ACHIEVER COURSE (PHASE : MAW)

TARGET : PRE-MEDICAL 2013

ALLEN CAREER INSTITUTE KOTA (RAJASTHAN) Path to Success

MAJOR TEST # 04

ALLEN NEET-UG | **DATE : 06 - 04 - 2013**

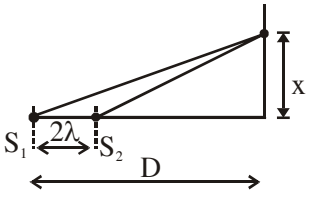
SYLLABUS - 04

ANSWER KEY

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

HINT – SHEET

7.



$$\sqrt{D^2 + x^2} - \sqrt{(D - 2\lambda)^2 + x^2} = \lambda$$

$$\Rightarrow \sqrt{D^2 + x^2} - \lambda = \sqrt{(D - 2\lambda)^2 + x^2}$$

$$\Rightarrow D^2 + x^2 + \lambda^2 - 2\lambda\sqrt{D^2 + x^2} = D^2 + 4\lambda^2 - 4\lambda D + x^2$$

$$\Rightarrow 2\lambda\sqrt{D^2 + x^2} = 4\lambda D - 3\lambda^2 \simeq 4\lambda D$$

$$\Rightarrow \sqrt{D^2 + x^2} = 2D$$

$$D^2 + x^2 = 4D^2 \Rightarrow x = \sqrt{3}D$$

11. $E_{induced} = -\frac{d\phi}{dt}$

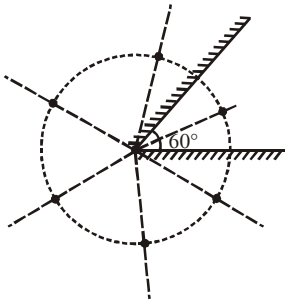
पहले flux increase होगा जिससे $E_{induced}$ negative आवेगा उसके बाद velocity increase होने के कारण कम time में flux decrease होगा जिसके कारण non-symmetric graph आयेगा।

24. $P = \frac{NE}{t}$

$E = 188$ MeV, $N = \frac{m}{M_W} N_A$,

$t = 30 \times 24 \times 3600$ sec

29.

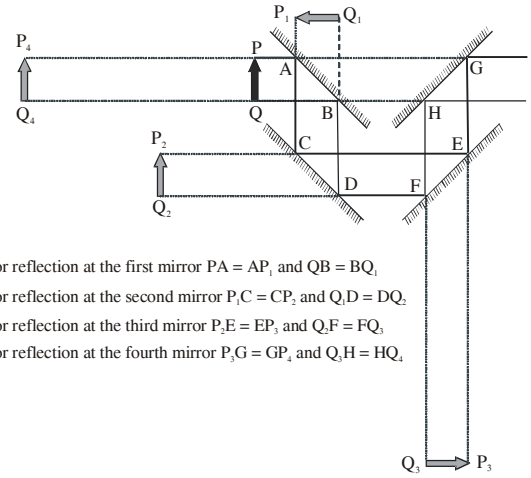


no. of images.

$\Rightarrow \frac{360}{60} = 6 \qquad \Rightarrow 6 - 1 = 5$

30. $\frac{10}{100} = \left(\frac{1}{2}\right)^{t/6000}$

31.



For reflection at the first mirror PA = AP_1 and QB = BQ_1
For reflection at the second mirror $P_1C = CP_2$ and $Q_1D = DQ_2$
For reflection at the third mirror $P_2E = EP_3$ and $Q_2F = FQ_3$
For reflection at the fourth mirror $P_3G = GP_4$ and $Q_3H = HQ_4$

34. $\frac{dQ}{dt} = Vi \times \frac{99}{100}$

35. For small angled prism $\delta = (\mu - 1)A \Rightarrow \delta = \mu A - A$ from graph A = 4^0, slope = A =4

40. Fringe width

$\beta = \frac{D}{d}\lambda \Rightarrow \beta \propto \lambda \propto \frac{1}{\sqrt{V}}$

$\Rightarrow \frac{\beta_1}{\beta_2} = \sqrt{\frac{V_2}{V_1}} = \sqrt{\frac{10^4}{100}} = \frac{10}{1}$

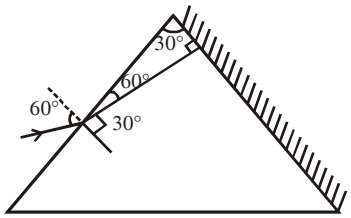
$\Rightarrow \beta_2 = \frac{\beta}{10}$

42. $I = \frac{E}{At} = \frac{nhc}{\lambda At}$

$\Rightarrow \frac{1}{100} \times I = \frac{nhc}{\lambda At}$

λ = 300nm, A = $1cm^2 = 10^{-4}\ m^2$

43.



Ray rectrace its path, when lies on front plane is perpendicularlly.
means i = 60° & r = 30°
sin i = μ sin r
sin 60° = μ sin 30°
$\sqrt{3} = \mu$

45. $E = Pc \Rightarrow P = \frac{E}{c} = \frac{h\nu}{c} \Rightarrow n = \frac{Pc}{h}$

68. $r = k[A]^2[B]$; when $P_C = 0.1$

$P_A = 0.4 - 2 \times 0.1 = 0.2$

$P_B = 0.3 - 0.1 = 0.2$

$\therefore$ ratio $= \frac{(0.2)^2(0.2)}{(0.4)^2(0.3)} = \frac{1}{6}$

70. $\log \frac{k_2}{k_1} = \frac{E_a}{2.303R}\left[\frac{1}{T_1} - \frac{1}{T_2}\right]$

$= \frac{7 \times 10^3}{2.303 \times 8.314}\left[\frac{1}{300} - \frac{1}{400}\right]$

$= \frac{7000 \times 100}{2.303 \times 8.314 \times 120000} = 0.30$

$\Rightarrow \log \frac{K_2}{K_1} \cong \log 2 \Rightarrow \frac{K_2}{K_1} = 2$

72. $\frac{ROD[A]}{1} = \frac{ROD[B]}{2} = \frac{ROD(C)}{1} = \frac{ROD(D)}{2}$

$\therefore \frac{-d(A)}{dt} = \frac{1}{2}\left(\frac{-d(B)}{dt}\right) \Rightarrow \frac{-d(B)}{dt} = 2 \times \frac{d(A)}{dt}$

$= 2 \times 4.8 \times 10^{-2}\ ms^{-1}$

$= +\ 5.6 \times 10^{-2}\ ms^{-1}$

74. $\because$ r $\propto$ [reactant]^{order} ,

$\because$ [reactant] < 1

82. NCERT XII, Pg # 134

84. C.No. of Cu^{2+} is normally four & six. If C. No. is form then complex will be

$[Cu(NH_3)_3Cl]Cl$ 50% Cl^- ionisable.

88. Complex of Zn^{2+} are tetrahedral
$\therefore$ M_{abcd} tetrahedral can exhibit optical isomerism
Complex of Pt & Pd are square planar.
91. NCERT-XII, Page No. # 187, Para 3
93. NCERT-XII, Page No. # 175, Para 2
95. NCERT-XII, Page No. # 173, Para 1
97. NCERT-XII, Page No. # 175, table 9.2
99. NCERT-XII, Page No. # 176, Line 12
101. NCERT-XII, Page No. # 177, Para 2
115. NCERT-XII, (E) Pg. # 159
117. NCERT-XII, (E) Pg. # 158-159
119. NCERT-XII, (E) Pg. # 150
121. NCERT-XII, (E) Pg. # 158, 159
123. NCERT-XII, (E) Pg. # 147
125. NCERT-XII, (E) Pg. # 153, 154
127. NCERT-XII, (E) Pg. # 159
129. NCERT-XII, (E) Pg. # 158-159
131. NCERT-XII, (E) Pg. # 150
133. NCERT-XII, (E) Pg. # 154
135. NCERT-XII, (E) Pg. # 162
137. NCERT-XII, (E) Pg. # 158, 159
149. NCERT-XII, (E) Pg. # 159
151. NCERT-XII, (E) Pg. # 159
153. NCERT-XII, (E) Pg. # 159
155. NCERT-XII, (E) Pg. # 159
157. NCERT-XII, (E) Pg. # 147
159. NCERT-XII, (E) Pg. # 149
163. NCERT-XII, Pg. # 198
165. NCERT-XII, Pg. # 183
167. NCERT-XII, Pg. # 201
169. NCERT-XII, Pg. # 209
171. NCERT-XII, Pg. # 181
173. NCERT-XII, Pg. # 197
175. NCERT-XII, Pg. # 211
177. NCERT-XII, Pg. # 208