Monthly Progessive Test

Class: VIII

Subject: PCMB

Test Booklet No.: MPT01

Test Date: | 2 | 2 | 0 | 4 | 2 | 0 | 2 | 4 |

Time: 180 mins

Full Marks: 200

Important Instructions :

1. The Test is of 180 mins duration and the Test Booklet contains 100 multiple choice questions of single correct option only. There are four sections with four subjects. You have to attempt all 100 questions (Candidates are advised to read all 100 questions). Questions 1 to 25 contain Physics, Questions 26 to 50 contain Chemistry, Questions 51 to 75 contain Mathematics, Questions 76 to 100 contain Biology.

2. Each question carries 2 marks. For each correct response, the candidate will get 2 marks. There is no negative mark for wrong response. The maximum mark is 200.

3. Use Blue / Black Ball point Pen only for writing particulars marking responses on Answer Sheet.

4. Rough work is to be done in the space provided for this purpose in the Test Booklet only.

5. On completion of the test, the candidate must handover the Answer Sheet to the invigilator before leaving the Room / Hall. The candidates are allowed to take away this Test Booklet with them.

6. The CODE for this Booklet is Off Line MPT0122042024.

7. The candidates should ensure that the Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet. Do not write your UID No. anywhere else except in the specified space. Use of white fluid for correction is NOT permissible on the Answer Sheet. **Do not scrible or write on or beyond discrete bars of OMR sheet at both sides**.

8. Each candidate must show on-demand his/her Registration document to the Invigilator.

9. No candidate, without special permission of the Centre Superintendent or Invigilator, would leave his/her seat.

10. Use of Electronic Calculator/Cellphone is prohibited.

11. The candidates are governed by all Rules and Regulations of the examination with regard to their conduct in the Examination Hall. All cases of unfair means will be dealt with as per Rules and Regulations of this examination.

12. No part of the Test Booklet and Answer Sheet shall be detached under any circumstances.

13. There is no scope for altering response mark in Answer Sheet.

Physics

1. A ball is sinking in a pond. How many forces act on the ball? (Neglect viscous force)

   Ⓐ 1   Ⓑ 2   Ⓒ 3   Ⓓ None of these

2. A rock is freely falling from a height. What are the forces acting on the rock?

   Ⓐ Gravity   Ⓑ Air resistance   Ⓒ Both of these   Ⓓ None of these

3. A cart is rolling downhill. What are the forces acting on it?

   Ⓐ Gravity   Ⓑ Friction   Ⓒ Normal force   Ⓓ All of these

4. A shelf hangs from a rope from the ceiling. A book rests on the shelf. Which forces are acting on the book?

   Ⓐ Gravity and tension   Ⓑ Gravity and tension and normal force

   Ⓒ Gravity and normal force   Ⓓ None of these

5. A force of 10 N is applied on a body. If the friction force the body feels is 5 N then find the body's acceleration. (Mass of the body is 5 kg.)

   Ⓐ $1 \, \text{m/s}^2$ Ⓑ $0.2 \, \text{m/s}^2$

   Ⓒ There is no acceleration   Ⓓ $2 \, \text{m/s}^2$

6. A body of mass 1 kg is resting on a table. What is the value of the normal force?

   Ⓐ 1 N   Ⓑ 1 dyne   Ⓒ 1 kgf   Ⓓ None of these

7. What weight does a freely falling body feel?

   Ⓐ Its own weight   Ⓑ Lesser than its weight

   Ⓒ Greater than its weight   Ⓓ Zero weight

8. An apple is falling from a tree. The force acting here is

   Ⓐ Mascular   Ⓑ Gravitational   Ⓒ Electrostatics   Ⓓ Magnetic force

9. What does a North pole of a magnet do to the North pole of another magnet?

   Ⓐ Attract   Ⓑ Repel   Ⓒ Does nothing   Ⓓ None of these

10. What type of force is involved in kicking a ball?

    Ⓐ Friction force   Ⓑ Electrostatic force

    Ⓒ Gravitational force   Ⓓ Muscular force

11. The number of forces are acting on a mango hanging from a tree is/are

    Ⓐ 1   Ⓑ 2   Ⓒ 3   Ⓓ 4

12. A cat is sleeping on a table. The number of forces acting on cat is

Ⓐ 1   Ⓑ 2   Ⓒ 3   Ⓓ 4

13. A river flows down from the mountain into plane. The type of force acting here is

Ⓐ Masculine force   Ⓑ Magnetic force

Ⓒ Gravitational force   Ⓓ Electrostatic force

14. When two bodies repel each other, the type of force/forces can be responsible for it is

Ⓐ Electrostatic force   Ⓑ Magnetic force

Ⓒ Both Ⓐ and Ⓑ   Ⓓ None of these

15. A man pushing a box towards East. In which direction should a lady push the box to keep the box at rest.

Ⓐ Towards East   Ⓑ Towards South   Ⓒ Towards North   Ⓓ Towards West

16. The value of reaction force if action force on a fixed body is 10N

Ⓐ 12N   Ⓑ 10N   Ⓒ 8N   Ⓓ 15N

17. The direction of reaction of normal force is

Ⓐ 30° to normal force

Ⓑ 60° to normal force

Ⓒ 45° to normal force

Ⓓ Along the line of action of normal force but in opposite sense

18. The total number of types of inertia is

Ⓐ 1   Ⓑ 2   Ⓒ 3   Ⓓ 4

19. Does the directional inertia is related to resistance of a body to change its direction of its motion?

Ⓐ Yes   Ⓑ No   Ⓒ Sometimes yes   Ⓓ Data insufficient

20. If a spring is pulled at the free end of spring which is fixed to a wall on the other end, then spring is

Ⓐ Compressed   Ⓑ Extended

Ⓒ Sometimes extended   Ⓓ No change in the length of spring

21. A constant force 10N starts acting on a body which was resting on a smooth surface. The mass of the body is 2Kg. If mass of the body is made to 4Kg, then new acceleration of the body becomes

Ⓐ 2 m/s^2 Ⓑ 1.5 m/s^2 Ⓒ 1 m/s^2 Ⓓ 2.5 m/s^2

22. If weight of a body is 19.6 N, then the mass of the body (in kg) is

Ⓐ 2   Ⓑ 1.5   Ⓒ 1   Ⓓ 3

23. If mass of body is 2kg, then mass of the same body on Moon is (in kg)

Ⓐ 2.5   Ⓑ 1   Ⓒ 1.5   Ⓓ 2

24. A force of 10N is acting on a body for 2s, the value of impulse is (in Ns)

Ⓐ 10   Ⓑ 20   Ⓒ 25   Ⓓ 15N

25. A force of 5N acting on a body for 3s, then value of change in linear momentum is (in Kg m/s)

Ⓐ 10   Ⓑ 12   Ⓒ 15   Ⓓ 16

Chemistry

26. When coal is heated in air, it burns and produces

Ⓐ Oxygen gas   Ⓑ Carbon dioxide gas

Ⓒ Nitrogen gas   Ⓓ All of these

27. The world's first oil well drilled in

Ⓐ Pennsylvania   Ⓑ Washington   Ⓒ New Zealand   Ⓓ India

28. The other name of petroleum is

Ⓐ Coal   Ⓑ Tar   Ⓒ Grease   Ⓓ Black gold

29. Coke is used for manufacturing of

Ⓐ Lead   Ⓑ Alluminium   Ⓒ Steel   Ⓓ Copper

30. Which is an almost pure form of carbon ?

Ⓐ Coke   Ⓑ Coal tar   Ⓒ Coal gas   Ⓓ None of these

31. Heavy motor vehicles and tractors run on

Ⓐ Petrol   Ⓑ Diesel   Ⓒ Kerosene   Ⓓ Coal

32. The petroleum product used in place of coal-tar for metalling the road

Ⓐ Coke   Ⓑ Coal gas   Ⓒ Tar   Ⓓ Bitumen

33. Renewable source(s) of energy is / are

Ⓐ Sunlight   Ⓑ Air   Ⓒ Coal   Ⓓ Both Ⓐ and Ⓑ

34. The example of non-renewable source of energy is

Ⓐ Water   Ⓑ Air   Ⓒ Coal   Ⓓ All

35. The carbon contain in the anthracite coal is

Ⓐ 50%   Ⓑ 71%   Ⓒ 80 - 85%   Ⓓ 94 - 98%

36. The gas obtained when coal is heated in absence of air is called

Ⓐ LPG   Ⓑ CNG   Ⓒ Coal gas   Ⓓ None of these

37. Petrol and diesel can be obtained from

Ⓐ Coal tar   Ⓑ Coal   Ⓒ Petroleum   Ⓓ Coal gas

38. A black rocky substance mainly used as a fuel is

Ⓐ Coal tar   Ⓑ Coal   Ⓒ Wood   Ⓓ None of these

39. Which is used in thermal power plants and produce electricity ?

Ⓐ Petroleum   Ⓑ Natural gas   Ⓒ Coal   Ⓓ None of these

40. Charcoal burns in air to give

Ⓐ Carbon dioxide   Ⓑ Heat   Ⓒ Both Ⓐ and Ⓑ   Ⓓ None of these

41. The slow process of conversion of dead vegetations into coal is called

Ⓐ Carbon dating   Ⓑ Coalization   Ⓒ Carbonization   Ⓓ None of these

42. PCRA stands for

Ⓐ Petroleum and Coal Reservation Association

Ⓑ Petroleum Conservation Research Association

Ⓒ Petroleum and Coal Research Association

Ⓓ None of these

43. The stepwise stages for formation of coal

Ⓐ Wood - Peat - Lignite - Bituminus coal - Anthracite coal

Ⓑ Wood - Peat - Bituminus coal - Lignite - Anthracite coal

Ⓒ Wood - Bituminus coal - Peat - Lignite - Anthracite coal

Ⓓ Wood - Peat - Lignite - Anthracite coal - Bituminus coal

44. The unit of calorific value is

Ⓐ joule   Ⓑ Kilojoule   Ⓒ Kilojoule.(kg)   Ⓓ Kilojoule/(kg)

45. Fossil fuels were formed from

Ⓐ Stones   Ⓑ Dead remains of living organisms

Ⓒ sea water   Ⓓ Plastics

46. Which is an exhaustible resource ?

Ⓐ Air   Ⓑ Sunlight   Ⓒ Fossil fuel   Ⓓ Wind

47. Producer gas is

Ⓐ $[CO + N_2]$ Ⓑ $[CO + H_2]$ Ⓒ $[CO + O_2]$ Ⓓ $[CO + Cl_2]$

48. The colour of peat is

Ⓐ Light brown   Ⓑ Brown   Ⓒ Black   Ⓓ Bright black

49. Lowest form of carbon is present in

Ⓐ Peat   Ⓑ Lignite

Ⓒ Bituminius coal   Ⓓ Anthracite coal

50. Which is used as a fuel in wick stoves ?

Ⓐ Diesel   Ⓑ Petrol

Ⓒ Kerosene   Ⓓ Lubricating oil

Mathematics

51. $\left(\dfrac{-7}{13} + \dfrac{19}{26}\right) = ?$

Ⓐ $\dfrac{7}{26}$ Ⓑ $\dfrac{5}{26}$ Ⓒ $\dfrac{3}{26}$ Ⓓ $\dfrac{5}{13}$

52. What should be added to $\dfrac{5}{12}$ to get $\dfrac{-3}{14}$?

Ⓐ $\dfrac{53}{84}$ Ⓑ $\dfrac{-53}{84}$ Ⓒ $\dfrac{51}{84}$ Ⓓ $\dfrac{-51}{84}$

53. The product of all rational numbers lying between –1 and 1 is

Ⓐ $\dfrac{1}{2}$ Ⓑ 0   Ⓒ $-\dfrac{1}{2}$ Ⓓ Cannot say

54. The additive inverse of $\dfrac{-23}{26}$ is

Ⓐ $\dfrac{25}{26}$ Ⓑ 1   Ⓒ 0   Ⓓ $\dfrac{23}{26}$

55. The value of $\left(\dfrac{-3}{5}\right)^{-2}$ is

Ⓐ $\dfrac{25}{9}$ Ⓑ $\dfrac{-25}{9}$ Ⓒ $\dfrac{9}{25}$ Ⓓ $\dfrac{-9}{25}$

56. The value of $(1)^{-1} + \left(\dfrac{1}{2}\right)^{-1} + \left(\dfrac{1}{3}\right)^{-1}$ is

Ⓐ –6 Ⓑ 1 Ⓒ 6 Ⓓ 0

57. 3430000 in standard form is

Ⓐ 3.43×10^6 Ⓑ 34.3×10^5 Ⓒ 343×10^4 Ⓓ 3430×10^3

58. The value of $\left(\frac{1}{2}\right) \div \left(\frac{3}{5}\right)$ is equal to:

Ⓐ $\dfrac{3}{10}$ Ⓑ $\dfrac{3}{5}$ Ⓒ $\dfrac{6}{5}$ Ⓓ $\dfrac{5}{6}$

59. The additive identity of rational numbers is:

Ⓐ 0 Ⓑ 1 Ⓒ –1 Ⓓ 2

60. What is the product of $\dfrac{2}{9}$ and $\dfrac{3}{4}$?

Ⓐ $\dfrac{1}{6}$ Ⓑ $\dfrac{2}{3}$ Ⓒ $\dfrac{1}{9}$ Ⓓ $\dfrac{1}{4}$

61. The multiplicative identity of rational numbers is:

Ⓐ 0 Ⓑ 1 Ⓒ –1 Ⓓ 2

62. The exponent in the expression 3^7 is

Ⓐ 1 Ⓑ 7 Ⓒ 0 Ⓓ 3

63. The value of $\dfrac{1}{3^2}$ is equal to

Ⓐ $\dfrac{1}{9}$ Ⓑ 1 Ⓒ $\dfrac{9}{1}$ Ⓓ $\dfrac{1}{3}$

64. 4^{-3} in exponential form with base 2 is

Ⓐ 2^6 Ⓑ 2^3 Ⓒ $(-2)^6$ Ⓓ 2^{-6}

65. Value of $4^3 \times 5^3$ is

Ⓐ 20^3 Ⓑ 20^6 Ⓒ 20 Ⓓ 80

66. The rational number that does not have a reciprocal is

Ⓐ 0   Ⓑ 1   Ⓒ –1   Ⓓ 12

67. The product of rational number $\dfrac{-2}{3}$ and its additive inverse is

Ⓐ 1   Ⓑ $\dfrac{2}{3}$ Ⓒ $\dfrac{4}{9}$ Ⓓ $\dfrac{-4}{9}$

68. Find the value of following expression $\dfrac{-4}{5} \times \dfrac{3}{7} \times \dfrac{15}{16} \times \dfrac{-14}{9}$

Ⓐ $\dfrac{1}{2}$ Ⓑ $\dfrac{1}{4}$ Ⓒ $\dfrac{1}{3}$ Ⓓ $\dfrac{3}{4}$

69. Name which property is used in following operation $\dfrac{1}{2} \times \left(5 \times \dfrac{2}{5}\right) = \left(\dfrac{1}{2} \times 5\right) \times \dfrac{2}{5}$

Ⓐ Associative   Ⓑ Reciprocal   Ⓒ Commutative   Ⓓ Additive inverse

70. By simplifying $(8)^{\frac{2}{3}}$

Ⓐ 4   Ⓑ 16   Ⓒ $\dfrac{(8)^2}{(8)^3}$ Ⓓ 32

71. By simplifying $(7)^{\frac{2}{5}} \times (7)^{\frac{3}{4}}$ we get —

Ⓐ $(7)^{\frac{6}{20}}$ Ⓑ 7   Ⓒ $(7)^{\frac{23}{20}}$ Ⓓ $(7)^{\frac{7}{20}}$

72. $(-2)^{m+1} \times (-2)^4 = (-2)^6 \Rightarrow m =$

Ⓐ 0   Ⓑ 1   Ⓒ –1   Ⓓ None of these

73. One rational number between 2 and 3 is

Ⓐ $\dfrac{5}{2}$ Ⓑ $\dfrac{3}{2}$ Ⓒ $\dfrac{7}{2}$ Ⓓ None of these

74. One equivalent rational number of $\dfrac{9}{4}$ is

Ⓐ $\dfrac{18}{8}$ Ⓑ $\dfrac{27}{8}$ Ⓒ $\dfrac{9}{8}$ Ⓓ $\dfrac{45}{16}$

75. The value of $x^{a-b} \times x^{b-c} \times x^{c-a}$ is

Ⓐ 3   Ⓑ 1   Ⓒ 2   Ⓓ 0

Biology

76. When plants of the same kind are cultivated at one place on a large scale, it is called —
    Ⓐ Agriculture   Ⓑ Crop   Ⓒ Weeds   Ⓓ Farming

77. Tilling refers to —
    Ⓐ the process of loosening & turning the soil

    Ⓑ the process of removing weeds

    Ⓒ the process of seed sowing

    Ⓓ the process of supplying minerals to soil

78. Which of the following is referred to as agricultural practice?
    Ⓐ Sowing   Ⓑ Irrigation   Ⓒ Harvesting   Ⓓ All

79. What is the term used for placing seeds in the soil for germination?
    Ⓐ Cultivation   Ⓑ Sowing   Ⓒ Harvesting   Ⓓ Irrigation

80. Which season in India is associated with Rabi crop?
    Ⓐ Summer   Ⓑ Monsoon   Ⓒ Winter   Ⓓ Spring

81. Which of the following is a common Kharif crop in India?
    Ⓐ Mustard   Ⓑ Barley   Ⓒ Millets   Ⓓ Gram

82. Which of the following is a typical Rabi crop in India?
    Ⓐ Rice   Ⓑ Wheat   Ⓒ Maize   Ⓓ Cotton

83. What is the primary purpose of crop rotation in agriculture?
    Ⓐ To increase soil fertility   Ⓑ To reduce water usage

    Ⓒ To control pests and diseases   Ⓓ To maximise the use of fertiliser

84. Which of the following is an example of a traditional agricultural practice?
    Ⓐ Organic farming   Ⓑ Wetland farming

    Ⓒ Hydroponics   Ⓓ Subsistence farming

85. What is the primary purpose of using fertilizers in agriculture?
    Ⓐ Weed control   Ⓑ Pest control

    Ⓒ Increasing soil fertility   Ⓓ Enhancing water absorption

86. What is the process of loosening and turning the soil before sowing seeds called?

Ⓐ Sowing   Ⓑ Harvesting   Ⓒ Ploughing   Ⓓ Irrigation

87. Which factor plays a crucial role in determining the choice of crops grown in a particular region?

Ⓐ Soil type and fertility   Ⓑ Temperature and climate

Ⓒ Availability of labour   Ⓓ All of the above

88. What is the primary purpose of tilling the soil during soil preparation?

Ⓐ To control weeds

Ⓑ To increase soil fertility

Ⓒ To improve aeration and water absorption

Ⓓ To control pests

89. Kharif crops are sown during which season in India?

Ⓐ Winter   Ⓑ Summer   Ⓒ Monsoon   Ⓓ Spring

90. Which factor is essential for successful sowing of seeds?

Ⓐ Water scarcity   Ⓑ Dense planting

Ⓒ Proper seed depth and spacing   Ⓓ Sowing at any time of the year

91. The process of rearing animals for commercial purposes is called —

Ⓐ Levelling   Ⓑ Harvesting

Ⓒ Animal husbandry   Ⓓ Poultry

92. Clover is a

Ⓐ Cash crop   Ⓑ Fodder crop   Ⓒ Food crop   Ⓓ Ornamental crop

93. Select the food crop among the following:

Ⓐ Rice   Ⓑ Wheat   Ⓒ Maize   Ⓓ All

94. Which of the following is not an ornamental plant?

Ⓐ Orchid   Ⓑ Rose   Ⓒ Marigold   Ⓓ Hemp

95. Which among the following agricultural practices, ensures even distribution of water in the field?

Ⓐ Ploughing   Ⓑ Levelling   Ⓒ Manuring   Ⓓ Sowing

96. Unwanted plants growing in the field are called —

Ⓐ Crops   Ⓑ Pests   Ⓒ Weeds   Ⓓ None of the above

97. Jute is a

    Ⓐ Cash crop   Ⓑ Food crop   Ⓒ Ornamental crop   Ⓓ Fodder crop

98. Sowing seeds with the help of a seed drill is beneficial because

    Ⓐ The seeds are sown at proper depth under the soil

    Ⓑ The seeds are sown at proper intervals from each other

    Ⓒ It protects the seeds from being eaten by birds

    Ⓓ All of the above

99. Which of the following organisms are considered 'friends of farmers'?

    Ⓐ Flatworms   Ⓑ Rats   Ⓒ Snakes   Ⓓ Earthworms

100. Short duration summer crops are called —

    Ⓐ Food crop   Ⓑ Fodder crop   Ⓒ Zaid crop   Ⓓ Kharif crop

Space For Rough Works

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