ALLEN CAREER INSTITUTE KOTA (RAJASTHAN)

CLASSROOM CONTACT PROGRAMME
(Academic Session : 2024 - 2025)

LEADER & ACHIEVER COURSE

PHASE : MLA, MAZA, MAZB, MAZC, MAZD, MAZL, MAZN, MAZO, MAAX, MAAY, MAPA, MAPB, LAKSHYA

TARGET : PRE MEDICAL 2025

Test Type : **MAJOR** Test Pattern : **NEET (UG)**

TEST DATE : 06-03-2025

ANSWER KEY

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.	1	1	3	3	1	2	1	2	4	4	3	3	4	2	2	1	3	3	1	2	2	3	4	2	2	1	1	1	1	2
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.	1	3	1	3	2	1	3	2	3	3	4	3	2	2	1	3	4	2	4	1	3	2	3	2	3	4	1	1	2	1
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.	4	2	3	1	4	3	4	3	4	2	1	2	4	3	2	2	3	1	3	2	1	3	4	3	4	4	2	2	3	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.	3	3	1	4	3	2	3	4	2	3	1	1	2	2	3	1	4	4	4	2	2	3	4	4	3	1	4	1	2	2
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	2	3	1	3	4	3	2	2	1	2	3	3	2	3	2	4	3	3	3	4	3	2	1	3	4	1	4	2
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.	2	3	1	3	4	3	2	1	1	2	3	1	3	3	2	2	3	3	1	4	3	3	3	3	2	1	1	3	1	3

HINT – SHEET

1. **Ans (1)**
NCERT-XI, Pg # 150

2. **Ans (1)**
NCERT, Pg. # 140, 141

3. **Ans (3)**
NCERT XI, Page No. 134, 135

4. **Ans (3)**
NCERT XI Page No. 136, 140, 147, 150

5. **Ans (1)**
NCERT-XI, Pg. No. - 145

6. **Ans (2)**
XI NCERT Pg. # 143

7. **Ans (1)**
NCERT, Pg. # 135

8. **Ans (2)**
NCERT, Pg. # 146

9. **Ans (4)**
NCERT, Pg. # 147

10. **Ans (4)**
NCERT, Pg # 142

11. **Ans (3)**
NCERT, Pg # 142

12. **Ans (3)**
NCERT, Pg. # 143

13. **Ans (4)**
NCERT Pg. # 142, 143

14. **Ans (2)**
NCERT, Pg. # 140

15. **Ans (2)**
NCERT Pg. # 139

16. **Ans (1)**
NCERT, Pg. # 150

17. **Ans (3)**
NCERT, Pg. # 145, 146

18. **Ans (3)**
NCERT, Pg # 137, 146

19. **Ans (1)**
NCERT Pg. # 157, 160

20. **Ans (2)**
NCERT, Pg. # 159, 160

21. **Ans (2)**
NCERT Pg. # 155, 158

22. **Ans (3)**
NCERT XI Page No. 157, 162, 163

23. **Ans (4)**
NCERT XI Pg # 157

24. **Ans (2)**
NCERT, Pg. # 154, 157

25. **Ans (2)**
NCERT XI, Pg. # 157

26. **Ans (1)**
NCERT-XI, Pg. # 158

27. **Ans (1)**
NCERT XI Page No. 161

28. **Ans (1)**
NCERT Pg. # 162

29. **Ans (1)**
NCERT-XII, Pg. # 156

31. **Ans (1)**
NCERT XI Pg # 159

32. **Ans (3)**
NCERT Pg. # 164

33. **Ans (1)**
NCERT Pg. # 162

34. **Ans (3)**
NCERT Pg. # 158

35. **Ans (2)**
NCERT Pg. # 161

36. **Ans (1)**
XI NCERT Pg # 175, 176, 177, 178

37. **Ans (3)**
NCERT-XI, Pg # 177

38. **Ans (2)**
NCERT XI Pg. # 166, 171

39. **Ans (3)**
NCERT-XI, Pg # 177

40. **Ans (3)**
NCERT-XI, Pg. # 174, 175

41. **Ans (4)**
NCERT, Pg. # 175

42. **Ans (3)**
NCERT Pg. # 167

43. **Ans (2)**
NCERT Pg. # 168, 169

44. **Ans (2)**
NCERT Pg. # 170

45. **Ans (1)**
NCERT Pg. # 172

46. **Ans (3)**
NCERT XI Pg. # 234

47. **Ans (4)**
NCERT 316

48. **Ans (2)**
NCERT Page No. 319

49. **Ans (4)**
NCERT XI Pg. No. 232

50. **Ans (1)**
NCERT XI Pg. No. # 320, 321

51. **Ans (3)**
NCERT-XI, Pg. # 321, Para-3

52. **Ans (2)**
NCERT-XI, Pg. # 107

53. **Ans (3)**
NCERT XI Pg#321

54. **Ans (2)**
NCERT XI Pg. # 247

55. **Ans (3)**
NCERT -XI, Pg. # 245

56. **Ans (4)**
NCERT-XI, Pg. # 242

57. **Ans (1)**
NCERT Pg. No. # 240

58. **Ans (1)**
NCERT XI, Pg. No. 339, Para - 22.4

59. **Ans (2)**
NCERT XI Page No. # 336

60. **Ans (1)**
NCERT-XI, Pg. # 242

61. **Ans (4)**
NCERT Pg. # 333

62. **Ans (2)**
NCERT Pg # 332

63. **Ans (3)**
NCERT, Pg # 334,336,337

64. **Ans (1)**
MSH help in dispersion of melanin while ACTH stimulate adrenal cortex for the secretion of mineralo-cocorticoides and glucocorticoides.

65. **Ans (4)**
NCERT Page#336

66. **Ans (3)**
NCERT Page#338.

67. **Ans (4)**
NCERT Page#335.

68. **Ans (3)**
NCERT-XI Pg#227

69. **Ans (4)**
NCERT (XI) Pg. # 311, 312

70. **Ans (2)**
NCERT-XI, Pg No. 306

71. **Ans (1)**
NCERT XI (E)Pg.# 219

72. **Ans (2)**
NCERT Page No 227

73. **Ans (4)**
NCERT (XIth) Pg. # 227

74. **Ans (3)**
NCERT XI Pg # 224

75. **Ans (2)**
NCERT XI - Page No. 221

76. **Ans (2)**
NCERT XI Page No. 220

77. **Ans (3)**
NCERT Pg. # 236
Broca's area – motor speech area
Wernicke's area – Language comprehension area
Somaesthetic area – Somatic sensation like touch, pain, pressure, temperature

78. **Ans (1)**
NCERT XI Pg. No. # 233

79. **Ans (3)**
NCERT-XI, Pg. # 236

80. **Ans (2)**
NCERT XI Pg. No. 232

81. **Ans (1)**
NCERT XI Page No. # 247-248

82. **Ans (3)**
NCERT Pg # 244, 245, 246

83. **Ans (4)**
NCERT Pg. No. # 242-243

84. **Ans (3)**
NCERT Page # 244

85. **Ans (4)**
NCERT XI Page # 334 (II Para)

86. **Ans (4)**
NCERT Page-335/337/342(E)

87. Ans (2)

NCERT XI Pg # 311

88. Ans (2)

NCERT (XI) Pg. # 222

89. Ans (3)

Module, Pg. # 163

90. Ans (2)

NCERT (XI) Pg. # 221

91. Ans (3)

According to FLOT :-

$Q = W + \Delta U$

In Cyclic process :- $\Delta U = 0$

$\therefore Q = W = -2PV$

$\therefore$ Heat Rejected = 2 PV

92. Ans (3)

$$(C_V)_{mix} = \frac{n_1(C_V)_1 + n_2(C_V)_2}{n_1 + n_2}$$

$$= \frac{2\left(\frac{5R}{2}\right) + 8\left(\frac{3R}{2}\right)}{2+8}$$

$$= \frac{17R}{10} = 1.7\,R$$

93. Ans (1)

By second law of thermodynamics (SLOT)

94. Ans (4)

$$\frac{R}{C_P + C_V} = \frac{1}{6} \Rightarrow C_P + C_V = 6R$$

$\because C_P - C_V = R$

$\therefore C_P = \frac{7}{2}R,\ C_V = \frac{5}{2}R$

$$\gamma = \frac{C_P}{C_V} = 1 + \frac{2}{R}$$

$\Rightarrow f = 5$

95. Ans (3)

$$\frac{\Delta L}{L} = \alpha \Delta T$$

$= 12 \times 10^{-6} \times 50$

$= 6 \times 10^{-4}$

Strain will be negative, as rod is in compressed state.

96. Ans (2)

$\therefore PV = nRT$

$$P = \left(\frac{nR}{V}\right)T \Rightarrow \left(\frac{mR}{MV}\right)T$$

$$\therefore \text{slope} = \frac{mR}{MV}$$

$\because$ m is doubled and volume is halved.

$\therefore$ slope becomes 4 times.

97. Ans (3)

$$P = \frac{\rho RT}{M_w}$$

$$\text{Slope} = \frac{\rho R}{M_w}$$

98. Ans (4)

As per Kirchoff's law a body can emit only those radiations at high temperature which it has absorbed at low temperature.

99. Ans (2)

A cooking pot should have low specific heat so that it requires less heat in heating upto a particular temperature & consume less fuel or gas.

Its thermal conductivity should be high so that it cooks food in less time.

100. Ans (3)

Q_R = Heat Required to melt all ice

$= ms_{ice}\Delta T + mL_f$

$= 200 \times 0.5 \times 5 + 200 \times 80$

$= 16500$ calorie

Q_S = Heat supplied by hot water $= ms_w\Delta T = 500 \times 1 \times 25$

$= 7500$ cal

Since, $Q_S < Q_R$ all ice will not melt. Temperature of mixture $= 0°C$.

101. Ans (1)

$\lambda m_1 T_1 = \lambda m_2 T_2$

$4 \times 900 = \lambda m_2 \times 1200$

$$\lambda m_2 = \frac{4 \times 900}{1200} = 3\mu m$$

102. Ans (1)

Black colour absorbs maximum at the time of heating so emits maximum at the time of cooling.

103. Ans (2)

A/C to Prevost - theory.

104. Ans (2)

$\frac{80-64}{5} = K(72-T_0)$

$16 = 5K(72-T_0)$ .... (1)

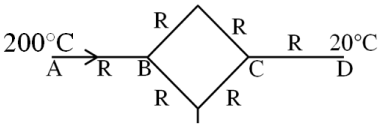
$\frac{64-52}{50} = K(58-T_0)$

$12 = 5K(58-T_0)$. . . (2)

Eq. (1) ÷ (2)

$\frac{4}{3} = \frac{72-T_0}{58-T_0} \Rightarrow T_0 = 16°C$

105. Ans (3)



$\because R_{eq} = 3R$

$i = \frac{\Delta T}{R_{eq.}} = \frac{180}{3R} = \frac{60}{R}$

For AB :- $i = \frac{200-T_B}{R}$

$\frac{60}{R} = \frac{200-T_B}{R}$

$T_B = 140°C$

106. Ans (1)

$T = 2\pi\sqrt{\frac{m}{k}}$

$T' = 2\pi\sqrt{\frac{m}{nk}} = \frac{T}{\sqrt{n}}$

107. Ans (4)

resultant amplitude $= \sqrt{(4)^2+(4)^2}$

$= 4\sqrt{2}m$

108. Ans (4)

$T = 2\pi\sqrt{\frac{\ell}{g}} = 2\pi\sqrt{\frac{\ell r^2}{GM}} = 2\pi r\sqrt{\frac{\ell}{GM}}$

$\frac{T_2}{T_1} = \frac{r_2}{r_1} = \frac{(R+R)}{R} = \frac{2}{1}$

109. Ans (4)

$T.E = \frac{1}{2}ka^2$

$T.E. \propto a^2$

110. Ans (2)

$\omega = \frac{2\pi}{T} = \frac{2\pi}{8} = \frac{\pi}{4}$

$\Delta t = 4-2 = 2$

$\Delta\phi = \omega\Delta t = \frac{\pi}{4}\times 2 = \frac{\pi}{2}$

111. Ans (2)

$a = -\omega^2 x$

when x = 0 then a = 0

112. Ans (3)

$\because V_{max} = a\omega$

$\therefore 100 = 10\omega,\ \omega = 10$

$\because v = \omega\sqrt{a^2-x^2}$

$\therefore 50 = 10\sqrt{(10)^2-x^2}$

$\therefore 25 = 100 - x^2$

$\therefore x^2 = 75$

$x = 5\sqrt{3}cm$

113. Ans (4)

Periodic motion repeats itself after a certain fixed time interval.

114. Ans (4)

S.H.M is a periodic motion,

velocity is maximum at mean position in SHM, acceleration is directly proportional to the displacement in S.H.M,

115. Ans (3)

$a_{max} = V_{max}$

$a\omega^2 = a\omega$

$\omega = 1,\ \frac{2\pi}{T} = 1$

$\therefore T = 6.28$ sec

116. Ans (1)

$v = n\lambda = 2\times 5 = 10$ cm/s

117. Ans (4)

$x = A\sin\omega t \qquad v = A\omega\cos\omega t = v_0\cos\omega t$

$a = -v_0\omega\sin\omega t = -\omega^2 A\sin\omega t = -\omega^2 x$

$a = -v_0\omega\sqrt{1-\cos^2\omega t}$

$= -v_0\omega\sqrt{1-\frac{v^2}{v_0^2}} = -\omega\sqrt{v_0^2-v^2}$

a-x graph is straight line passing through origin.

a-v graph is neither straight line nor a parabola.

v-t graph is of either sine or cosine function

118. Ans (1)

The velocity of particle executing S.H.M at its extreme position is zero, hence its momentum is also zero.

119. Ans (2)

For fundamental mode $\frac{\lambda}{2} = 100\,\text{cm},\ \lambda = 200\,\text{cm}$

$V = n\lambda = 330 \times \frac{200}{100} = 660\ \text{m/s}$

120. Ans (2)

Path difference $= \pi r - 2r = (2n - 1)\frac{\lambda}{2}$ {for minima}

$(3.14 - 2)r = \frac{\lambda}{2}$ (For smallest radius n = 1)

$r = \frac{\lambda}{2 \times 1.14} = \frac{0.342}{2 \times 1.14} = 0.15\,\text{m}$

121. Ans (3)

$3 \times \frac{V}{4\ell_C} = 2 \times \frac{V}{2\ell_0}$

$\frac{\ell_C}{\ell_0} = \frac{3}{4}$

122. Ans (1)

$A_x = 4\sin\left(\frac{\pi x}{15}\right)$

At x = 5 cm, $A_x = 4\sin\left(\frac{\pi}{15} \times 5\right) = 4\sin\frac{\pi}{3}$

$$A_x = 4 \times \frac{\sqrt{3}}{2} = 2\sqrt{3}\,\text{cm}$$

123. Ans (2)

$f_0 = 50$ Hz, $f_1 = 3f_0$, $f_2 = 5f_0 \Rightarrow$ COP

only odd harmonics

124. Ans (3)

Beat period $T = \frac{1}{n_1 \sim n_2} = \frac{1}{384 - 380} = \frac{1}{4}\text{sec.}$

Hence minimum time interval between maxima and minima $t = \frac{T}{2} = \frac{1}{8}\text{sec.}$

125. Ans (1)

$L_2 - L_1 = \Delta L = 10\log\frac{P_2}{P_1} = 10\log\frac{600}{30}$

$\Delta L = 10\log 20 \simeq 13\ \text{dB}$

126. Ans (3)

$V_S = \sqrt{\frac{E}{\rho}}$

E : Coefficient of elasticity

ρ : Density of medium

128. Ans (3)

$\omega = 60 \Rightarrow 2\pi n = 60 \Rightarrow n = \frac{30}{\pi}$ Hz

$V = \frac{\omega}{K} = \frac{60}{2} = 30\,\text{m/s}$

$K = \frac{2\pi}{\lambda} = 2 \Rightarrow \lambda = \pi$ metre

129. Ans (2)

$A^2 = a_1^2 + a_2^2 + 2a_1a_2\cos\theta$

$a^2 = a^2 + a^2 + 2a^2\cos\theta$

$\cos\theta = -\frac{1}{2}$

$\theta = \frac{2\pi}{3}$

130. Ans (2)

$\because\ I \propto A^2$

$\therefore \frac{I_{max}}{I_{min}} = \left(\frac{A_{max}}{A_{min}}\right)^2 = \left(\frac{A_1 + A_2}{A_1 - A_2}\right)^2$

$\therefore \frac{I_{max}}{I_{min}} = \left(\frac{5+3}{5-3}\right)^2 = \frac{64}{4} = \frac{16}{1}$

131. Ans (1)

NCERT Pg. # 285

$y = 0.02\sin(x + 30\,t)$

$\omega = 30,\ K = 1$

$V = \frac{\omega}{K} = \frac{30}{1} = 30\,\text{m/s}$

$\because V = \sqrt{\frac{T}{m}}$

$\therefore T = mV^2 = (30)^2 \times 10^{-4} = 9 \times 10^{-2}$

$\therefore T = 0.09\ \text{N}$

132. Ans (2)

$n_0 = \frac{V}{4\ell} = \frac{330}{4 \times 0.15} = 550\text{Hz}$

133. Ans (3)

$\ell_2 = 3\ell_1 = 3 \times 16 = 48\ \text{cm}$

134. Ans (3)

$A = A_0e^{-\gamma t}$

135. Ans (2)

$V_{rms} \propto \sqrt{T}$ & it is independent of pressure.

136. Ans (3)

NCERT 12th Page No. # 317

143. Ans (3)

NCERT-XII Pg#348

145. Ans (1)

Fact

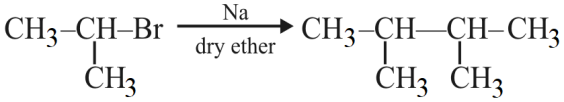
148. Ans (1)

NCERT-XII, Pg. # 345

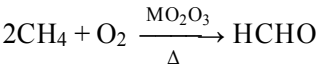
153. Ans (1)

NCERT (XI) Pg # 344, 3rd para

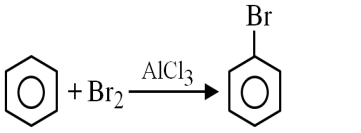
157. Ans (2)



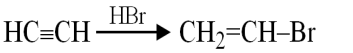
160. Ans (2)



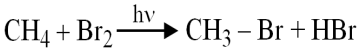
161. Ans (3)



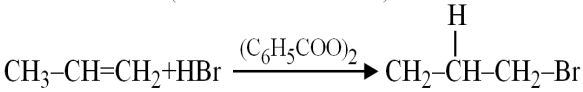
(Aromatic electrophilic substitution)



(Electrophilic addition)

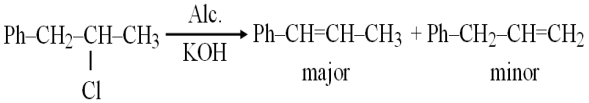


(Free radical substitution)



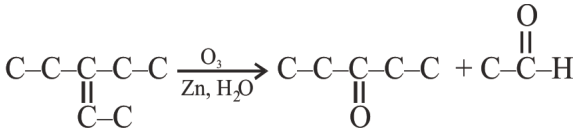
(Free radical addition)

162. Ans (1)



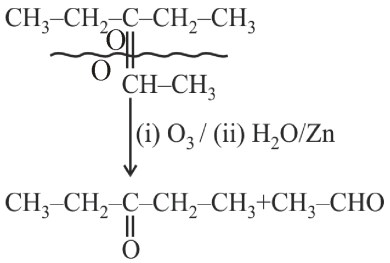
E-2 1-phenylpropene.

164. Ans (3)

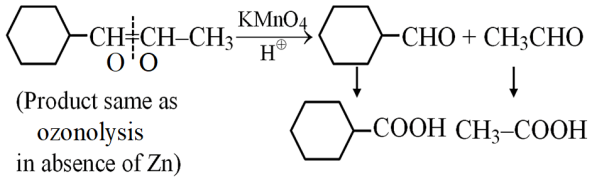


NCERT (XIth) Part II, Pg. # 397

OR



166. Ans (2)



(Product same as ozonolysis in absence of Zn)

169. Ans (1)

Fact Based

171. Ans (3)

Cummene followed by FRSR mechanism.

172. Ans (3)

Aniline do not show FCR.

173. Ans (3)

A = Benzene B = Friedel craft reaction

175. Ans (2)

$$\%N = \frac{1.4}{w} \times NV = \frac{1.4}{0.1} \times 4 = 56\%$$

178. Ans (3)

Silver acetylides are obtained by passing 1-alkyne in the ammonical solution of silver nitrate (tollen's reagent)