

ACE OF PACE (MEDICAL) CLASS 10th
(ANSWER KEY)

PHYSICS	CHEMISTRY	BOTANY	ZOOLOGY
1. (A)	26. (D)	51. (A)	76. (B)
2. (D)	27. (D)	52. (D)	77. (B)
3. (C)	28. (B)	53. (B)	78. (B)
4. (C)	29. (B)	54. (D)	79. (B)
5. (A)	30. (A)	55. (D)	80. (A)
6. (C)	31. (C)	56. (A)	81. (D)
7. (B)	32. (A)	57. (C)	82. (A)
8. (B)	33. (B)	58. (B)	83. (C)
9. (C)	34. (B)	59. (B)	84. (D)
10. (C)	35. (B)	60. (C)	85. (B)
11. (A)	36. (A)	61. (C)	86. (C)
12. (A)	37. (A)	62. (B)	87. (A)
13. (A)	38. (C)	63. (B)	88. (A)
14. (D)	39. (B)	64. (B)	89. (A)
15. (B)	40. (C)	65. (C)	90. (B)
16. (C)	41. (A)	66. (D)	91. (B)
17. (A)	42. (B)	67. (A)	92. (A)
18. (D)	43. (A)	68. (A)	93. (D)
19. (D)	44. (D)	69. (C)	94. (A)
20. (D)	45. (C)	70. (B)	95. (A)
21. (B)	46. (B)	71. (B)	96. (A)
22. (D)	47. (D)	72. (A)	97. (D)
23. (C)	48. (D)	73. (B)	98. (A)
24. (B)	49. (C)	74. (A)	99. (D)
25. (B)	50. (B)	75. (C)	100. (B)

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(SOLUTION)

1. (A) I.R. radiation is used for curing body aches.
2. (D) Angle of incidence = Angle of reflection
3. (C) Focal length of mirror will remain unchanged.
4. (C) Frequency remains unchanged as it depends on the source.

5. (A) $P = \frac{1}{f} = \frac{1}{0.25\text{m}} = 4\text{Dioptre}$

6. (C) $\langle \text{speed} \rangle = 10\text{m/s}$

$$\langle \text{velocity} \rangle = 0$$

$$\text{Because net displacement} = 0$$

7. (B) Theory based.

8. (B) Latent heat of ice = 80 cal/gm

$$\text{Heat released} = ml = 1 \times 80 = 80\text{ cal}$$

9. (C) $R_{\text{series}} = R + R = 2R$

$$R_{\text{parallel}} = \frac{R \times R}{R + R} = \frac{R}{2}$$

$$\frac{R_{\text{series}}}{R_{\text{parallel}}} = \frac{2R}{\frac{R}{2}} \times 2 = \frac{4R}{R}$$

10. (C) $V = 45\text{ km/hr} = 45 \times \frac{5}{18}\text{ m/s} = \frac{25}{2}\text{ m/s}$

$$s = 150 + 850 = 1000$$

$$t = \frac{1000}{\frac{25}{2}} \times 2 = 80\text{ s}$$

11. (A) Theory

12. (A) Theory

13. (A) $I = \frac{dq}{dt}$

14. (D) Theory

15. (B) Theory

16. (C) Theoretical

17. (A) R - ohm

18. (D)

$$I = \frac{q}{t}$$

Unit of charge \rightarrow amp sec

19. (D) Theoretical

20. (D)

$$R_{\text{eq}} = 9\Omega$$

21. (B) $a = \frac{dv}{dt}$

a → constant acceleration

22. (D)

23. (C)

$$V = 60 \times \frac{5}{18} \text{ m/s}$$

$$t = 10 \times 60$$

$$d = v \times t$$

$$= 60 \times \frac{5}{18} \times 10 \times 60 \text{ m}$$

$$d = \frac{6 \times 5 \times 6}{18} \text{ km}$$

$$= 10 \text{ km}$$

24. (B) S = 200 m

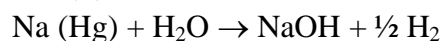
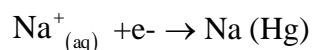
25. (B) Theoretical

26. (D) Bleaching powder is given as CaOCl_2 (Calcium chloro hyperchlorite)27. (D) CuSO_4 is acidic salt because it is made from $\text{Cu}(\text{OH})_2$ (weak base) and H_2SO_4 (strong acid)

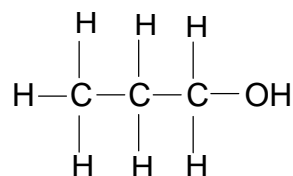
28. (B) Silicon (Si) is a metalloid, because it exhibits same properties of both metals and non-metals

29. (B) M-shell $-2 \times (3)^2 = 18$ electrons, but the outermost shell can have only 8 electrons, so the third period also has only 8 elements30. (A) Sodium hydrogen carbonate (NaHCO_3) is used in soda acid fire extinguisher

31. (C) Cathode :

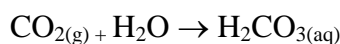


32. (A)



There are seven C-H bonds in propanol.

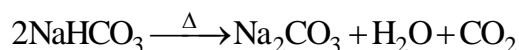
33. (B) $\text{CaCO}_3 \xrightarrow{\Delta} \text{CaO}_{(\text{s})} + \text{CO}_{2(\text{g})}$



H_2CO_3 does not change the (Carbonic acid)

Colour of phenolphthalein as Phenolphthalein is colourless in acidic solution

34. (B) Oxygen (Z=8) 2, 6
Sulphur (Z=16) 2, 8, 6
Both have '6' valence electrons
35. (B) Pb (Lead) is used in storage battery
36. (A) The alloy of any metal with Hg is amalgam.
37. (A) The following reaction takes place when NaHCO_3 is heated during cooking.

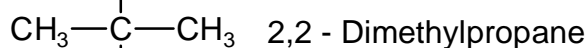
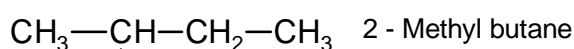
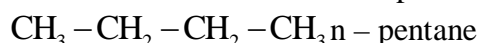


38. (C) NaCl is electrovalent (or) ionic compound exists as Na^+ and Cl^- ions.

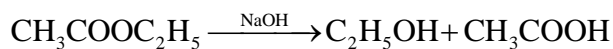
39. (B) $2\text{Pb}(\text{NO}_3)_{(s)} \xrightarrow{\Delta} 2\text{PbO}_{(s)} + 4\text{NO}_{2(g)} + \text{O}_{2(g)}$

40. (C) During corrosion of Fe, it form brown colour Fe_2O_3 .

41. (A) There are 3 structural isomers possible for pentane. They are



42. (B)

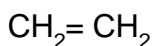


Ethylethanoate
(Ester)

(A)
(Ethanol)

(B)
(Acetic acid)

Hot Conc. H_2SO_4



(C)

(Ethene)

43. (A) Here chlorine replace the hydrogen atom of CH_4 . So it is a substitution reaction.
44. (D) Atomic radius decreases from left to right across a period
 $\text{Li} > \text{Be} > \text{B} > \text{C} > \text{N} > \text{O}$
45. (C) 'C' and 'Si' both are in group IV in the Mendeleev's periodic table. Hence both forms similar hydride and oxide.

46. (B) Detergents are generally ammonium or Sulphonate salts of long chain carboxylic acids.
47. (D) Al_2O_3 and ZnO are amphoteric
MgO is basic
 CO_2 is acidic
48. (D) Gallium (Ga) and Caesium (Cs) has very low melting point. These two metal melts if we keep on palm.
49. (C) Diamond, an allotrope of carbon is hardest natural substance known.
50. (B) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O} \xrightarrow[373\text{K}]{\Delta} \text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O} + 1\frac{1}{2}\text{H}_2\text{O}$
51. (A) Photolysis is also known as splitting of water molecule.
52. (D) Asexual reproduction is uniparental and thus has no variations
53. (B)
54. (D) More is the organic matter more is the oxygen consumed by aerobes to break it down. Thus it is an indirect measurement of knowing the organic matter content.
55. (D)
56. (A) Gir in Gujrat is famous for lions
57. (C)
58. (B) Smooth endoplasmic reticulum is involved in lipid synthesis while rough endoplasmic reticulum is involved in protein synthesis
59. (B)
60. (C) Dark reactions take place independent of availability of light
61. (C)
62. (B) Mitochondria is semi-autonomous in nature
63. (B)
64. (B)
65. (C) Osmosis causes movement of water from higher concentration to the lower concentration of water.
66. (D) Pteridophytes are first vascular plants.
67. (A)
68. (A) Anemophily- Wind pollination
Hydrophily- Water pollination
Entomophily- Insect pollination
Ornithophily- Bird pollination
69. (C)
70. (B) Meiosis is reduction division
71. (B)
72. (A) Bhopal gas tragedy was due to leakage of methyl iso-cyanide
73. (B)
74. (A) Ribosomes are not bound by any cell membrane
75. (C) Eutrophication is the enrichment of a water body with nutrients, usually with an excess amount of nutrients. This process induces growth of plants and algae and due to the biomass load, may result in oxygen depletion of the water body.
76. (B)
77. (B)
78. (B) During expiration, diaphragm becomes relaxed ie dome shaped.

79. (B) Main metabolic hormone of body is thyroid hormones which regulate all metabolic reactions of body.
80. (A) During inspiration, air moves from external environment to lungs due to difference in air pressure.
81. (D)
82. (A) Carbohydrates digest into saccharide units.
83. (C) Diaphragm is the main muscle for inspiration..
84. (D)
85. (B) 70% of carbon dioxide is carried as bicarbonate ion, 23% with hb, 7% dissolved in plasma.
86. (C)
87. (A) On inspiration oxygen is used up and during expiration carbon dioxide is released out.
88. (A) Pressure exerted by blood on the wall of artery is blood pressure.
89. (A)
90. (B) Double vascular system means blood flows through the heart twice.
91. (B) Proximal part is duodenum and last part is Ileum.
92. (A)
93. (D) Carbon dioxide, salts and excess water is considered as waste product.
94. (A) Insulin is the only hormone which decreases blood sugar.
95. (A) Nephron is considered as functional unit as it forms urine.
96. (A)
97. (D)
98. (A) Bile juice helps in emulsification of fats.
99. (D)
100. (B) All salivary glands are present outside buccal cavity.