

Enthusiast, Leader & Achiever Course

PHASE : (All Phase)

TARGET : PRE-MEDICAL 2020

Test Type : MAJOR

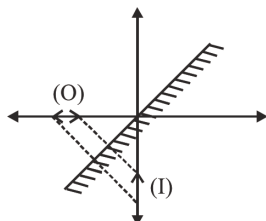
Test Pattern : NEET (UG)

TEST DATE : 11-05-2020

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

HINT - SHEET

1. Ans (2)



3. Ans (2)

$$\mu_{ga} = \frac{3}{2}$$

$$\mu_{wa} = \frac{4}{3}$$

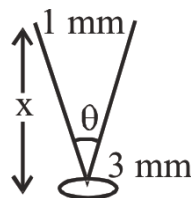
$$\mu_{gw} = \frac{\mu_g}{\mu_w} = \frac{3/2}{4/3} = \frac{9}{8}$$

4. Ans (1)

In minimum deviation,

$$r = \frac{A}{2} = \frac{60}{2} = 30^\circ$$

8. Ans (3)



$$\theta = \frac{10^{-3}}{x} = \frac{1.22\lambda}{3 \times 10^{-3}}$$

$$\Rightarrow x = \frac{3 \times 10^{-6}}{1.2 \times 5 \times 10^{-7}} = 5m$$

9. Ans (1)

$$f = \frac{75 \times 25}{75 - 25} = \frac{75 \times 25}{50} = \frac{75}{2} \text{ cm}$$

$$P = \frac{100 \times 2}{75} = \frac{8}{3} = +2.67 \text{ D}$$

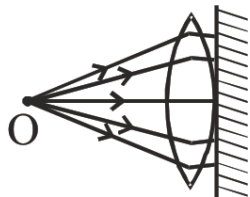
10. **Ans (3)**

"O" acts as focal point

$$\frac{1}{f} = (\mu - 1) \left(\frac{1}{R_1} - \frac{1}{R_2} \right)$$

$$\frac{1}{40} = (\mu - 1) \left(\frac{1}{10} + \frac{1}{10} \right)$$

$$\frac{1}{40} = (\mu - 1) \left(\frac{2}{10} \right) \Rightarrow \mu = \frac{9}{8}$$



15. **Ans (3)**

$$W_a = \frac{2D\lambda}{a} = \frac{2 \times 1.5 \times 500 \times 10^{-9}}{0.5 \times 10^{-3}} = 3 \text{ mm}$$

19. **Ans (3)**



from COLM, $p_M = p_{5M}$

$$\therefore \lambda = \frac{h}{p} \text{ so } \frac{\lambda_M}{\lambda_{5M}} = \frac{1}{1} = 1$$

20. **Ans (2)**

The electrostatic P.E. is zero when the electron and proton are far apart from each other. Work done in pulling electron and proton far away from each other

$$W = E_f - E_i = 0 - E_i = - \left(- \frac{13.6}{n^2} \text{ eV} \right)$$

$$\Rightarrow W = \frac{13.6}{(2)^2} \times 1.6 \times 10^{-19} \text{ J} = 3.4 \times 1.6 \times 10^{-19} \text{ J}$$

21. **Ans (2)**

The velocity of X-rays is always equal to that of light.

22. **Ans (3)**

Nuclear radius $r \propto A^{1/3}$

Hence $A \propto r^3$. Since density = Mass/Volume

Mass $\propto A$. Also volume $\propto r^3$.

Hence Mass/volume = constant.

24. **Ans (3)**

de-Broglie wavelength $\lambda = \frac{h}{mv_{\text{rms}}}$, rms

velocity of a gas particle at the given temperature (T) is given as

$$\frac{1}{2} mv_{\text{rms}}^2 \Rightarrow \frac{3}{2} kT \Rightarrow v_{\text{rms}} = \sqrt{\frac{3kT}{m}} \Rightarrow mv_{\text{rms}} = \sqrt{3mkT}$$

$$\therefore \lambda = \frac{h}{mv_{\text{rms}}} = \frac{h}{\sqrt{3mkT}}$$

$$\Rightarrow \frac{\lambda_H}{\lambda_{He}} = \sqrt{\frac{m_{He} T_{He}}{m_H T_H}} = \sqrt{\frac{4(273 + 127)}{2(273 + 27)}} = \sqrt{\frac{8}{3}}$$

27. **Ans (1)**

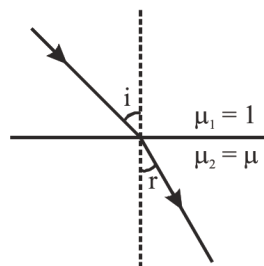
$$\lambda_{\text{max}} = \frac{12400}{\Delta E_g} = \frac{12400}{2.5 \text{ eV}} (\text{eV-}\text{\AA})$$

$$\lambda_{\text{max}} = 4960 \text{ \AA}$$

$$\lambda < \lambda_{\text{max}}$$

$$\lambda = 4000 \text{ \AA}$$

32. **Ans (2)**



$$i = 2r \text{ (given)}$$

$$\therefore \mu_1 \sin i = \mu_2 \sin r$$

$$1 \times \sin 2r = \mu \sin r$$

$$2 \sin r \cos r = \mu \sin r$$

$$2 \cos r = \mu$$

$$r = \cos^{-1} \left(\frac{\mu}{2} \right)$$

33. **Ans (4)**

$$\mu = \frac{1}{\sin \theta_C}$$

For θ_C minimum, μ is maximum, λ is minimum

37. **Ans (3)**

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

40. **Ans (3)**

Helium nucleus is called α -particle

41. **Ans (4)**

Minimum $\lambda \Rightarrow$ series limit

Lyman \Rightarrow

$$\frac{1}{\lambda_1} = R \left(1 - \frac{1}{\infty} \right) \& \frac{1}{\lambda_2} = R \left(\frac{1}{4} - \frac{1}{\infty} \right)$$

$$\frac{\lambda_1}{\lambda_2} = \frac{1}{4}$$

42. **Ans (3)**

The equation is $O^{17} \rightarrow 0n^1 + O^{16}$

$$\therefore \text{Energy required} = \text{B.E. of } O^{17} - \text{B.E. of } O^{16} \\ = 17 \times 7.75 - 16 \times 7.97 = 4.23 \text{ MeV}$$

43. **Ans (3)**

90% of the sample is decayed and 10% is undecayed. Fraction of $(1/10)$ lies between $(1/2)^3$ to $(1/2)^4$; so the time is less than 4 half-life periods but more than 3 half-life periods, i.e., between 30 to 40 days. The correct choice is 33 days.

44. **Ans (3)**

$$8 = I_B R_B + V_{BE}$$

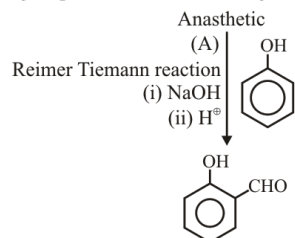
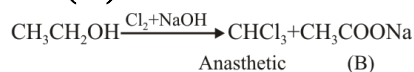
$$\Rightarrow 8 = \left(\frac{4 \times 10^{-3}}{100} \right) R_B + 0.6$$

$$\Rightarrow R_B = 185 \text{ k}\Omega$$

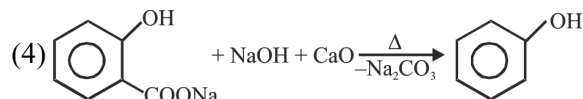
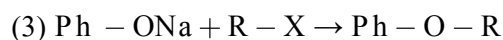
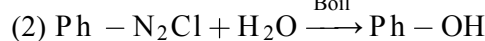
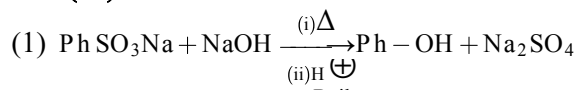
53. **Ans (3)**

Rate of nucleophilic substitution at aromatic ring μ Electron with drawing group.

57. **Ans (1)**



59. **Ans (3)**



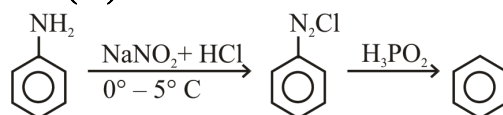
67. **Ans (4)**

Buna-S as well as Neoprene both are synthetic rubber.

69. **Ans (1)**

NCERT XII, II part Pg.# 414

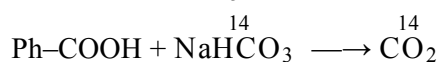
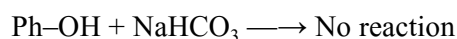
72. **Ans (1)**



73. **Ans (1)**

Fact

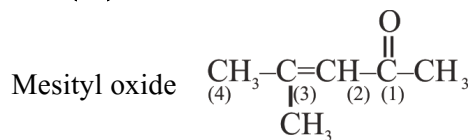
77. **Ans (4)**



79. **Ans (3)**

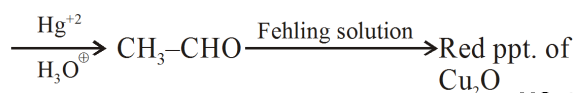
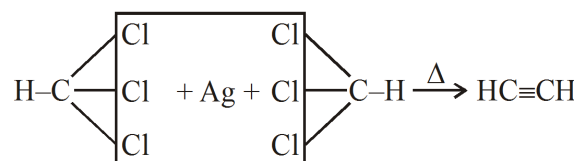
Presence of β -keto w.r.t. carboxylic acid increases rate of decarboxylation.

80. **Ans (4)**



NCERT (XIIth) Part II, Pg. # 352, 366, 367

84. **Ans (2)**



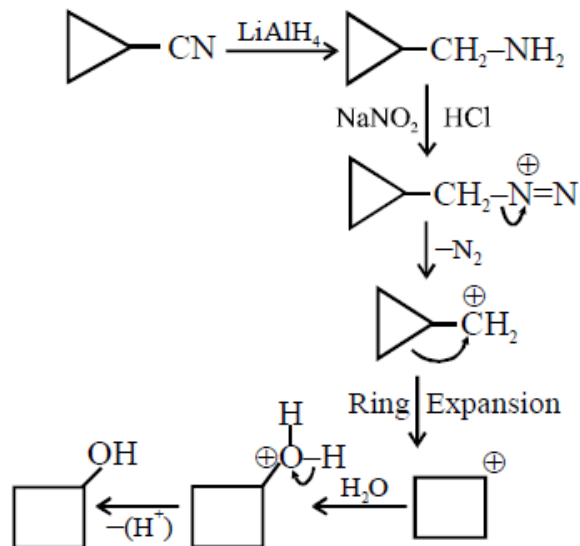
85. **Ans (2)**

NCERT Pg - 325 ; NaBH_4 is mild reducing Agent, can reduce Aldehyde & ketone.

86. **Ans (4)**

All given reagent convert carbonyl compound into alkane.

87. **Ans (3)**



93. **Ans (4)**

NCERT (XIIth) Pg. # 263

99. **Ans (2)**

NCERT-XII, Pg#E-262, H-286

119. **Ans (1)**

NCERT XII Pg # 229, 230, 231

120. **Ans (1)**

NCERT Pg. # 227(E), 247 (H)

121. **Ans (3)**

NCERT-XII, Pg. # 222

132. **Ans (3)**

NCERT Pg. # 184 (E), 201 (H)

139. **Ans (3)**

NCERT (XIIth) Pg. # 243

142. **Ans (2)**

NCERT XII Pg. # 226

145. **Ans (3)**

NCERT XII Pg. No. # (E)-224, (H243-244)

147. **Ans (3)**

NCERT XI, Page(E) 254, (H) 277

151. **Ans (1)**

NCERT (XII) Pg. # 151, Para-2

155. **Ans (3)**

NCERT (E) Pg # 153

156. **Ans (3)**

NCERT (XII) Pg. # 153, Para. # 8.2.5

160. **Ans (3)**

NCERT-XII Pg # 153; Para-8.2.5

161. **Ans (4)**

NCERT (XIIth) Pg. # 154-156 (Para 8.3)

164. **Ans (4)**

NCERT Pg. # 158

165. **Ans (4)**

NCERT (E) Page # 152

169. **Ans (3)**

NCERT (E) 159 (H) 172

172. **Ans (1)**

NCERT (XII) Pg # 146, 1st para

177. **Ans (1)**

NCERT(XII) Page# 168/182(H) para 9.1.2

178. **Ans (1)**

NCERT (XII) Pg. # 168