



**MAJOR TEST # 04**

**ALLEN NEET-UG**

**DATE : 08 - 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.	4	2	2	4	1	2	3	1	3	4	3	2	3	1	2	2	1	4	3	3
Q.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
A.	2	2	2	3	4	1	1	4	3	2	4	4	2	1	1	1	3	4	4	2
Q.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
A.	3	1	4	2	3	1	4	1	1	3	3	4	2	1	1	4	4	2	1	1
Q.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
A.	3	2	3	1	3	2	3	3	4	1	1	2	3	1	2	4	3	3	1	1
Q.	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
A.	2	4	2	2	3	4	4	4	4	2	4	3	4	4	3	4	4	3	2	3
Q.	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
A.	1	1	3	2	2	3	4	2	4	4	3	4	4	4	2	4	3	1	3	1
Q.	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
A.	2	1	4	2	4	4	2	2	2	3	4	4	1	1	3	4	2	3	3	1
Q.	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
A.	4	4	4	2	2	4	2	4	3	3	3	4	1	2	4	4	4	4	2	3
Q.	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
A.	4	4	1	2	2	2	2	3	1	3	2	3	3	2	2	4	4	3	3	4

**HINT - SHEET**

16.  $B = \frac{i_b}{i_c} \Rightarrow i_b = \frac{i_c}{B} = \frac{4 \times 10^{-3}}{100} A = 40 \mu A$

Now  $V_{BE} = 8.6 \quad i_b R_B$

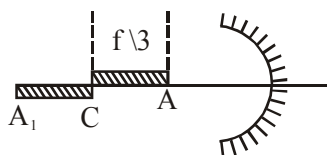
$\therefore R_B = \frac{8.6 - V_{BE}}{i_b} = \frac{8.6 - 0.6}{40 \times 10^{-6}} = \frac{8}{40 \times 10^{-6}}$

$= \frac{80 \times 10^5}{40} = 2 \times 10^5 \Omega = 200 \text{ k}\Omega$

33. For end A

$u = \left( 2f - \frac{f}{3} \right) = -\frac{5f}{3}$

$v = \frac{ug}{ug} = -\frac{5f}{2}$



For end C

$u = -2f, \quad v = -2f$

$\therefore$  Length of image

$l_1 = f/2$

37.  $A = r_1 + r_2$

$30 = r_1 + 0$

$r_1 = 30$

$\sin i = \mu \sin r_1$

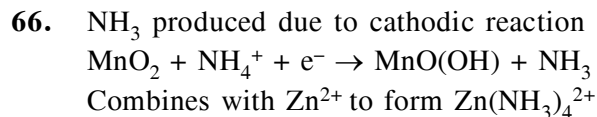
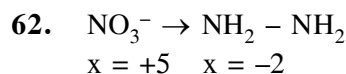
$\sin i = \sqrt{2} \sin 30 = \frac{1}{\sqrt{2}}$

$i = 45^\circ$



43.  $\mu = \frac{C}{V}$

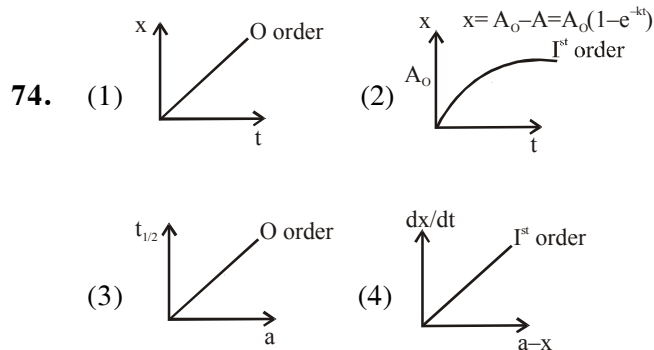
$\therefore \mu$  is minimum for red.  
 $\therefore V$  is maximum for red.



68.  $\therefore$  exothermic  
 $\therefore E_{xy} < E_{x+y}$  &  
I<sup>st</sup> step slow  $\Rightarrow$  higher  $E_A$  than II<sup>nd</sup> step.

70. 
$$\frac{\text{ROD}[\text{NH}_3]}{1} = \frac{\text{ROA}[\text{N}_2]}{1/2} = \frac{\text{ROA}[\text{H}_2]}{3/2}$$

$\therefore K_1 = \frac{K_2}{1/2} = \frac{K_3}{3/2}$   
 $\Rightarrow 3K_1 = 6K_2 = 2K_3$



76.  $K_1 = Ae^{-E_a/RT}$  &  $K_2 = Ae^{-E'_a/RT}$   
$$\log \frac{K_2}{K_1} = \frac{(E_a - E'_a) \times 1000}{2.3 \times 8.314 \times 298} = 7$$
  
 $\Rightarrow \frac{K_2}{K_1} = 10^7$

- 80. NCERT XII, Pg # 125
- 91. NCERT XII Pg. # 173 Para-5
- 93. NCERT XII Pg. # 174 Table 9.1
- 95. NCERT XII Pg. # 174 Table 9.1
- 97. NCERT XII Pg. # 176 Para-4
- 99. NCERT XII Pg. # 187 Para-2
- 101. NCERT XII Pg. # 187 Para-2
- 115. NCERT, English Page No. # 151
- 117. NCERT, English Page No. # 150
- 119. NCERT, English Page No. # 151
- 121. NCERT, English Page No. # 153
- 123. NCERT, English Page No. # 153
- 125. NCERT, English Page No. # 159
- 147. NCERT, English Page No. # 160
- 163. NCERT XII Pg. # 203
- 165. NCERT XII Pg. # 183
- 167. NCERT XII Pg. # 199
- 169. NCERT XII Pg. # 211, 204, 201
- 171. NCERT XII Pg. # 208, 209
- 173. NCERT XII Pg. # 198
- 175. NCERT XII Pg. # 209
- 177. NCERT XII Pg. # 185