

ACE OF PACE (SOLUTION)

1. (3)

$$\begin{aligned} \therefore P &= \frac{w}{t} = \frac{FS}{t} = \frac{ma-s}{t} \\ &= \frac{\text{Kg} - \text{m} - \text{sec}^{-2} \times \text{m}}{\text{sec}} = \text{kg} - \text{m}^2 - \text{sec}^{-3} \end{aligned}$$

2. (1) Theoretical

3. (1) Theoretical

4. (1) $V_{\text{solid}} > V_{\text{liq}} > V_{\text{gas}} \rightarrow$ for sound

5. (4) Only e can be added or removed to make any substance negatively charged or positively charged.

6. (4)

$$\begin{aligned} a &= \frac{v-u}{t} \\ &= 30 \times \frac{5}{18} \times \frac{1}{10} = 0.83 \text{ m/s}^2 \end{aligned}$$

7. (2) Theoretical

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

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

9. (2) $S = 200 \text{ m}$

10. (2) Theoretical

11. (3) A prism has two triangular bases with three rectangular faces.

12. (3) area under $v-t$ graph = $v \times t = S$ $S \rightarrow$ displacement13. (2) $R = R_0(1 + \alpha \Delta T)$

Resistance increases with increase in temperature.

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

15. (3) Theoretical

16. (2)

$$\begin{aligned}F_{\text{net}} &= F_1 - F_2 \\ &= 30 - 20 \\ &= 10\text{N}\end{aligned}$$

17. (3)

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

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

19. (3) 1 Joule = 1 Nm

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

21. (1) Theoretical

22. (1) $V_{\text{om}} = -V_{\text{IM}}$

$$V_{\text{IM}} = 2\text{m/s}$$

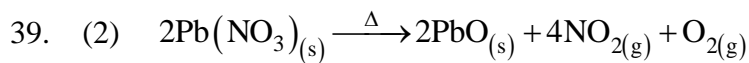
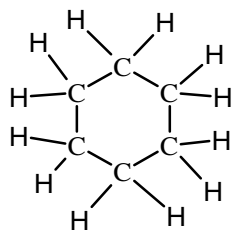
23. (2) Distance between trough is trough is known as wavelength

24. (2) $R_{\text{eq}} = 2\Omega$

$$I = \frac{10}{2} = 5\text{A}$$

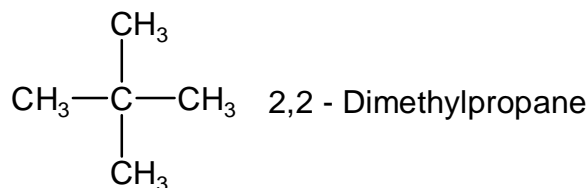
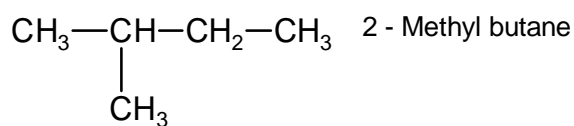
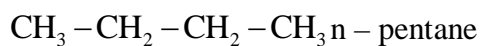
25. (3) Both PE and KE

26. (1) Acetic acid is present in vinegar
27. (4) Bleaching powder is given as CaOCl_2 (Calcium chloro hypochlorite)
28. (3) $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$ (plaster of paris) which doctors use as plaster for supporting fractured bones.
29. (4) CuSO_4 is acidic salt because it is made from $\text{Cu}(\text{OH})_2$ (weak base) and H_2SO_4 (strong acid)
30. (1) Sodium hydrogen carbonate (NaHCO_3) is used in soda acid fire extinguisher
31. (3) $\text{Ca}(\text{OH})_2$ -Slaked lime; CaO -Quick lime
32. (3) Group – 3 to group – 12, elements are called ‘d-block elements’.
33. (2) Pb (Lead) is used in storage battery
34. (3) I and III are correct.
Plaster of paris is $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$ (Calcium sulphate hemihydrate)
35. (3) HgS- Cinnabar
36. (1) C and Si both belongs to the same group. Hence forms similar hydrides.
37. (3) Vinegar contains acetic acid (CH_3COOH)
38. (4) Cyclohexane is C_6H_{12}

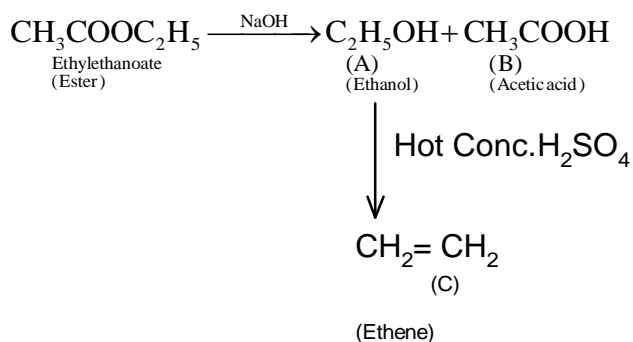


40. (3) During corrosion of Fe, it form brown colour Fe_2O_3 .

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

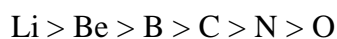


42. (2)



43. (1) Here chlorine replace the hydrogen atom of CH_4 . So it is a substitution reaction.

44. (4) Atomic radius decreases from left to right across a period



45. (3) 'C' and 'Si' both are in group IV in the Mendeleev's periodic table. Hence both forms similar hydride and oxide.
46. (2) Detergents are generally ammonium or Sulphonate salts of long chain carboxylic acids.
47. (4) Al_2O_3 and ZnO are amphoteric
MgO is basic
CO₂ is acidic
48. (4) Gallium (Ga) and Caesium (Cs) has very low melting point. These two metal melts if we keep on palm.
49. (3) Diamond, an allotrope of carbon is hardest natural substance known.
50. (2) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O} \xrightarrow[373\text{K}]{\Delta} \text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O} + 1\frac{1}{2}\text{H}_2\text{O}$
51. Embden, Meyerhoff, Parnas described glycolysis
52. Rubisco is present in stroma of chloroplast and is required for formation of glucose
53. Mitoplast is not a plashd
54. Guanine is a nitrogenous base
55. Adenine is only purine mentioned
56. Bryophyte lacks vascular system.
57. Double fertilization is only seen in angiosperm.
58. Haemophilia gene is located on X-Chromosome & hence father passes it to daughter.
59. According to Chargaff's rules, A=T.
60. Oxygen is not required in photosynthesis
61. Mitochondria shows cristae
Chloroplast shows thylakoid
Endoplasmic reticulum shows cisternae
62. Ribosome is the site for protein synthesis

63. During anaerobic respiration lactic acid is formed that causes fatigue and pain.
64. Blood platelets means thrombocytes. Leucocytes are WBCs
65. Acromegaly and Gigantism both are due to oversecretion of GH ,but at adulthood and childhood respectively.
66. Haemoglobin shows maximum affinity for carbon mono oxide and binds irreversibly to it.
67. Diastole means relaxation and systole means contraction.
68. Pepsinogen and HCl both are secreted by gastric glands.
69. Thromboplastin clotting factor initiates coagulation.
70. Internal ear has semi circular canals to maintain body balance
71. Respiratory organ depends on the habitat of the animal but all respiratory surface is always kept moist.
72. Motor or efferent nerve carries messages away from brain.
73. Appendix is reduced outgrowth of caecum.
74. Myelin covers axon of neuron.
75. During stress adrenal medulla secretes adrenaline to make us more alert.