

ACE OF PACE CLASS 10th MEDICAL

(SOLUTION)

1. (D) Theoretical question

2. (D) $v^2 = u^2 + 2as$

$$v^2 \propto s$$

$$(50)^2 \propto 6 \quad \text{(i)}$$

$$(100)^2 \propto s \quad \text{(ii)}$$

Divide equation (i) and (ii)

$$\frac{50 \times 50}{100 \times 100} = \frac{6}{s}$$

$$s = 6 \times 4 = 24\text{m}$$

3. (A) ohm

4. (A) Scalar

5. (D) Theoretical question

6. (C) Theoretical question

7. (D) Sound is a form of energy.

8. (C)

$$P = \frac{v^2}{R}$$

$$100 = \frac{(200)^2}{R}$$

$$R = \frac{200 \times 200}{100} = 400\Omega$$

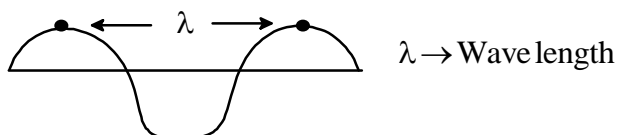
9. (A) $v = v + at$

$$\frac{v - u}{t} = a$$

$$\frac{40 - 20}{2} = \frac{20}{2} = 10\text{sec}$$

10. (D) $ev \rightarrow$ Energy11. (A) $V_{\text{solid}} > V_{\text{liq}} > V_{\text{gas}} \rightarrow$ for sound

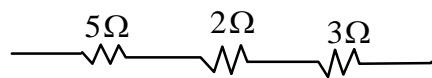
12. (B)



13. (B) Constant velocity means it is travelling in uniform motion.

14. (B)

15. (B)



$$R_{eq} = 10\Omega$$

16. (C)

$$\langle \text{speed} \rangle = 10 \text{ m/s}$$

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

Because net displacement = 0
s²

17. (B) Theory based.

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

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

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

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

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

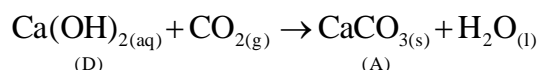
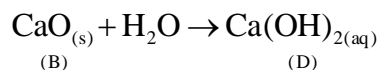
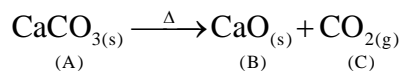
20. (C)

$$V = 45 \text{ km/hr} = 45 \times \frac{5}{18} \text{ m/s} = \frac{25}{2} \text{ m/s}$$

$$s = 150 + 850 = 1000$$

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

21. (B)



22. (D)

		pH
Gastric Juice	–	1.2
Lemon juice	–	2.2
Blood	–	7.4
Milk of Magnesia	–	10

23. (A) $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$ - Plaster of Paris is used for supporting fractured bone by doctors

24. (A) Na_2CO_3 – Sodium carbonate is used for removing permanent hardness of water
25. (D) In chlor-alkali process $2\text{NaCl}_{(\text{ar})} + 2\text{H}_2\text{O}_{(\text{l})} \rightarrow 2\text{NaOH}_{(\text{aq})} + \text{Cl}_{2(\text{g})} + \text{H}_{2(\text{g})}$
26. (C) $\text{NaCl}_{(\text{aq})} + \text{AgNO}_{3(\text{aq})} \rightarrow \text{AgCl}_{(\text{s})} + \text{NaNO}_{3(\text{aq})}$
White Precipitate
27. (A) Fe, Zn and Pb are more reactive than Cu and Ag is less reactive, So Ag can't displace Cu from CuSO_4 solution
28. (D) CaCl_2 – Calcium chloride is used to dry any gas in the laboratory
29. (C) Toothpastes, are generally basic for cleaning the teeth can neutralise the excess acid and prevent tooth decay.
30. (B) Brass – Cu and Zn
Bronze – Cu and Sn
Stainless steel – Fe, Ni and Cr
Solder – Pb and Sn
31. (D) The highly reactive metals like Ca is extracted by the electrolysis of their molten chloride.
32. (C) Ionic compounds are generally soluble in water and insoluble in solvents such as Kerosene, petrol, etc
33. (C) $\text{NaCl} + \text{H}_2\text{O} + \text{CO}_2 + \text{NH}_3 \rightarrow \text{NH}_4\text{Cl} + \text{NaHCO}_3$
Ammonium Chloride Sodium hydrogen Carbonate
34. (C) Ester is prepared as follows
- $$\text{R-OH} + \text{R}'-\underset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{OH} \xrightarrow{\text{H}^+} \text{R}'-\underset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{OR} + \text{H}_2\text{O}$$
35. (B)
- $$\text{CH}_3\text{CH}_2\text{OH} \xrightarrow[\text{Conc. H}_2\text{SO}_4]{\text{H}^+} \text{CH}_2 = \text{CH}_2 + \text{H}_2\text{O}$$
36. (C)
- $$2\text{Na} + 2\text{CH}_3\text{CH}_2\text{OH} \rightarrow 2\text{CH}_3\text{CH}_2\text{O}^- \text{Na}^+ + \text{H}_{2(\text{g})}$$
- Sodium ethoxide
- $$2\text{Na} + 2\text{CH}_3\text{COOH} \rightarrow 2\text{CH}_3\text{COO}^- \text{Na}^+ + \text{H}_{2(\text{g})}$$
- Sodium acetate
37. (B) 5-8% solution of acetic acid in water is called vinegar.
38. (C) In the presence of sunlight, Cl atoms replace the hydrogen atoms one by one. It is a substitution reaction.

39. (D) C_4H_9OH has higher boiling point here as the boiling points increase with increase in molecular mass
40. (D) Butene and propyne are aliphatic open chain unsaturated organic compounds. Benzene is cyclic unsaturated organic compound.
41. (A) Stomato 80% transpiration
42. (A) ethylene
43. (A) hypogeal germination
44. (B) 4 daughter cells
45. (D) Xylem and phloem are complex permanent tissue
46. (B) Glycolysis occurs in cytoplasm
47. (C) $NADPH_2$ and ATP
48. (D) Mitochondria
49. (D) Gene bank
50. (B) caused only by CO_2 rise.
51. (B) Man, Dog and Camel are urcotelic as they all are mammals.
52. (B) Loop of Henle of nephron is responsible for osmoregulation due to difference in permeability of both limbs of loop of Henle.
53. (B) Larger the surface area more shall be exchange of gases.
54. (C) Pulmonary artery carries deoxygenated blood. Valves are found in veins and venous blood is returned to right atrium.
55. (C) Efferent means motor nerve fibres.
56. (B) Liver is devoid of enzymes and saliva and gastric juice has limited enzymes.
57. (D) Hypothalamus is the centre for regulation of temperature, hunger, thirst.
58. (A)
59. (A) Proteins are normally not a part of glumerular filtrate as membrane is impermeable to them.
60. (A) Hyaluronidase of acrosome of sperm disintegrates corona radiate of sperm to facilitate fertilization.