

Enthusiast, Leader & Achiever COURSE

PHASE : (All Phase)

TARGET : PRE-MEDICAL 2020

Test Type : DRILL TEST # 12

Test Pattern : NEET (UG)

TEST DATE : 29-04-2020

Q.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
A.	2	1	2	3	2	1	2	3	4	3	1	2	1	1	3	1	3	3	3	3	3	2	3	3	2	1	2	1	3	3
Q.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
A.	3	1	2	4	4	4	4	2	1	3	2	2	4	2	3	2	1	3	3	1	4	4	1	2	2	4	1	1	3	2
Q.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
A.	2	4	4	4	1	4	2	1	3	2	3	1	4	4	1	2	3	3	1	3	1	4	2	4	1	1	4	1	3	1
Q.	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
A.	4	3	4	2	4	2	1	3	3	3	4	2	3	2	3	3	2	2	3	3	4	4	1	2	3	2	3	3	1	1
Q.	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
A.	2	2	1	2	4	1	4	2	4	4	3	1	1	1	2	1	2	3	4	3	4	4	2	1	4	3	3	1	3	3
Q.	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
A.	3	2	3	4	1	3	2	2	2	4	3	1	1	3	3	2	4	3	2	3	1	4	3	3	4	3	2	1	3	2

HINT - SHEET

2. **Ans (1)**

The dimensional formula of energy is (ML^2T^{-2})

$$n_2 = 1 \left[\frac{1 \text{ kg}}{10 \text{ kg}} \right]^1 \left[\frac{1 \text{ m}}{1 \text{ km}} \right]^2 \left[\frac{1 \text{ s}}{1 \text{ min}} \right]$$

$$= \frac{1}{10} \times \frac{1}{10^6} \times \frac{1}{(60)^{-2}} = \frac{3600}{10^7} = 3.6 \times 10^{-4}$$

4. **Ans (3)**

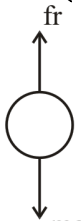
$$a_{\text{rel}} = a_{\text{real}} - a_{\text{frm}}$$

$$= g - a$$

5. **Ans (2)**

$$F_{\text{ag}} = \frac{\Delta p}{\Delta t} = \frac{m(v_2 - v_1)}{t} = \frac{0.01(5 + 5)}{0.01} = 10 \text{ N}$$

6. **Ans (1)**



$$mg - fr = m \times 8$$

$$fr = m(9 - 8) \Rightarrow fr = m(g - 8)$$

$$fr = m(10 - 8) = 2N$$

8. **Ans (3)**

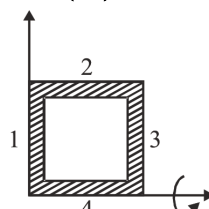
Let m = mass of boy, M = mass of man
 v = velocity of boy, V = velocity of man

$$\frac{1}{2}MV^2 = \frac{1}{2}\left[\frac{1}{2}mv^2\right] \quad \dots(i)$$

$$\frac{1}{2}M(V + 1)^2 = 1 \left[\frac{1}{2}mv^2 \right] \quad \dots(ii)$$

Putting $m = \frac{M}{2}$ and solving $V = \frac{1}{\sqrt{2} - 1}$

11. **Ans (1)**



$$I = I_1 + I_2 + I_3 + I_4$$

$$= \frac{mL^2}{3} + (0 + mL^2) + \frac{mL^2}{3} + 0$$

$$I = \frac{5}{3} mL^2$$

14. **Ans (1)**

They will collide at centre of mass

15. **Ans (3)**

In floating condition

$$W = Th$$

Let V_1 volume immersed in lower liquid then

$$V\rho g = (V - V_1)\rho_1 g + V_1\rho_2 g$$

$$V(\rho - \rho_1) = V_1(\rho_2 - \rho_1)$$

$$\frac{V_1}{V} = \frac{\rho - \rho_1}{\rho_2 - \rho_1} = \frac{\rho_1 - \rho}{\rho_1 - \rho_2}$$

16. **Ans (1)**

Using force balance method we can say if radius is double force due to surface tension will be double so mass will be double.

18. **Ans (3)**

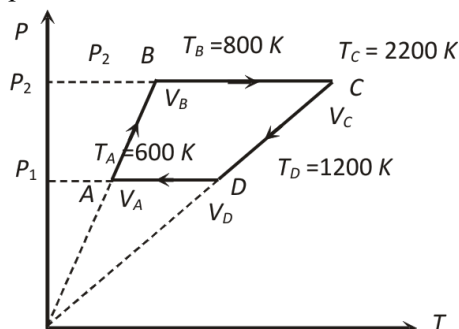
At low pressure and high temperature, the molecules are farther apart so that molecular size is negligible as compared to the size of the vessel and also molecular forces do not come in.

19. **Ans (3)**

Processes A to B and C to D are parts of straight line graphs of the form $y = mx$

$$\text{Also } P = \frac{\mu R}{V} T \quad (\mu = 6)$$

$\Rightarrow P \propto T$. So volume remains constant for the graphs AB and CD



So no work is done during processes for A to B and C to D i.e., $W_{AB} = W_{CD} = 0$ and $W_{BC} = P_2(V_C - V_B) = \mu R(T_C - T_B)$

$$= 6R(2200 - 800) = 6R \times 1400 \text{ J}$$

$$\text{Also } W_{DA} = P_1(V_A - V_D) = \mu R(T_A - T_D)$$

$$= 6R(600 - 800) = -6R \times 600 \text{ J}$$

Hence work done in complete cycle

$$\begin{aligned} W &= W_{AB} + W_{BC} + W_{CD} + W_{DA} \\ &= 0 + 6R \times 1400 + 0 - 6R \times 600 \\ &= 6R \times 900 = 6 \times 8.3 \times 800 \approx 40 \text{ kJ} \end{aligned}$$

22. **Ans (2)**

$$n_A = 256$$

As tuning fork A when sounded with tuning fork B gives four beats, therefore the frequency n_B of tuning fork B is,

$$n_B = 256 \pm 4 = 252 \text{ or } 260$$

When the tuning fork A is slightly loaded with wax, the frequency of A decreases and the difference between two frequencies decreases if

$$n_B = 252$$

As on sounding beats decrease, hence

$$n_B = 252 \text{ Hz.}$$

23. **Ans (3)**

$$v^1 = \sqrt{\frac{1 - v/c}{1 + v/c}} = \left(\sqrt{\frac{1 - .8}{1 + .8}} \right) \times 6 \times 10^{14}$$

$$v^1 = \frac{1}{3} \times 6 \times 10^{14} = 2 \times 10^{14} \text{ Hz}$$

25. **Ans (2)**

$$\frac{kQ}{R} = 24 \text{ volt} \quad \dots (1)$$

$$\text{outside } r = \frac{3R}{2}$$

$$v_0 = \frac{kQ}{3R/2} = \frac{2}{3} \frac{kQ}{R} = \frac{2}{3} (24)$$

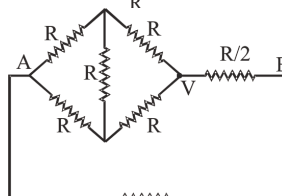
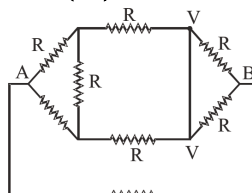
$$= 16 \text{ volt}$$

$$\text{inside } r = R/2$$

$$v_{in} = \frac{kQ}{2R^3} (3R^2 - r^2) = \dots$$

$$= 33 \text{ volt}$$

27. **Ans (2)**



$$R_{AB} = \frac{\frac{3R}{2} R}{\frac{3R}{2} + R}$$

$$R_{AB} = 3R/5$$

30. Ans (3)

$$B = \frac{\mu_0 (i/2)}{4\pi a} + \frac{\mu_0 (i/2)}{4\pi a}$$

32. Ans (1)

When north pole of the magnet approaches the coil, emf is induced such that left face behaves like north pole. When south pole leaves coil, the emf is induced such that right face behaves like north pole (thus left face like south pole). At the right side external bar is momentarily at rest and thus there has to be a break after half cycle. Similar arguments hold good when magnet moves from right to left. The correct option is (1)

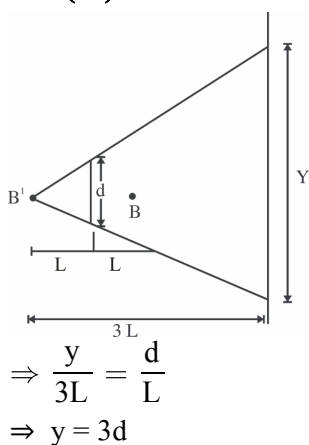
34. Ans (4)

$$\frac{\Delta\phi}{2\pi} = \frac{\Delta t}{T}$$

$$\therefore \Delta t = \frac{\Delta\phi}{f(2\pi)} = \frac{\pi/4}{50(2\pi)}$$

$$= \frac{1}{400} = 2.5 \text{ ms}$$

35. Ans (4)



36. Ans (4)

Convex lens, glass slab, prism and glass sphere they all disperse the light.

37. Ans (4)

$$n_1\lambda_1 = n_2\lambda_2$$

$$\frac{n_1}{n_2} = \frac{\lambda_2}{\lambda_1} = \frac{520}{650} = \frac{4}{5}$$

4th bright of 650 nm coincide with 5th bright of 520 nm

$$x = \frac{n\lambda D}{d} = \frac{4 \times 650 \times 10^{-9} \times 150 \times 10^{-2}}{0.5 \times 10^{-3}} = 7.8 \text{ mm}$$

49. Ans (3)



I.P. > K_{sp} for precipitation

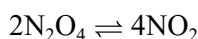
$$[\text{Ba}^{+2}] [\text{SO}_4^{-2}] > K_{sp}$$

$$(0.01) (\text{SO}_4^{-2}) > 10^{-9}$$

$$(\text{SO}_4^{-2}) > 10^{-7}$$

10⁻⁶ option (3)

55. Ans (2)



$$-\frac{1}{2} \frac{d[\text{N}_2\text{O}_4]}{dt} = \frac{k}{2} = \text{ror}$$

$$\frac{1}{4} \frac{d[\text{N}_2\text{O}_4]}{dt} = \frac{k'}{4} = \text{ror}$$

$$\frac{k}{2} = \frac{k'}{4}$$

$$2k = k'$$

68. Ans (1)

LiCl is covalent

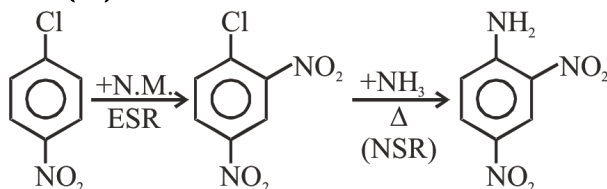
74. Ans (4)

Concept

75. Ans (1)

Belong P-Block

80. Ans (3)



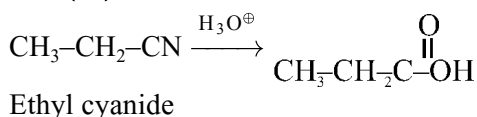
87. Ans (4)

Nylon-2-Nylon-6 and PHBV are biodegradable polymer.

88. Ans (1)

Phenelzine is an antidepressant.

90. Ans (1)



91. Ans (4)

Module-1 Pg. # 3, 4

- | | |
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| <p>92. Ans (3)
NCERT-XI Pg. # 7, 9</p> <p>102. Ans (2)
NCERT Pg. # 90</p> <p>105. Ans (3)
NCERT Pg. # 139, Fig. 8.11</p> <p>109. Ans (3)
NCERT Pg.#146</p> <p>112. Ans (4)
One Enzyme = Conversion of 5 molecules of substrates into product in 5 minutes.
Two Enzymes = Conversion of 10 molecules of substrates into product in 5 minutes.
In next 5 minutes same enzymes convert the remaining 10 substrates into product so at last the remain will be products and enzymes because enzymes not consumed in the process.</p> <p>117. Ans (3)
NCERT-XI, Pg. # 234</p> <p>118. Ans (3)
NCERT Pg. # 232</p> <p>119. Ans (1)
Module-3, Pg.# 245</p> <p>126. Ans (1)
NCERT Pg.#101</p> | <p>140. Ans (3)
NCERT-XII, Pg No. # 223</p> <p>141. Ans (4)
NCERT Pg. # 221</p> <p>143. Ans (2)
NCERT Pg.# 260</p> <p>148. Ans (1)
NCERT-XI - Page No.-49</p> <p>150. Ans (3)
NCERT (XIth) Pg. # 48</p> <p>151. Ans (3)
NCERT Pg # 53 para 4.2.8</p> <p>154. Ans (4)
NCERT XIth P.No. 115</p> <p>164. Ans (3)
NCERT - XI, Pg # 312</p> <p>168. Ans (3)
NCERT XIth Pg.# 332 Para-22.2.2</p> <p>172. Ans (4)
NCERT Pg # 62</p> <p>176. Ans (3)
NCERT Pg. # 147</p> |
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