

ENTHUSIAST COURSE**TARGET : PRE-MEDICAL 2013**
ALLENTM
 CAREER INSTITUTE
 KOTA (RAJASTHAN)
MAJOR TEST # 07**ALLEN NEET-UG (FULL Syllabus)****DATE : 11 - 02 - 2013****ANSWER KEY**

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

HINT - SHEET

1. $\omega^2 = \omega_0^2 = 2 \propto \theta$
 $0 = (2\pi n)^2 - z \propto \theta$

$$N = \frac{\theta}{2\pi}$$

2. $V = \frac{\omega}{K} = \frac{100}{20} = 5 \text{ m/s}$

3. K.E. = $\frac{1}{2} I \omega^2$ & angular momentum $L = I \omega$

$$\therefore \frac{\text{K.E.}}{L} = \frac{\omega}{2} \Rightarrow L = \frac{2\text{K.E.}}{\omega}$$

$$\text{further } L' = \frac{2 \left[\frac{\text{K.E.}}{2} \right]}{2\omega} = \frac{1}{4} \times \left[\frac{2\text{K.E.}}{\omega} \right] = \frac{L}{4}$$

4. $f = \frac{V_0}{2l}, \quad f' = \frac{V_0}{2l/3} = 3f$

5. $V_{\max} = A\omega$

$$31.4 = \frac{20 \times 2\pi}{T}$$

7. $(F_{\text{SHM}})_{\max} = \mu mg$
 $m\omega^2 A = \mu mg$

$$\omega = \sqrt{\frac{\mu g}{A}}$$

$$2\pi n = \sqrt{\frac{\mu g}{A}}$$

$$n = \frac{1}{2\pi} \sqrt{\frac{\mu g}{A}}$$

25. For eye-piece $\frac{1}{f_e} = \frac{1}{v_e} - \frac{1}{u_e}$

Here, $v_e = -25$ cm, $f_e = 5$ cm

$\therefore u_e = -(25/6)$ cm

But length of the microscope is

$L = v_o + u_e = 20$

$\therefore v_o = 20 - \frac{25}{6} = \frac{95}{6}$ cm

Total magnification

$$M = \left(\frac{v_o - f_o}{f_o} \right) \left(1 + \frac{D}{f_e} \right) = \left(\frac{95 - 0.95}{0.95} \right) \left(1 + \frac{25}{6} \right) = 94$$

27. $S = (\mu - 1)t(D/d)$

But $\beta = \frac{D\lambda}{d}$ or $\frac{D}{d} = \frac{\beta}{\lambda}$

$\therefore s = (\mu - 1)t(\beta/\lambda)$

or $20\beta = (\mu - 1)(2.5 \times 10^{-3}) \left[\frac{\beta}{5000 \times 10^{-8}} \right]$

or $(\mu - 1) = \frac{20 \times 5000 \times 10^{-8}}{2.5 \times 10^{-3}} = 0.4$

$\therefore \mu = 1.4$

37. NCERT Part-1, Page no. 96

Impulse $|\Delta \vec{p}| = 2 \text{ mV} = 2 \times 20 \times 10^{-3} \times 5 = 0.2$
kg m/s

Force = $\frac{I}{\Delta t} = \frac{0.2}{10^{-3}} = 200 \text{ N}$

38. $U = KE = \frac{f}{2} NKT$

$\Rightarrow U \propto N$

39. NCERT Part-1, Page no. 42&58

$\bar{v}_{\text{avg}} = \frac{\text{disp}}{\text{time}} = \frac{\Delta x \text{ or Area of } (v-t) \text{ graph}}{\Delta t}$

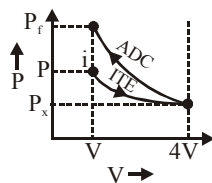
40. ITE $\Rightarrow PV = \text{const.}$

$\Rightarrow PV = P_x \times 4V$

$\Rightarrow P_x = \frac{P}{4}$

ADC $\Rightarrow PV^\gamma = \text{const.}$

$\Rightarrow P_x (4V)^\gamma = P V^\gamma$



$\Rightarrow P_f = 4^\gamma P_x$

$P_f = 4^{3/2} \times \frac{P}{4}$

$\Rightarrow P_f = 2P$

41. NCERT Part-1, Page no. 87,45

$\vec{V} = \frac{d\vec{r}}{dt} = (2t - 4)\hat{i} + (2t)\hat{j}$

$\vec{a} = \frac{d\vec{V}}{dt} = 2\hat{i} + 2\hat{j}$

when $\vec{V} \perp \vec{a}$, then $\vec{V} \cdot \vec{a} = 0$

$2(2t - 4) + 2(2t) = 0$

$4t - 8 + 4t = 0$

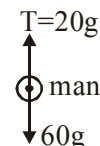
$t = 1 \text{ sec}$

42. $PV = \mu RT$

$T = \left(\frac{V}{\mu R} \right) P$
 $\Rightarrow \begin{matrix} \uparrow \\ y = m \end{matrix} \begin{matrix} \uparrow \\ x \end{matrix}$

Slope $\propto V \Rightarrow \begin{cases} \theta_2 > \theta_1 \\ V_2 > V_1 \end{cases}$

43. NCERT/Part-1/Page no. 112



$F_{\text{Net}} = 60g - 20g = 40g = 400 \text{ N}$

44. $P \propto T^4 \left[T \propto \frac{1}{\lambda_m} \right]$

$P \propto \frac{1}{\lambda_m^4}$

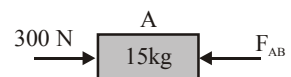
$\Rightarrow \frac{P_1}{P_2} = \left(\frac{\lambda_{m_2}}{\lambda_{m_1}} \right)^4$

$\Rightarrow \frac{P}{P_2} = \left(\frac{\lambda_0/2}{\lambda_0} \right)^4 \Rightarrow P_2 = 16P$

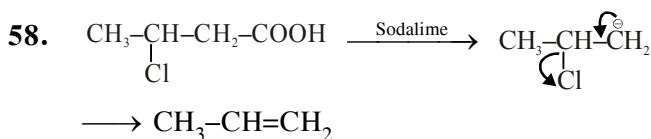
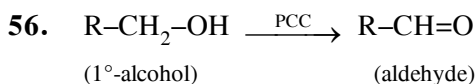
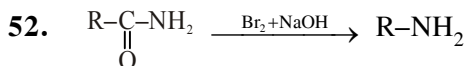
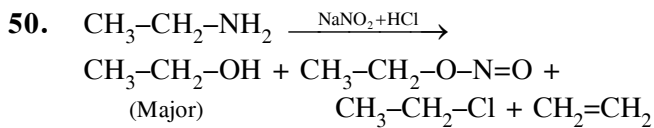
45. NCERT Part-I, Page no. 113

$\therefore A$ is a rest

$\therefore F_{AB} = 300 \text{ N}$

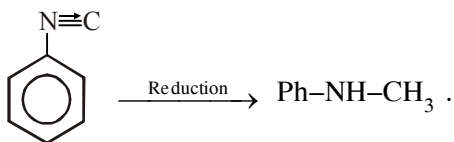
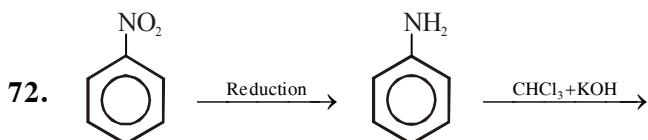
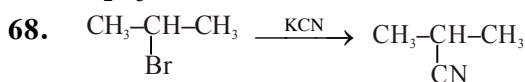


46. In formation of chloroform by bleaching powder oxidation, chlorination and hydrolysis process occurs.



60. Williamson ether synthesis follows by SN² path.

62. CH₃-OH not gives iodoform test while C₂H₅OH gives.



75. NCERT(XI)th Page no. 208, Part-I

76. NCERT(XI)th Page no. 42, Part-I

For α line of Balmer

$$n_1 = 2$$

$$n_2 = 3$$

$$\frac{1}{\lambda} = R_H \cdot z^2 \left(\frac{1}{n_1^2} - \frac{1}{n_2^2} \right)$$

$$77. K_c = \frac{\left(\frac{0.4}{2}\right)^2}{\left(\frac{0.8}{2}\right)^2}$$

$$78. E = -13.6 \times \frac{z^2}{n^2}$$

79. NCERT(XI)th Page no. 179, Part-I

80. NCERT(XI)th Page no. 45, Part-I

$$81. K_{sp} = S^1 C^2$$

82. NCERT(XI)th Page no. 43, Part-I

83. NCERT(XI)th Page no. 141, Part-I

84. NCERT(XI)th Page no. 44, Part-I

86. NCERT(XI)th Page no. 43, Part-I

$$v = \frac{2\pi ze^2}{nh}$$

$$f = \frac{1}{T} = \frac{v}{2\pi r} = \frac{2\pi ze^2}{nh} \cdot \frac{1}{2\pi \times \frac{n^2 h^2}{4\pi^2 m z e^2}}$$

$$F = \frac{k q_1 q_2}{r^2} = \frac{-ze^2}{r^2}$$

$$r \propto n^2$$

87. $4e^- + N^{+3} \longrightarrow N^{-1}$

88. NCERT(XI)th Page no. 167, Part-I

89. $NV = N_1 V_1 + N_2 V_2$

90. NCERT(XI)th Page no. 176, Part-I

91. NCERT(XII)th Page no. 173, Fig. 9.3

93. NCERT(XII)th Page no. 174, Table 9.1

95. NCERT(XII)th Page no. 176, Line-1

100. NCERT (XI) Page No. 164,165,166

102. NCERT (XI) Page No. 136, 137.

106. NCERT (XI) Page No. 136

108. NCERT XII, Pg # 97

116. NCERT (XII) Page No. 50-51

119. NCERT(XI)th Page no. 24

120. NCERT (XII) Page No. 51-52

121. NCERT(XI)th Page no. 44 Q. 4 (Exe.)

125. NCERT(XI)th Page no. 32,33,34,35

126. NCERT Page No. 318 Para-2

138. NCERT XII Page No. (E) 42,44,46,47,48,
(H) 45,47,49,51,52

142. NCERT XII Page No. (E) 54, (H) 59

144. NCERT XII Page No. (E) 53, (H) 58

151. NCERT (XI) Page # 263

155. NCERT (XII) Page # 229, 231

157. NCERT (XII) Page # 169

161. NCERT (XI) Page # 265

163. NCERT (XI) Page # 23 (E), 25 (H)

168. NCERT XI : Page no. 92.

170. NCERT XI : Page no. 74, IInd para.

172. NCERT : Page no. 250

173. NCERT Page # 57

174. NCERT : Page no. 232

175. NCERT Page # 57

176. NCERT : Page no. 157

177. NCERT Page # 60

178. NCERT : Page no. 180-185

179. NCERT : Page no. 228

180. NCERT : Page no. 208