2O_2 and H_2

(D) H_2 and OH^-

52. During photosynthesis, plants produce glucose. Molecular formula of glucose is,

(A) $C_3H_6O_4$

(B) $C_6H_{12}O_6$

(C) $C_{12}H_{22}O_{11}$

(D) $C_{24}H_{40}O_{21}$

53. Which of the following statements signifies Boyle's Law?

(A) PV=const; T,n constant

(B) $V \propto T$; P, n constant

(C) $V \propto n$; P, T constant

(D) $P \propto n$; V, T constant

54. Choose the gas that neither catches fire nor support ignition.

(A) H_2

(B) O_2

(C) C_2H_2

(D) N_2

55. Which of the following is a liquid metal?

(A) Mercury

(B) Bromine

(C) Water

(D) Kerosine

56. Which of the following statements is correct?

(A) Static friction = sliding friction

(B) Sliding friction > rolling friction

(C) Rolling friction > static friction

(D) Static friction = sliding friction = rolling friction

57. Scientist Wöhler firstly prepared an organic compound from inorganic ingradient. The organic compound was

(A) formic acid

(B) vinegar

(C) urea

(D) iodex

58. Which of the following temperatures is same in celsius as well as fahrenheit scales?

(A) –273

(B) –40

(C) 0

(D) 218

59. pH of an aquous weak acid solution is

(A) 0

(B) 7

(C) >7

(D) <7

60. How many electrons must flow across a cross-section of a conductor per second to produce 1 amp. current?

(A) $6{\cdot}02\times10^{23}$

(B) $1{\cdot}90\times10^{-19}$

(C) $4{\cdot}32\times10^{-22}$

(D) $6{\cdot}25\times10^{18}$

61. Calculate the interest of Rs. 800 for 2 years 3 months at the rate of $12\frac{1}{2}\%$ per annum.

(A) Rs. 200
(B) Rs. 225
(C) Rs. 300
(D) Rs. 175

62. If the purchase value of fish be Rs. 250 and the profit is 10%, the selling price is

(A) Rs. 225
(B) Rs. 260
(C) Rs. 275
(D) Rs. 280

63. Divide Rs. 3,500 among A, B and C so that A's share : B's share = 2:3 and B's share : C's share = 4:5.

(A) A's share Rs. 800, B's share Rs. 1,200 and C's share Rs. 1500
(B) A's share Rs. 600, B's share Rs. 1,000 and C's share Rs. 1,200
(C) A's share Rs. 1,500, B's share Rs. 1,200 and C's share Rs. 800
(D) None of the above

64. How many time the hour hand of a clock will take to describe 45°?

(A) 1 hr.
(B) 1 hr. 15 mins.
(C) 2 hr.
(D) 1 hr. 30 mins.

65. Simplify: $\sqrt{0{\cdot}25} \times (0{\cdot}5)^3 + (0{\cdot}25)^2$

(A) 12·5
(B) 1·25
(C) 0·125
(D) ·0125

66. An employee spent 25% of his salary in first week and $16\frac{2}{3}\%$ of the remaining in the second week and found that he altogether spent Rs. 1,500. Find the salary of the man.

(A) Rs. 3,000
(B) Rs. 4,000
(C) Rs. 5,000
(D) Rs. 6,000

67. When a natural number n is divided by 4, the remainder is 3. What is the remainder when $2n$ is devided by 4?

(A) 1
(B) 2
(C) 3
(D) 6

68. Simplify: $6-\dfrac{1\frac{1}{4}}{1+\dfrac{1}{1-\frac{1}{3}}}$

(A) $6\frac{1}{2}$
(B) $7\frac{1}{2}$
(C) $5\frac{1}{2}$
(D) $3\frac{1}{2}$

69. The cost price of 20 articles is equal to the selling price of 15 articles. The profit per cent is

(A) $10\frac{1}{3}\%$
(B) $15\frac{1}{3}\%$
(C) $33\frac{1}{3}\%$
(D) $25\frac{1}{3}\%$

70. Simplify: $\frac{1}{99}\left(\frac{2}{3}\div\frac{4}{9}\text{ of }7\frac{1}{2}\right)+9999\frac{494}{495}$

(A) 1000
(B) 10000
(C) 9999
(D) 99000

71. What is the greatest presquare number of 7265?

(A) 7221
(B) 7224
(C) 7225
(D) 7229

72. Find the five-digit greatest number which is a perfect square.

(A) 99999
(B) 90000
(C) 10000
(D) 99856

73. Some people can do $\frac{3}{4}$th of a work in 28 days. To finish the rest of work in 14 days, 14 more people were appointed. Determine the number of people who were appointed initially.

(A) 20
(B) 18
(C) 16
(D) 12

74. The least number of $66\frac{2}{3}$% of 90, 4% of 5000, 50% of 200·8 and $141\frac{4}{3}$ is

(A) $141\frac{4}{3}$
(B) 50% of 200·8
(C) 4% of 5000
(D) $66\frac{2}{3}$% of 90

75. 33 bighas of land can be ploughed by 15 ploughs in 11 days. In how many days 22 bighas of land will be ploughed by 10 ploughs?

(A) 11 days
(B) 10 days
(C) 15 days
(D) 8 days

76. The mixture of 72 litres contains syrup and water in the ratio of 7:2. How much water must be added to it so that the ratio of syrup and water may be 4:3?

(A) 46 litres
(B) 26 litres
(C) 36 litres
(D) 16 litres

77. If working 9 hrs. daily 6 persons complete a piece of work in 30 days, then working 8 hrs. daily how many people complete 10 times above work in 25 days?

(A) 80
(B) 81
(C) 75
(D) 90

78. Rs. 9,000 were divided equally among a certain number of persons. Had there been 20 less number of persons, each would have got Rs. 160 more. The original number of persons—

(A) 40
(B) 45
(C) 25
(D) 35

79. If principal amount becomes double in $7\frac{1}{2}$ years, what is the percentage rate of interest per annum?

(A) 20%
(B) 15%
(C) $13\frac{1}{3}$%
(D) 40%

80. Which number decreased by its 10% gives 30?

(A) $33\frac{1}{3}$

(B) $27\frac{3}{11}$

(C) 27

(D) None of the above

81. A bag contains Rs. 130 in form of 1 rupee, 50 paisa coins in the ratio 4:5. What is the number of 50 paisa coins?

(A) 70

(B) 80

(C) 90

(D) 100

82. A sum lent on simple interest becomes Rs. 2520 in 2 years and Rs. 2700 in 5 years. The rate of interest is

(A) 2% per annum

(B) 2·25% per annum

(C) 2·5% per annum

(D) 3% per annum

83. Find the fourth proportional to 5, 15 and 8.

(A) 6

(B) 4

(C) 8

(D) 24

84. The number of members of a club increases every year by 10%. If the number of members be 400 in the first year, what will it be in the third year?

(A) 440

(B) 420

(C) 484

(D) 524

85. What per cent of 60 is 42?

(A) 50%

(B) 60%

(C) 80%

(D) 70%

86. The capitals of three partners in a business are Rs. 7,000, Rs. 9,500 and Rs. 23,500. If the profit is Rs. 22,400, how much amount the partner with lowest capital will get?

(A) Rs. 13,160

(B) Rs. 5,320

(C) Rs. 3,000

(D) Rs. 3,920

87. Divide 800 mangoes among 4 men, 10 women and 16 boys so that $\frac{1}{3}$ of each man's share $\frac{1}{2}$ of each woman's share and $\frac{3}{4}$ of each boy's share may be equal.

(A) Each man gets 20 mangoes, each woman gets 30 mangoes and each boy gets 45 mangoes.

(B) Each man gets 45 mangoes, each woman gets 30 mangoes and each boy gets 20 mangoes.

(C) Each man gets 45 mangoes, each woman gets 20 mangoes and each boy gets 30 mangoes.

(D) Each man gets 60 mangoes, each woman gets 25 mangoes and each boy gets 15 mangoes.

88. If $x:y = 4:7$, the ratio $21x+4y:7x+2y$ is

(A) 7:4

(B) 3:8

(C) 8:3

(D) 1:4

89. What is 40% of 40% of 400?

(A) 160

(B) 64

(C) 16

(D) 6·4

90. What is the compound ratio of 2:3, 4:1 and 5:8?

(A) 3:5

(B) 5:7

(C) 3:7

(D) 5:3

91. A man who lent Rs. 9,000 got Rs. 750 as interest. Find the rate per cent of interest.

(A) $8\frac{1}{3}\%$

(B) $7\frac{1}{3}\%$

(C) $6\frac{2}{3}\%$

(D) 8%

92. A man bought a cycle for Rs. 6,860 at a discount of 2%. What would be the cost if the discount was not allowed?

(A) Rs. 8,000

(B) Rs. 8,660

(C) Rs. 9,700

(D) Rs. 7,000

93. What is the compound interest of Rs. 25,000 in 3 years at the rate of 10% per annum?

(A) Rs. 8,275

(B) Rs. 7,500

(C) Rs. 33,275

(D) Rs. 32,500

94. The simplest value of $\dfrac{1+\frac{2}{3}\div\frac{3}{4}\text{ of }\frac{2}{3}}{2-\frac{3}{4}\text{ of }\frac{2}{3}\div\frac{2}{3}}$

(A) $1\frac{13}{15}$

(B) $2\frac{13}{15}$

(C) $\frac{13}{15}$

(D) $1\frac{2}{13}$

95. A person weights 80 kg. By physical exercise at the beginning of each year, he decreases 5% weight. His weight after 3 years will be

(A) 68·59 kg

(B) 68·50 kg

(C) 68·75 kg

(D) 68 kg

96. Find the least number of five-digit divisible by 12, 16 and 24.

(A) 10000

(B) 10048

(C) 10032

(D) 10064

97. The ratio of two numbers is 4:5 and their L.C.M. is 100. Find their H.C.F.

(A) 3

(B) 4

(C) 5

(D) 6

98. The income of a man first reduced 50%. Again his income was increased 50%. How much per cent was his loss or gain?

(A) 25% loss

(B) 25% gain

(C) 12·5% loss

(D) 12·5% gain

99. Simplify:

$$\left(444+\frac{1}{444}\right)\left(444+\frac{1}{444}\right)-\left(444-\frac{1}{444}\right)\left(444-\frac{1}{444}\right)$$

(A) 4

(B) −4

(C) 8

(D) −8

100. The average of 11 results is 50. If the average of first 6 results be 49 and that of the last 6 results be 52, then find the 6th result.

(A) 56

(B) 51

(C) 50

(D) 57