ACE OF PACE CLASS 10th MEDICAL
(ANSWER KEY)

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

ACE OF PACE (SOLUTION)
(SOLUTION)

1. (A) Theoretical
2. (A) Particle strikes ground with some speed

$$\Delta P = m(v-u)$$
$$= m(10-(-10))$$
$$= 1\times 20 = 20$$

3. (C)

$$h = \frac{1}{2}gt^2$$
$$t = \sqrt{\frac{2h}{g}}$$

Time period is independent of mass.

4. (B)

$$W = F\cdot S$$
$$= 40\times 10\times \cos 0$$
$$= 400\,J$$

5. (C)

$$W = F\cdot S$$
$$= 40\times 10\times \cos 90$$
$$= 0\,J$$

6. (B) Theory

7. (D) $\text{Current} = \frac{\text{Charge}}{\text{Time}}$
8. (D) Dispersion is splitting of light into its constituent colors.
9. (C) Theory
10. (D) In wave motion energy is transfer from one point to another point.

11. (C)

$$R = \frac{\rho\ell}{A}$$
$$\rho = \frac{RA}{\ell}$$
$$\text{ohm}\times m$$

12. (B) I^2R

13. (B) $R = R_0(1+\propto \Delta T)$

Resistance increases with increase in temperature.

14. (D) $\rho \rightarrow$ It is a property of material.

15. (C) Theoretical

16. (B)

$$F_{net} = F_1 - F_2$$
$$= 30 - 20$$
$$= 10N$$

17. (C)

$$\frac{m_1}{m_2} = \frac{60}{30} = 2$$

18. (A) $P = F \times V$

19. (C) 1 Joule=1 Nm

20. (D) $P = \frac{W}{t} = \frac{E}{t}$

21. (A) Theoretical

22. (A) $V_{om} = -V_{IM}$
$V_{IM} = 2m/s$

23. (B) Distance between trough is trough is known as wavelength

24. (B) $R_{eq} = 2\Omega$
$I = \frac{10}{2} = 5A$

25. (C) Both PE and KE

26. (A) Acetic acid is present in vinegar

27. (D) Bleaching powder is given as $CaOCl_2$ (Calcium chloro hyperchlorite)

28. (C) $CaSO_4.\frac{1}{2}H_2O$ (plaster of paris) which doctors use as plaster for supporting fractured bones.

29. (D) $CuSO_4$ is acidic salt because it is made from $Cu(OH)_2$ (weak base) and H_2SO_4 (strong acid)

30. (A) Sodium hydrogen carbonate $(NaHCO_3)$ is used in soda acid fire extinguisher

31. (C) $Ca(OH)_2$-Slaked lime; CaO-Quick line

32. (C) Group – 3 to group – 12, elements are called ‘d-block elements’.

33. (B) Pb (Lead) is used in storage battery

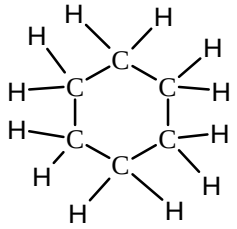
34. (C) I and II are correct.
Plaster of paris is $CaSO_4\frac{1}{2}H_2O$ (Calcium sulphate hemihydrate)

35. (C) HgS- Cinnabar

36. (A) C and Si both belongs to the same group. Hence forms similar hydrides.

37. (C) Vinegar contains acetic acid (CH_3COOH)

38. (D) Cyclohexane is C_6H_{12}



39. (B) Esters react in the presence of an acid or base to give back the alcohol and carboxylic acid. This reaction is known as saponification.

$$CH_3COOC_2H_5 \xrightarrow{NaOH} C_2H_5OH + CH_3COOH$$

40. (B) $CuO + 2HCl \rightarrow \underset{(\text{Blue green solution})}{CuCl_2} + H_2O$

41. (A) In the reactivity series, Ag lies below Cu, so Ag cannot displace Cu.

42. (D) The compounds formed by the transfer of electrons from a metal to a non-metal are known as ionic compounds Eg, CaO, $MgCl_2$ etc;

43. (B) 'Hg' was obtained by heating mercuric oxide.

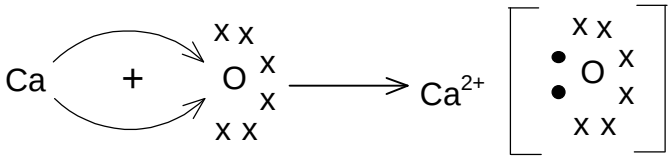
$$2HgO_{(s)} \xrightarrow{\Delta} 2Hg_{(l)} + O_{2(g)}$$

44. (D) Alloy of mercury is amalgam
Brass is an alloy of Cu and Zn
Bronze is an alloy of Cu and Sn

45. (C) 'Au' is the least reactive element in the reactivity series, doe not react with air hence does not corrode easily

46. (B) 'ZnO' is amphoteric as it reacts with both acids as well as bases to produce salts.

47. (C) The maximum number of electron transfer occurs in the formation of CaO is given as



48. (C)

$$2HgO_{(s)} \xrightarrow{\Delta} 2Hg_{(l)} + O_{2(g)}$$
$$ZnCO_{3(s)} \xrightarrow{\Delta} ZnO_{(s)} + CO_{2(g)}$$

49. (D) Copper reacts with moist carbondioxide in the air and slowly loses its shiny brown surface and gains a green coat. This green substance is copper carbonate.

50. (D) In 22 carat gold, 22 parts of pure gold is alloyed with 2 parts of copper.
Brass – Cu and Zn
Bronze – Cu and Sn
Solder – Pb and Sn

51. (D) (A) Gymnospernes, (B) Angiosperms, (C) Preridophytes

52. (B) 5'– A – A – T – A – A – A – G – C – T – 3'
3'– T – T – A – T – T – T – C – G – A – 5'

53. (A) Chlorphyll a

54. (B) Mg

55. (C) relative amount required in plants

56. (C) $14CO_2$

57. (A) the root dies first

58. (B) H_2O containing ^{18}O

59. (C) water comes out by exosmosis

60. (C) paper is moistened by the transpiring water

61. (C)
62. (C)
63. (D)
64. (D)
65. (B)

66. (C) I and IV
The sugar present in RNA has one oxygen atom more than the sugar present in DNA.DNA as well as RNA are hetero-polymer of nucleotides as there are 4 types of nucleotides in each.

67. (A) Cellulose and glycogen

68. (C) Ginger
Sweet potato- root, Carrot- root, Ginger-stem, Phyllode- leaf

69. (B) 2

70. (D) ABA

71. (D) Saprophytic: They depend on dead and decaying matter for their nutrition. Such type of nutrition is called saprophytic.

72. (A) Water: Splitting of H2O releases oxygen.

73. (A) Zeatin

74. (D) Guanine-Adenine are purines while Cytosine, Thyamin and Uracil are pyrimidines.

75. (B) Auxin

76. (C) heart rate=72 times per minute

77. (A)
78. (A) Substances which are reabsorbed selectively as the urine flows are useful substances for body as Glucose, amino acids, salts and water
79. (C)
80. (A) Iodine is necessary for the thyroid gland to make thyroxin hormone.
81. (A)
82. (C)
83. (B)
84. (A)
85. (B)
86. (D)
87. (D)
88. (D)
89. (C)
90. (C)
91. (A) Cerebrospinal fluid (CSF) is a clear, colorless bodily fluid found in brain and spinal cord.
92. (B) Speech center located in the frontal lobe of the left hemisphere of cerebrum.
93. (D) A person with blood type AB is universal recipient
94. (B)
95. (C)
96. (D)
97. (B)
98. (B)
99. (B)
100. (B)