Path to Success
ALLEN CAREER INSTITUTE
KOTA (RAJASTHAN)

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.	3	2	3	1	3	4	2	4	4	2	2	4	1	2	2	2	4	4	4	2
Q.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
A.	2	4	3	1	3	2	2	3	2	1	2	1	4	3	3	4	1	1	1	2
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	2	4	1	2	1	2	2	2	2	1	2	3	1	3	4	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	4	2	1	1	3	1	4	1	3	3	3	4	3	4	2	2	4	4	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	3	4	2	2	4	1	4	3	4	3	1	1	4	3	1	3	2
Q.	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
A.	3	2	4	4	1	3	1	3	4	4	4	4	3	4	3	3	4	4	1	2
Q.	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
A.	3	2	4	3	3	4	4	3	3	1	4	1	3	3	4	1	2	2	2	1
Q.	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
A.	2	1	4	3	4	2	4	2	4	3	1	4	2	2	4	3	3	1	3	2
Q.	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
A.	1	2	1	2	1	1	1	4	2	4	2	2	3	3	3	4	1	3	1	4

HINT – SHEET

1. Non mono chromatic light used in an experiment of PEE the stopping potential is related to shortest wavelength (or larger frequency)

3. In fisson and fusion, sum of binding energy of products are greater than sum of binding energy of parent.

7. In fission, about 93% of released energy appears in the form of kinetic energies of products.

9. Energy of photon
= (939 MeV + 940 MeV) – (1876 MeV)
= 3 MeV

11. $KE = \frac{E_r - 1.02MeV}{2}$ and $E_r = \frac{hc}{\lambda}$

15. Activity = $N_1 \lambda$

$N_2 = N_1\lambda$ or $\lambda_2 = \frac{N_2}{N_1}$.

25. $KE = 2E_0 - E_0 = E_0$ (for $0 \le x \le 1$)

So $\lambda_1 = \frac{h}{\sqrt{2mE_0}}$ ...(1)

Again $KE = 2E_0$ (for $x > 1$)

$\lambda_2 = \frac{h}{\sqrt{2mE_0}}$ ...(2)

from equation (1) and (2)

$\frac{\lambda_1}{\lambda_2} = \sqrt{2}$

27. $\because (PC)_{photon} > (PC)_{electron}$ and $\lambda = \frac{h}{p} = \frac{hc}{pc}$

$\therefore \lambda_{photon} < \lambda_{electron}$

46. NCERT Page no. # 83
Faraday's laws of electrolysis

48. NCERT Page no. # 83
Faraday's laws of electrolysis
$2I^- \rightarrow I_2 + 2e^-$

52. NCERT Page no. # 76 equation (3.20)
$K = C \times \ell/a$

54. NCERT Page no. # 84/3.5.1
After electrolysis of $CuSO_4$, H_2SO_4remains in the solution so, pH of solution decreases.

56. $\overset{-2}{H_2C} = \overset{+2}{C}Cl_2$ becuase C is more electronegative than H but less electronegative than Cl.

64. NCERT Page no. # 68/3.3
$Fe(s) \rightarrow Fe^{+2} + 2e^-$; $E^o_{O.P.} = 0.44V$

$$E_{O.P.} = E^o_{O.P.} - \frac{0.0591}{2}\log[Fe^{+2}]$$

66. NCERT Page no. # 81-82/equations (3.24) and (3.26)

$$\alpha = \frac{\lambda_{eq}}{\lambda^{\infty}_{eq}} = \frac{K \times 1000/N}{\lambda^o_C + \lambda^{\infty}_a} = \frac{0.0092 \times 1000/0.1}{(43+65)}$$

68. $$\frac{(t_{1/2})_1}{(t_{1/2})_2} = \left(\frac{P_2}{P_1}\right)^{n-1}$$

70. NCERT Page no. # 113/Figure 4.10

72. NCERT Page no. # 113/equation (4.22)

74. $A \rightarrow nB$
initially a 0
after time t(a-x) nx
At intersection point [A] = [B]
$a - x = nx$
$a = nx + x$

$$x = \frac{a}{(n+1)}$$

$$\therefore \ [B] = nx = \frac{n[A]_0}{n+1}$$

76. NCERT Page no. # 105/equation (4.15)

78. $FeCl_3 + Z\ell no \rightarrow Fe(OH)_3 + 3HCl$ is an hydrolysis reaction.

80. Au sol is used in intramuscular injection

81. $\boxed{\Delta_0 \propto \frac{1}{\lambda}}$

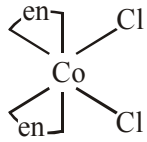
$\Delta_0 \rightarrow$ splitting energy
$\lambda \rightarrow$ Wavelength

84. For sulphides ore only use froath floatation process.

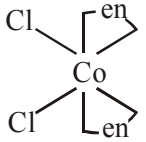
87. Four coordination isomers :-
$[Pt(NH_3)_4Cl_2][PtCl_4]$
$[Pt(NH_3)_3Cl_3][PtCl_3(NH_3)]$
$[Pt(NH_3)_3Cl_4][PtCl_2(NH_3)_2]$
$[Pt(NH_3)Cl_5][PtCl(NH_3)_3]$

88. $CuFeS_2$ (copper pyrites)

89.



Cis l-isomer



Cis d-isomer

91. NCERT Page no. 145-E, 156-H
93. NCERT Page no. 148-E, 159-H
95. NCERT Page no. 148-149-E, 160-H
99. NCERT Page no. 147-E, 158-H
101. NCERT Page no. 147-E, 159-H
107. NCERT Page no. 151-E, 163-H
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117. NCERT Page no. 158-E, 171-H
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148. NCERT, Page No. # 243
150. NCERT, Page No. # 236
152. NCERT, Page No. # 237
154. NCERT, Page No. # 232