

MAJOR TEST # 03

ALLEN NEET-UG

DATE : 02 - 04 - 2013

SYLLABUS - 03

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

HINT – SHEET

2. NCERT, Page No. # 193
4. NCERT, Page No. # 195
10. NCERT, Page No. # 134
12. NCERT, Page No. # 138
15. According to COME rule

$$\frac{1}{2}Mv^2 + 0 = 0 + \frac{KQq}{r}$$

$$\Rightarrow r \propto \frac{1}{v^2}$$

17. $\therefore \phi = \frac{q_{\text{inside}}}{\epsilon_0} : \frac{\phi_1}{\phi_2} = \frac{\sqrt{3}\lambda a}{2\lambda a} = \frac{\sqrt{3}}{2}$

19. Work done by electrostatic force

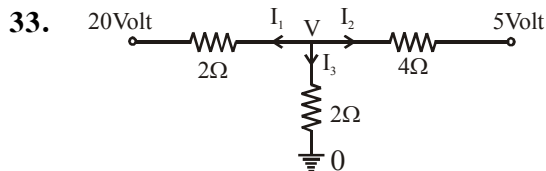
$$= -\Delta U = U_i - U_f = \frac{6Kq^2}{r} - 0$$

20. NCERT, Page No. # 151
22. NCERT, Page No. # 145
23. As distances of A and B from origin are same so PD = 0

30. Apparent angle of dip $\tan\theta' = \frac{\tan\theta}{\cos\alpha}$
 $\Rightarrow \tan\theta = (\cos\alpha)\tan\theta' = (\cos 30^\circ)(\tan 45^\circ)$
 $= \frac{\sqrt{3}}{2}$

$$\Rightarrow \theta = \tan^{-1}\left(\frac{\sqrt{3}}{2}\right)$$

31. As $\Delta V_{R_3} = \Delta V_{R_2} = \Delta V_{R_1}$
So $R_1 : R_2 : R_3 = 1 : 1 : 1$

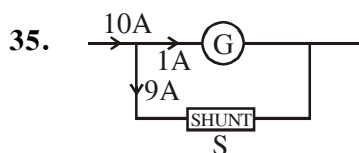


By KCL, $I_1 + I_2 + I_3 = 0$

$$\Rightarrow \frac{V-20}{2} + \frac{V-5}{4} + \frac{V-0}{2} = 0$$

$\Rightarrow V = 9 \text{ Volt}$

Therefore $I_3 = \frac{V}{2} = \frac{9}{2} = 4.5 \text{ A}$



$G \times 1 = S \times 9$

$$\Rightarrow \frac{G}{S} = \frac{9}{1}$$

39. $x = \frac{V}{L} = \frac{IR}{L} = \frac{I\rho L}{AL} = \frac{I\rho}{A}$

40. $V = \sum \frac{kq}{r}$

$$= 9 \times 10^9 \times 0.2 \times 10^{-6} \left[\frac{1}{1} + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots \right]$$

$$= 1800 \left[1 + \frac{1}{2} + \left(\frac{1}{2}\right)^2 + \left(\frac{1}{2}\right)^3 + \dots \right]$$

$$= 1800 \left[\frac{1}{1 - \frac{1}{2}} \right] = 1800 (2) = 3600 \text{ V}$$

41. Current in 8Ω will remain same when no current passed through cell of emf E it means all three resistances will be in series

45. $\therefore V \propto R$

$$\frac{V_A}{V_B} = \frac{R_A}{R_B} = \frac{\ell_A / r_A^2}{\ell_B / r_B^2}$$

$$\Rightarrow \frac{r_B}{r_A} = \sqrt{\frac{V_A \ell_B}{V_B \ell_A}} = \frac{1}{2}$$

- 91. NCERT - Eng., Part -II Page No. # 5, 6
- 93. NCERT - Eng., Part -II Page No. # 11
- 95. NCERT - Eng., Part -II Page No. # 11
- 97. NCERT - Eng., Part -II Page No. # 13, 14
- 99. NCERT - Eng., Part -II Page No. # 16
- 103. NCERT - Eng., Part -II Page No. # 15, 16
- 105. NCERT - Eng., Part -II Page No. # 15
- 107. NCERT - Eng., Part -II Page No. # 21,22
- 109. NCERT - Eng., Part -II Page No. # 23, 24
- 111. NCERT - Eng., Part -II Page No. # 26
- 113. NCERT - Eng., Part -II Page No. # 7
- 115. NCERT - Eng., Part -II Page No. # 30, 33,34
- 117. NCERT - Eng., Part -II Page No. # 27, 28
- 119. NCERT Page No. 139
- 121. NCERT Page No. 127
- 123. NCERT Page No. 127
- 125. NCERT Page No. 141
- 127. NCERT Page No. 131,141
- 129. NCERT Page No. 141
- 131. NCERT Page No.131 (E), 141(H)
- 133. NCERT Page No. 132,134 (E), 142,145 (H)
- 135. NCERT Page No. 132 (E), 142(H)
- 137. NCERT Page No. 133(E), 143 (H)
- 139. NCERT Page No. 135(E), 145 (H)
- 141. NCERT Page No. 141(E), 151 (H)
- 143. NCERT Page No. 140,141(E), 151,152 (H)
- 145. NCERT Page No. 134(E), 145 (H)
- 147. NCERT Page No. 129, 134(E), 139, 141 (H)
- 149. NCERT Page No. 90(E), 99 (H)

SPECIAL NOTE

Correction NCERT Based Objective Questions (Biology)

On Page # 83 ; Q. No. 42 → Ans. will be (1)

(only English Medium)