



# Monthly Progressive Test (Solution)

Class: VIII

Subject: PCMB



Test Booklet No.: MPT08

Test Date: 

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|---|---|---|---|---|---|---|---|
| 2 | 0 | 1 | 2 | 2 | 0 | 2 | 4 |
|---|---|---|---|---|---|---|---|

## Physics

1. (A)  
Lightning occurs because of charge accumulation in the clouds.
2. (B)  
Lightning is generally an electric spark on large scale.
3. (B)  
Comb attracts papers.
4. (C)  
As electric charge is developed and remains in the body, then charge is kind of static electric charge.
5. (D)  
like charges repel each other.
6. (D)  
Repulsion is the surer test to know the kind of charge.
7. (D)  
Electroscope is used to detect the charge on a body.
8. (A)  
Lightning conductor is used to bypass the charge to the earth (ground).
9. (C)  
Earthquake is shaking of earth for a short duration.
10. (D)  
magnitude of Power of earthquake is measured in Richter scale.
11. (B)  
Tsunami is high level of Tidal wave forming wall along the coastal border and causing a devastation.
12. (A)  
Seismology is study about earthquake science.
13. (C)  
electrons have negative charge.
14. (A)  
light travels in straight line. This is rectilinear property of light.
15. (A)  
According to law of reflection angle of incidence = angle of reflection.

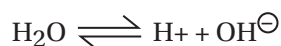
16. ©  
The phenomenon is called a regular reflection.
17. Ⓑ  
The real image can be cast on screen.
18. Ⓐ  
Image in a plane mirror is virtual image.
19. Ⓐ  
This is due to lateral shift phenomenon.
20. ©  
To view objects from obstacles or in crowd, a periscope is used.
21. Ⓐ  
Angle of deviation =  $180^\circ - 2i = 60^\circ$
22. Ⓐ  
Collision of tectonic plates causes earth quake inside the sea.
23. Ⓑ  
The place of origin of an earthquake below the surface of earth is called hypocentre.
24. Ⓐ  
The point above the seismic focus is called epicentre.
25. Ⓓ  
Earthquakes cause damage to the buildings, bridges, dams.

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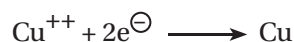
## Chemistry

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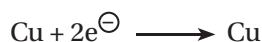
26. Ⓓ  
Metals like Au, Pt, Ag do not react with dilute acid.
27. Ⓐ  
(a) Oxygen—All living being inhale during breathing.  
(b) Copper—For making electric wires.  
(c) Sulphur—For making crackers.  
(d) Iron—For making rails.  
(e) Chlorine—For making crackers.
28. ©  
Chromium is used in electroplating to make object appear shining.
29. Ⓐ  
When electric current is passed through a conducting solution, there is a change of colour of the solution due to the chemical effect of current.
30. Ⓑ  
Electrolysis of  $\text{CuSO}_4$  solution using copper electrode.  
$$\text{CuSO}_4(\text{aq}) \rightleftharpoons \text{Cu}^{++} + \text{SO}_4^-$$



Anode reaction



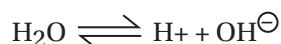
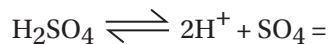
Cathode reaction



Both  $\text{OH}^\ominus$  and  $\text{SO}_4$  = migrates towards anode but none-discharge.

31. Ⓐ

Electrolysis of acidulated water :



| Anode reaction (+ve electrode)   | Cathode reaction (-ve electrode)                                      |
|--|---|
| $4\text{OH}^\ominus - 4\text{e}^\ominus \longrightarrow 2\text{H}_2\text{O} + \text{O}_2 \uparrow$ | $2\text{H}^+ + 2\text{e}^\ominus \longrightarrow \text{H}_2 \uparrow$ |

32. Ⓒ

During electroplating of a iron spoon by silver, spoon and silver metals are kept respectively :

Silver at anode and iron spoon at cathode

33. Ⓑ

Magnesium is a metal while charcoal is a non-metal.

34. Ⓒ

Hydrogen has the highest calorific value 1,50,000 kJ/kg

Kerosene = 48000 kJ/kg

Biogas = 35000 - 40000 kJ/kg

L.P.G. = 50,000 kJ/kg

35. Ⓐ Coal

36. Ⓓ Fossil fuel

37. Ⓓ Anthracite

38. Ⓓ

P—Innermost zone—(iii) Black—(b) No combustion

Q—Outermost zone—(i) Blue—(a) complete combustion

R—Middle zone—(ii) Yellow—(c) Partial combustion

39. Ⓓ

Assertion (A) : L.P.G. is a solid fuel. This is wrong.

Reason (R) : The amount of heat energy produced by the combustion of one kilogram fuel is called its calorific value. This is correct. Thus the answer is Ⓓ.

40. Ⓑ  
Here both Assertion (A) and Reason (R) are correct but Reason (R) is not the correct explanation of Assertion. Thus, the answer is Ⓑ
41. Ⓐ  
Here both assertion (A) and reason are correct and reason is the correct explanation of assertion.
42. Ⓑ  
Hydrogen : Ex:  $\text{Zn} + \text{H}_2\text{SO}_4 \longrightarrow \text{ZnSO}_4 + \text{H}_2 \uparrow$   
(Metal) (Acid) Metal sulphate Hydrogen
43. Ⓒ  
Coal has the highest ignition of temperature amongst Kerosene, petrol, coal and alcohol.
44. Ⓐ  
The dark zone of the candle is called innermost zone.
45. Ⓐ  
Brass is an alloy of copper and zinc.
46. Ⓓ  
He, Ne, Ar are known as inert gas or noble gas.
47. Ⓓ  
Graphite is a non-metal but good conductors of heat and electricity due to presence of free electrons.
48. Ⓓ Sodium  
Activity decreases : Sodium < Magnesium < Zinc < Gold.
49. Ⓒ Electrolyte  
A solution of a chemical compound which conducts electric current and at the same time undergoes a chemical change is known as electrolyte.
50. Ⓑ Cation  
The positively charged ion formed when a chemical compound is dissolved in water is called cation.

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## Mathematics

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51. Ⓑ  
Highest value = 25  
lowest value = 4  
∴ Range = 25 - 4 = 21
52. Ⓐ  
In the interval 20 - 35, 35 is called upper limit.
53. Ⓐ  
Tally marks are used to find frequency.
54. Ⓐ  
(x + 2, 4) = (5, y - 2)

$$\Rightarrow x + 2 = 5 \text{ and } y - 2 = 4$$

$$\Rightarrow x = 3 \text{ and } y = 6$$

$$\therefore (x, y) = (3, 6)$$

55. B

Mirror image of (9, 8) in the y-axis is (-9, 8).

56. C

(3, a - 2) is on x-axis.

$$\therefore a - 2 = 0 \Rightarrow a = 2$$

57. A

A line graph which is a whole unbroken line is called linear graph.

58. A

In line graph or linear graph x-axis represents the variable which is known as independent variable.

59. B

The graph represented by  $y = 2x + 3$  is a linear graph.

60. D

$$\text{Number of people preferred an electric car} = \frac{24^6}{100^4} \times 150^6 = 36$$

61. B

Pie-chart is suitable to highlight the data as a part of a whole.

62. C

The person spends 9 hours in office work daily i.e. out of 24 hours.

$$\therefore \text{Central angle in the pie-graph} = \frac{9}{24} \times 360^\circ = 135^\circ$$

63. D

By tossing 2 coins together number of outcomes = 4 { HH, HT, TH, TT }

64. C

When a die is thrown, then outcomes are { 1, 2, 3, 4, 5, 6 }

Favourable outcomes = 1

$$\therefore \text{Required probability} = \frac{1}{6}$$

65. B

Total number of balls = 23

Number of green balls = 6

$$\therefore \text{Required probability} = \frac{6}{23}$$

66. B

The name of the figure OABC is rectangle.

67. C

The length of OA is 3 units.

68. D

The length of OB is  $\sqrt{3^2 + 4^2} = 5$  units.

69. C

Assertion (A) is true  
Reason (R) is false.

70. B

Total marbles = 11  
White marbles = 5

$$\therefore P(\text{drawing a white marble}) = \frac{5}{11}$$

$\therefore$  Assertion (A) is true.

Reason (R) :  $0 \leq P(E) \leq 1$ , where E is any event is also true.

But reason is not the correct explanation of Assertion (A).

71. B

When two dice are thrown together, then number of outcomes = 36.

(1, 1), (1, 2), (1, 3), ..... , (6, 6).

For sum 3, outcomes are (1, 2), (2, 1).

$\therefore$  number of favourable outcomes = 2

$$\therefore \text{Required probability} = \frac{2}{36} = \frac{1}{18}$$

72. A

At the centre of pie-chart total angle =  $360^\circ$

73. A

From the graph, the distance covered in 6 seconds = 30 m.

74. A

The perpendicular distance of the point P (3, 4) from y-axis is 3 units.

75. C

$$\text{The class mark of the class 30-60 is } \frac{30+60}{2} = \frac{90}{2} = 45$$

## Biology

76. A

Kharif crops

77. B

Uniform water distribution

78. A

Bacteria

*Lactobacillus* is the bacteria responsible for curd formation

79. A

Bacteria

*Bacillus anthracis* and *Mycobacterium tuberculosis*, respectively

80. C

To support conservation efforts and to reduce human - tiger conflicts

81. C

As they are only found in specific areas

Since they are not found anywhere else, hence they are more susceptible to extinction

82. Ⓑ  
Amoeba
83. Ⓑ  
Menarche  
Onset of the menstrual cycle initiates the process of ovulation
84. Ⓑ  
Metamorphosis
85. Ⓑ  
Pituitary
86. Ⓑ  
Both A and R are true but R is not the correct explanation of A
87. Ⓐ  
Both A and R are true and R is the correct explanation of A
88. Ⓐ  
Fallopian tube
89. Ⓐ  
Fertilisation
90. Ⓐ  
Zygote  
The fertilized egg
91. Ⓐ  
IUCN
92. Ⓒ  
Increase in ground water  
Deforestation results in decrease in ground water as the rate of seepage of water through the soil is reduced
93. Ⓐ  
Manure
94. Ⓒ  
It prevents soil erosion  
Loose soil created by ploughing is more prone to soil erosion
95. Ⓐ  
Bacterium  
They may be found in the soil or in roots of leguminous plants
96. Ⓓ  
All of these
97. Ⓑ

Both A and R are true but R is not the correct explanation of A

98. Ⓓ

A is false but R is true

Endocrine glands are ductless glands

99. Ⓑ

Ovary, oviduct, uterus and vagina, respectively

100. Ⓒ

Part 3

The uterus is the site for the development of the foetus from embryo

