LEADER & ACHIEVER TEST SERIES / JOINT PACKAGE COURSE (AIOT)

TARGET : PRE-MEDICAL 2024

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

TEST DATE : 14-04-2024

ANSWER KEY

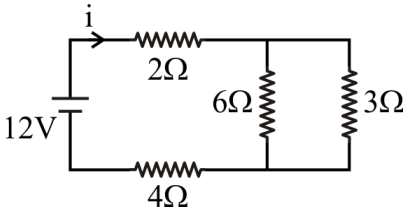
Q.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
A.	2	1	4	2	3	3	1	3	3	2	3	4	1	1	1	4	2	2	4	3	2	1	3	2	1	4	1	3	3	1
Q.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
A.	3	4	3	2	1	4	3	4	3	3	4	2	2	2	4	2	4	3	3	4	2	3	2	2	1	1	3	1	4	3
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	2	4	4	3	4	2	1	4	3	3	3	4	2	3	4	2	4	2	4	4	4	4	4	1	1	2	1	4
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.	1	3	4	3	4	2	4	1	3	4	2	4	3	1	3	1	3	1	2	2	2	3	3	4	4	3	2	4	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.	4	1	3	2	2	1	3	3	2	1	3	3	3	4	3	1	3	1	4	1	1	4	4	1	4	2	3	2	1	1
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.	3	1	1	2	4	3	2	2	3	4	2	3	1	2	1	3	3	1	4	3	4	3	1	3	2	3	1	2	1	3
Q.	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200										
A.	1	3	4	2	2	3	2	4	1	2	1	2	4	1	4	4	2	3	1	2										

HINT – SHEET

SUBJECT : PHYSICS

SECTION-A

1. Ans (2)



$$i = \frac{12}{\frac{6}{3}+2+4} = \frac{12}{8}A$$

$$i_{6\Omega} = \frac{12}{8} \times \frac{3}{3+6} = \frac{1}{2}A$$

2. Ans (1)

$N \times 2\pi r = L$

$$r \propto \frac{1}{N}$$

$$B = \frac{\mu_0 NI}{2r} \propto \frac{N}{r}$$

$$\boxed{B \propto N^2}$$

3. Ans (4)

$$W = MB(1 - \cos 60^\circ) = \frac{MB}{2} = 3 \Rightarrow MB = 6$$

$$\tau = MB \sin 60^\circ = 6 \times \frac{\sqrt{3}}{2} = 3\sqrt{3}\ \text{Nm}.$$

4. Ans (2)

$$\phi = B(\pi r^2) \Rightarrow e = \frac{d\phi}{dt} = B(2\pi r)\left(\frac{dr}{dt}\right)$$

$$= 25(2\pi)(0.2)(1 \times 10^{-2}) = 100\ \pi\text{mV}$$

5. Ans (3)

$$\cos\phi = \frac{R}{z} = \frac{8}{10} = 0.80\ \Omega$$

6. Ans (3)

$$(i_d)_{max} = (i_c)_{max} = i_0 = \frac{\varepsilon_0}{Z}$$

$$= \frac{220\sqrt{2}}{\sqrt{100^2 + 100^2}} = 2.2A$$

7. **Ans (1)**

$$\frac{1}{f_m} = \left(\frac{\mu_\ell}{\mu_m} - 1\right)\left(\frac{1}{R_1} - \frac{1}{R_2}\right)$$

$$\frac{1}{4} = \left(\frac{1.4}{1} - 1\right)\left(\frac{1}{R_1} - \frac{1}{R_2}\right) \quad ...(1)$$

$$\frac{1}{f} = \left(\frac{1.4}{1.6} - 1\right)\left(\frac{1}{R_1} - \frac{1}{R_2}\right) \quad ...(2)$$

$$\frac{(1)}{(2)} \quad \frac{f}{4} = \frac{0.4 \times 1.6}{-0.2}$$

$\Rightarrow f = -12.8$ cm

8. **Ans (3)**

$$\frac{I_1}{I_2} = 4 \Rightarrow \frac{I_{max} - I_{min}}{I_{max} + I_{min}}$$

$$\Rightarrow \frac{\left(\sqrt{I_1} + \sqrt{I_2}\right)^2 - \left(\sqrt{I_1} - \sqrt{I_2}\right)^2}{\left(\sqrt{I_1} + \sqrt{I_2}\right)^2 + \left(\sqrt{I_1} - \sqrt{I_2}\right)^2} \Rightarrow \frac{4\sqrt{I_1}\sqrt{I_2}}{2I_1 + 2I_2}$$

$$\Rightarrow \frac{2\sqrt{I_1}\sqrt{I_2}}{I_1 + I_2} = \frac{2\sqrt{\frac{I_1}{I_2}}}{\frac{I_1}{I_2} + 1} = \frac{2\sqrt{4}}{4+1} = \frac{4}{5}$$

9. **Ans (3)**

Theory based

10. **Ans (2)**

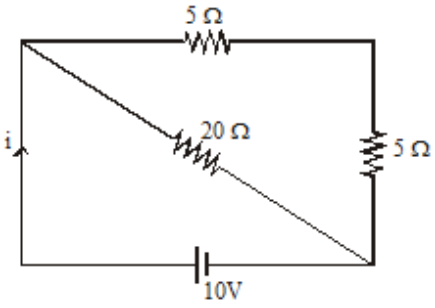
$$\frac{hc}{\lambda} = 13.6\left[\frac{1}{2^2} - \frac{1}{3^2}\right]$$

$$\Rightarrow \lambda = \frac{36hc}{(13.6)5} = \frac{36}{(13.6)5}(12400)\text{Å}$$

$= 6564$ Å $= 656$ nm

11. **Ans (3)**

D_1 is in reverse bias, D_2, D_3 in forward bias.



$$R_{eq} = \frac{10 \times 20}{10 + 20} = \frac{20}{3}$$

$$i = \frac{10}{20/3} = 1.5 \text{ A}$$

12. **Ans (4)**

Out put of NOR $= \overline{X + Y}$

Out put of given circuit

$$W = (\overline{X + Y})Z = (\bar{X} \cdot \bar{Y})Z$$

13. **Ans (1)**

Let initial temperature of water was 'T_1' such that

$$m_1 \cdot S_1 \cdot (T - T_1) = m_2 \cdot S_2 \cdot (T_2 - T)$$

$$60 \times S_w \times (35 - T_1) = 48 \times S_w \times (40 - 35)$$

$$T_1 = 31°C$$

14. **Ans (1)**

Newton's law of cooling

$$\frac{T_1 - T_2}{t} = k\left(\frac{T_1 + T_2}{2} - T\right)$$

$$\frac{4T - 3T}{10} = k\left(\frac{7T - 2T}{2}\right) \Rightarrow \frac{T}{10} = k\left(\frac{5T}{2}\right) \quad ...(i)$$

$$\frac{3T - T'}{10} = k\left(\frac{3T + T'}{2} - T\right)$$

$$\Rightarrow \frac{3T - T'}{10} = k\left(\frac{T' + T}{2}\right) \quad ...(ii)$$

By solving (i) and (ii) $T' = \frac{7}{3}T$

15. **Ans (1)**

$PV^{-1} =$ constant

Polytropic process $C = \frac{R}{\gamma - 1} + \frac{R}{1 - x}$

$$C = \frac{R}{\frac{5}{3} - 1} + \frac{R}{1 - (-1)} = \frac{3}{2}R + \frac{R}{2} = 2R$$

16. Ans (4)

Given, temperature of the source $T_1 = 500$ K

Temperature of the sink, $T_2 = 300$ K

Work done per cycle, W = 1 KJ = 1000 J

Heat transferred to the engine per cycle, Q_1 =?

Efficiency of a Carnot engine,

$$\eta = 1 - \frac{T_2}{T_1} = 1 - \frac{300}{500} = \frac{2}{5}$$

and $\eta = \frac{W}{Q_1}$

or $Q_1 = \frac{W}{\eta} = \frac{1000}{(2/5)} = 2500$ J

17. Ans (2)

For open organ pipe

$f = \frac{nv}{2\ell} \Rightarrow 1000 = \frac{n \times 330}{2 \times 33} \times 100$

$\Rightarrow 2 = n$

$\therefore f = \frac{2v}{2\ell} \rightarrow 2^{nd}$ harmonic

18. Ans (2)

torque acting on dipole is given by

$\tau = pE \sin\theta$

$20\sqrt{3} = pE \sin 30° = \frac{pE}{2}$ or $pE = 40\sqrt{3}$

potential energy of dipole in external electric field = $U = -pE\cos\theta = -40\sqrt{3} \times \frac{\sqrt{3}}{2} = -60$ J

19. Ans (4)

Distance $|V_0| + |u_e|$ use lens formula for objective

$V_0 = 6$ cm

lens formula for eye piece $|u_e| = 5$

distance = 6 + 5 = 11 cm

21. Ans (2)

$\frac{1}{\rho} = n_i e(\mu_e + \mu_n)$

$n_i = \frac{1}{\rho e(\mu_e + \mu_n)}$

$= \frac{1}{0.5 \times 1.6 \times 10^{-19} \times (0.39 + 0.11)}$

$= 2.5 \times 10^{19}\ m^{-3}$

23. Ans (3)

The circuit represents correct connection of R_1 (high resistance) in series and R_2 (small resistance) as shunt for measurement of V & I respectively as V & A

24. Ans (2)

From principle of calorimetry

Heat lost by brass ball = Heat gained by turpentine & calorimeter

(100) (0.1) (100 − 23)

= (200)(C)(23−15)+w(23−15)

770 = 1600 C + 4 × 8

$\Rightarrow$ 1600 C = 738 $\Rightarrow$ C = 0.46 cal/g°C

25. Ans (1)

Time $\propto c^x G^y h^z \Rightarrow T = kc^x G^y h^z$

Putting the dimensions in the above relation

$\Rightarrow [M^0L^0T^1] = [LT^{-1}]^x[M^{-1}L^3T^{-2}]^y[ML^2T^{-1}]^z$

$\Rightarrow [M^0L^0T^1] = [M^{-y+z}L^{x+3y+2z}T^{-x-2y-z}]$

Comparing the powers of M, L and T

$-y + z = 0$ …(i)

$x + 3y + 2z = 0$ …(ii)

$-x - 2y - z = 1$ …(iii)

On solving equations (i) and (ii) and (iii)

$x = \frac{-5}{2}, y = z = \frac{1}{2}$

Hence dimension of time are $[G^{1/2}h^{1/2}c^{-5/2}]$

26. Ans (4)

$s = t^3 - 6t^2 + 3t + 4$

Velocity, $v = \frac{ds}{dt} = 3t^2 - 6 \times 2t + 3 \times 1 + 0$

$= 3t^2 - 12t + 3$ m/s …(i)

Acceleration, $a = \frac{dv}{dt} = 3\times2t - 12\times1 + 0 = 6t - 12$ m/s^2

Acceleration is zero at time t given by $6t - 12 = 0$

$\Rightarrow \quad t = 2$ seconds

So, velocity v at t = 2 seconds is,

$v = (3t^2 - 12t + 3)_{t=2s}$

$= 3 \times (2)^2 - 12 \times 2 + 3 = -9$ m/s

27. Ans (1)

In head on elastic collision, if masses are equal than velocities of particles will be inter changed with each other.

$\vec{v}_1 = 3\hat{i}, \quad \vec{v}_2 = 2(-\hat{i})$

so, $\vec{u}_1 = -2\hat{i}, \ \vec{u}_2 = -3\hat{i}$

28. Ans (3)

$W = \vec{F} . \vec{s} = (5\hat{i} + 3\hat{j}) . (2\hat{i} - \hat{j}) = 10 - 3 = 7$ J

29. Ans (3)

In a rotating body, kinetic energy (K) = $\frac{1}{2} I\omega^2$

and angular momentum (J) = $I\omega$

Hence $K = \frac{J^2}{2I}$

If $I\uparrow \quad K\downarrow$

$\therefore K_A < K_B$

30. Ans (1)

$E = \frac{1}{2} I\omega^2$

31. Ans (3)

Let c be the COM situated at distance x from the atom of mass m_1 and at distance (r – x) from the atom of mass m_2.

$m_1 x = m_2(r - x)$

$x = \frac{m_2}{m_1 + m_2} . r$

M.I. about COM

$I = m_1 x^2 + m_2(r - x)^2$

Put the value of x.

$\boxed{I = \frac{m_1 m_2}{m_1 + m_2} r^2}$

32. Ans (4)

The acceleration due to gravity at a depth d below the surface of earth is

$g' = g\left(1 - \frac{d}{R}\right) = g\left(\frac{R - d}{R}\right) = g\frac{r}{R}$ ..(i)

where R – d = r = distance of location from the centre of the earth. When r = 0, g′ = 0

From (i), $g \propto r$ till R = r, for which g′ = g

For r > R, $g' = \frac{gR^2}{(R + h)^2} = \frac{gR^2}{r^2}$ or $g' \propto \frac{1}{r^2}$

(Here, R + h = r)

Therefore, the variation of g with distance r from centre of earth will be as shown in figure (4).

33. Ans (3)

$U = -\frac{GMm}{r}, K = \frac{GMm}{2r}$

$E = K + U = -\frac{GMm}{r} + \frac{GMm}{2r} = -\frac{GMm}{2r}$

$U = 2E_0$

34. Ans (2)

$W = T \times 2\Delta A \quad \Rightarrow \quad T = \frac{W}{2\Delta A}$

$= \frac{2 \times 10^{-4}}{2[10 \times 6 - 8 \times 3.75] \times 10^{-4}}$

$= 3.3 \times 10^{-2}$ N/m

35. Ans (1)

$Y = \frac{FL}{A\Delta L} = \frac{1000 \times 100}{10^{-6} \times 0.1} = 10^{12} N/m^2$

SECTION-B

36. Ans (4)

Reading = MSR + (VSR × LC) – ZE

= 6 mm + (5 × 0.1)mm – (–0.3 mm)

= 6.8 mm

37. Ans (3)

$R_1 = \frac{(110)^2}{100} = 121\ \Omega$

$R_2 = = 363\ \Omega$

$R_{total} = 121 + 363 = 484\ \Omega$

total power = $\frac{(220)^2}{484} = 100W$

38. Ans (4)

$f = \frac{qB}{2\pi m}$

$= \frac{1.7 \times 10^{11} \times 4.4 \times 10^{-2}}{2 \times \frac{22}{7}}$

$= \frac{1.7 \times 4.4}{44} \times 7 \times 10^9$

$= 1.7 \times 0.1 \times 7 \times 10^9$

$= 1.19 \times 10^9$ per sec.

39. Ans (3)

$Q = \frac{\omega_r L}{R} = \sqrt{\frac{L}{C}} \cdot \frac{1}{R}$

$Q = \sqrt{\frac{1}{9}} \cdot \frac{1}{3} = \frac{1}{9}$

40. Ans (3)

Container will appear half filled when

Empty part = app. filled part

$21 - x = \frac{x}{(4/3)}$

$\Rightarrow x = 12$ cm

41. Ans (4)

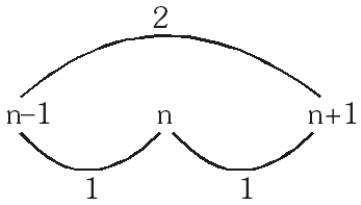
Distance between first dark fringe on either side of central bright fringe is equal to fringe width of central bright fringe

$\beta = \frac{2D\lambda}{a}$

42. Ans (2)

Sublimation : Process of converting solid into vapour directly.

44. Ans (2)



Now divide 1 second into 1, 1, 2 equal divisions

$\frac{1}{1}$

$\frac{1}{1}$

$\frac{1}{2}\ \frac{2}{2}$

By eliminating common time instants, total maxima in one second is 2.

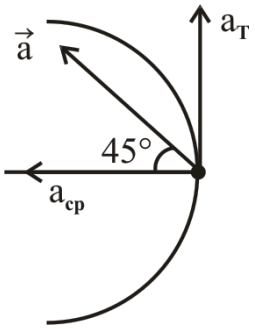
So, two beats per second will be heard.

45. **Ans (4)**

After removing one electron from helium atom it will become hydrogen like atom.

$\therefore E = 24.6 + (13.6)(2)^2 = 79$ eV

46. **Ans (2)**



$\because \tan 45^\circ = \frac{a_T}{a_{cp}}$

$a_{cp} = a_T$

$\omega^2 r = 9$

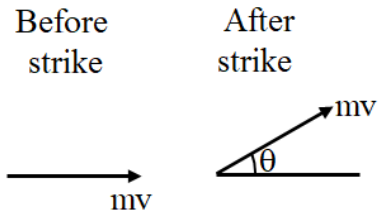
$\omega = \sqrt{\frac{9}{4}} \Rightarrow \omega = \frac{3}{2}$ rad/ sec

$\because \omega = \omega_0 + \alpha t$

$\omega = 0 + \left(\frac{a_T}{r}\right) t$

$\frac{3}{2} = \frac{9}{4}.t \Rightarrow t = \frac{2}{3}$ sec.

47. **Ans (4)**



$|\vec{P}_i| = |\vec{P}_f| = mv$

$|\Delta\vec{P}| = 2mv \sin\frac{\theta}{2}$

48. **Ans (3)**

$mU + 0 = mV + M(\sqrt{2gh})$

49. **Ans (3)**

$h = \frac{2T\cos\theta_c}{r\rho g}$

for $h = 0$

(i) T may be zero

(ii) $\cos\theta_c$ may be zero $\Rightarrow \theta_c = 90^\circ$

50. **Ans (4)**

for equal distance division :-

$\frac{2}{k_{eff}} = \frac{1}{k_1} + \frac{1}{k_2}$

$\therefore \frac{2}{k_{eff}} = \frac{k_1 + k_2}{k_1 k_2} \Rightarrow k_{eff} = \frac{2k_1k_2}{k_1 + k_2}$

now this effective dielectric has equal area division with k_3

$\therefore k_{final} = \frac{k_{eff} + k_3}{2}$

$= \frac{\frac{2k_1k_2}{k_1+k_2} + k_3}{2} = \left(\frac{k_1k_2}{k_1 + k_2} + \frac{k_3}{2}\right)$

$\therefore C_{final} = k_{final}C$

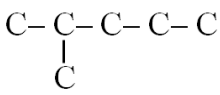
Option (4)

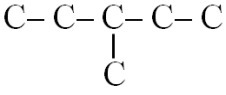
SUBJECT : CHEMISTRY

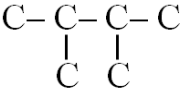
SECTION-A

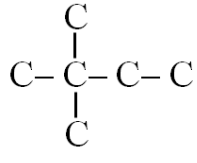
51. **Ans (2)**

(1) C–C–C–C–C–C

(2) 

(3) 

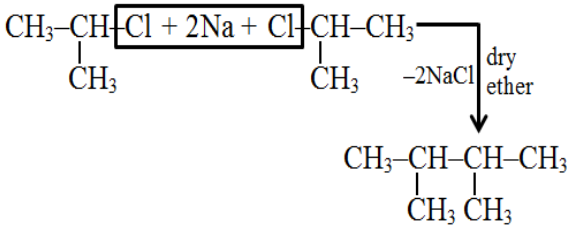
(4) 

(5) 

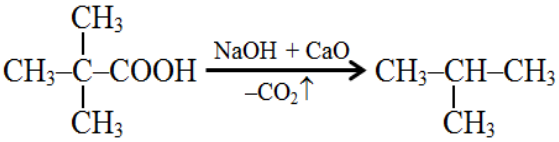
52. **Ans (3)**

Due to equal distribution of electron without charge unpaired electron containing species are formed.

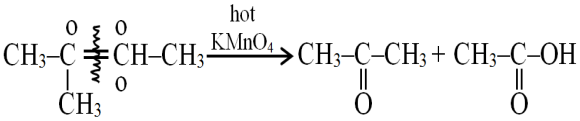
53. **Ans (2)**



54. **Ans (2)**



55. **Ans (1)**



56. **Ans (1)**

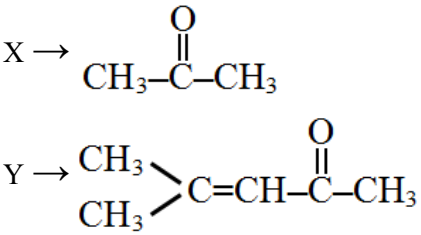
$$\% \text{ of } N_2 = \frac{28}{22400} \times \frac{V}{W} \times 100$$

$$= \frac{28}{22400} \times \frac{31}{0.25} \times 100 = 15.6\ \%$$

57. **Ans (3)**

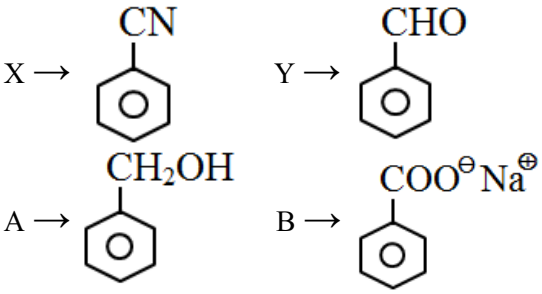
NCERT-XII, Pg.#418

58. **Ans (1)**



(Aldol condonsation product)

61. **Ans (2)**



62. **Ans (1)**

NCERT-XII, Pg.#421

63. **Ans (2)**

NCERT-2019, Pg.#81

64. **Ans (4)**

NCERT-XII-2019, Pg.#88,89,90

65. **Ans (4)**

NCERT-XII-2019, Pg.#83 (E)

NCERT-XII-2019, Pg.#81 (H)

66. **Ans (3)**

NCERT-XII (2019), Pg.#20, Q.4.10 [E]

NCERT-XII (2019), Pg.#119 [H]

67. **Ans (4)**

NCERT-XII (2019), Pg.#48

68. **Ans (2)**

NCERT-XI, Edition:2023-24, part-1, Pg.#200

69. **Ans (1)**

$H_3PO_2 = 3(+1) + x + 2(-2) = 0 \Rightarrow x = +1$

$H_3PO_3 = 3(+1) + x + 3(-2) = 0 \Rightarrow x = +3$

$H_4P_2O_6 = 4(+1) + 2x + 6(-2) = 0 \Rightarrow x = +4$

$H_3PO_4 = 3(+1) + x + 4(-2) = 0 \Rightarrow x = +5$

70. **Ans (4)**

1. 1 g of uranium
2. 2 mole of calcium atom

   mass = $2 \times 40 = 80$ g
3. 2 mole of $CaCO_3$

   $= 2 \times 100 = 200$ g

4 mass of $O_2 = 32 \times 10 = 320$ gm

71. **Ans (3)**
NCERT-XI, Edition: 2023-24, part-1, Pg.#150

72. **Ans (3)**
No. of subshell = n = 3
No. of orbitals = $n^2 = 3^2 = 9$

73. **Ans (3)**
NCERT-XI, Edition: 2023-24, part-1, Pg.162

74. **Ans (4)**

$$\frac{r_1}{r_3} = \frac{0.529 \times \frac{n_1^2}{Z}}{0.529 \times \frac{n_3^2}{Z}}$$

$$\frac{y}{r_3} = \frac{1^2}{3^2} = \frac{1}{9} \Rightarrow r_3 = 9y$$

75. **Ans (2)**
NCERT-XII, Pg.#238

77. **Ans (4)**
NCERT-XII, Pg.#230

78. **Ans (2)**
NCERT-XII, Pg.#227

79. **Ans (4)**
NCERT-XII, Pg.#189

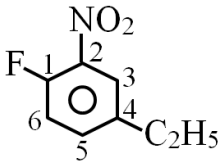
80. **Ans (2)**
NCERT-XII, Pg.#203

82. **Ans (4)**
NCERT-XI, Pg.#324

83. **Ans (4)**
NCERT-XI, Pg.#319

SECTION-B

86. **Ans (1)**



4-Ethyl-1-fluoro-2-nitro benzene

87. **Ans (1)**
In electrophilic addition reaction, carbocation intermediate is formed.

89. **Ans (1)**
NCERT-XII, Pg.#401

92. **Ans (3)**
NCERT-XII (2017), Pg.#45

93. **Ans (4)**
NCERT-XII (2019), Pg.#41

94. **Ans (3)**
$N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$
$\Delta n_g = -2$ ie < 0
$K_p < K_c$
$2H_2O(\ell) \rightleftharpoons 2H_2(g) + O_2(g)$
unit of $K_p = (atm)^{\Delta ng} = (atm)^3$
$C(s) + H_2O(g) \rightleftharpoons CO(g) + H_2(g)$
$\Delta n_g = 1$

95. **Ans (4)**
NCERT-XI, Edition:2023-24, part-1, Pg.#203

97. **Ans (4)**
NCERT-XI, Pg.#319

99. **Ans (3)**
NCERT-XI, Pg.#123

SUBJECT : BOTANY

SECTION - A

101. **Ans (2)**
NCERT XI Pg. # 91,92,93

102. **Ans (4)**
NCERT XI Pg. # 91,92,93

103. **Ans (3)**
NCERT XI Page No. # 250

104. **Ans (1)**
NCERT XI Pg # 245, 246

105. **Ans (3)**
NCERT XI Page No. # 30

106. **Ans (1)**
NCERT XI Page No. # 17 and 19

107. **Ans (3)**
NCERT XI Page No. # 33

108. Ans (1)
NCERT XI Page No. # 9 and 29

109. Ans (2)
NCERT XI Page No. # 79

110. Ans (2)
NCERT XI Page No. # 74

111. Ans (2)
NCERT XI Pg. # 158

112. Ans (3)
NCERT XI Pg. # 231,233

113. Ans (3)
NCERT XI Pg. # 230

114. Ans (4)
NCERT-XII, Pg # 232(E), 255(H)

115. Ans (4)
NCERT-XII, Pg # 233(E), 256(H)

116. Ans (3)
NCERT-XII, Pg # 234,235,237(E),
257,258,260(H)

117. Ans (2)
NCERT-XI, Pg # 209

118. Ans (4)
NCERT-XI, Pg # 219, 220

119. Ans (2)
NCERT-XI, Pg # 214

120. Ans (2)
NCERT XIIth Pg # 98, 100, 116, 122

121. Ans (4)
NCERT XIIth Pg # 121, 122

122. Ans (1)
NCERT XIIth Pg # 118, 119

123. Ans (3)
NCERT XIIth Pg # 112

124. Ans (2)
NCERT XIIth Pg # 97

125. Ans (2)
NCERT XIIth Pg # 117

126. Ans (1)
NCERT XII, Pg # 36(E)

127. Ans (3)
NCERT XII Pg # 28,29(E)

128. Ans (3)
NCERT XII Bio Pg # 243

129. Ans (2)
NCERT XII Pg. # 242

130. Ans (1)
NCERT XII Pg. # 259

131. Ans (3)
NCERT XII Pg. # 259

132. Ans (3)
NCERT XII Pg. # 87

133. Ans (3)
NCERT XII Pg. # 77

134. Ans (4)
NCERT XII Pg. # 77

135. Ans (3)
NCERT XII Pg. # 181

SECTION - B

136. Ans (1)
NCERT XI Pg. # 97

137. Ans (3)
NCERT XI Page No. # 243

138. Ans (1)
NCERT XI Pg. # 24

139. Ans (4)
NCERT XI Page No. # 35, 38, 39

140. Ans (1)
NCERT XI Pg. # 76

141. Ans (1)
NCERT XI Pg. # 231,232

142. Ans (4)
NCERT-XII, Pg # 227 [Figure 13.4] (E),
249 [चित्र 13.4] (H)

143. **Ans (4)**
NCERT-XII, Pg # 230(E), 252(H)
$N_t = N_0e^{rt} = 200 \times 2.72^{0.75 \times 4}$
$= 200 \times 2.72^3 = 4024$

144. **Ans (1)**
NCERT XIIth Pg # 100

145. **Ans (4)**
NCERT XIIth Pg # 99, 107, 109, 111

146. **Ans (2)**
NCERT XII, Pg # 27(E)

147. **Ans (3)**
NCERT XII Pg # 242

148. **Ans (2)**
NCERT XII Pg. # 259

149. **Ans (1)**
NCERT XII Pg. # 89

150. **Ans (1)**
NCERT XII Pg. # 183

SUBJECT : ZOOLOGY

SECTION - A

151. **Ans (3)**
NCERT Page No. # 226(E), 225/226(H)

152. **Ans (1)**
NCERT Page No. # 220(E), 219(H)

153. **Ans (1)**
NCERT XII Page No. # 118, 119, 124

154. **Ans (2)**
NCERT Page No. # 151, 152

155. **Ans (4)**
NCERT Page No. # 154

156. **Ans (3)**
NCERT Page No. # 147

157. **Ans (2)**
NCERT XI Page No. # 336/338

158. **Ans (2)**
NCERT XI Page No. # 337/335

159. **Ans (3)**
NCERT XI Page No. # 294

160. **Ans (4)**
NCERT XI Page No. 296-297

161. **Ans (2)**
NCERT Page No. # 138

162. **Ans (3)**
NCERT Page No. # 133

163. **Ans (1)**
NCERT Page No. # 139

164. **Ans (2)**
NCERT Page No. # 162

165. **Ans (1)**
NCERT Page No. # 164, 169

166. **Ans (3)**
NCERT Page No. # 168, 169

167. **Ans (3)**
NCERT Page No. # 125, 132, 134

168. **Ans (1)**
NCERT Page No. # 201

171. **Ans (4)**
NCERT, Pg # 47, 49

172. **Ans (3)**
NCERT-XI, Pg # 144

173. **Ans (1)**
NCERT-XI, Pg # 104

174. **Ans (3)**
NCERT-XI, Pg # 316, 317, 321

175. **Ans (2)**
NCERT, Pg # 271

176. **Ans (3)**
NCERT-XII, Pg # 44

177. **Ans (1)**
NCERT-XII, Pg # 47

178. **Ans (2)**
NCERT-XII, Pg # 45

179. **Ans (1)**
NCERT-XII, Pg # 64

180. **Ans (3)**
NCERT, Pg # 197

181. **Ans (1)**
NCERT, Pg # 201

182. **Ans (3)**
NCERT, Pg # 200

183. **Ans (4)**
NCERT, Pg # 201, 204

184. **Ans (2)**
NCERT, Pg # 210

185. **Ans (2)**
NCERT, Pg # 211

SECTION - B

186. **Ans (3)**
NCERT XII Page No. # 149

187. **Ans (2)**
NCERT Page No. # 159

188. **Ans (4)**
NCERT Page No. # 147

189. **Ans (1)**
NCERT XI Page No. # 335/336

190. **Ans (2)**
NCERT Page No. # 166

191. **Ans (1)**
NCERT Page No. # 196

192. **Ans (2)**
NCERT, Pg # 57

193. **Ans (4)**
NCERT-XI, Pg # 147, Last Para.

194. **Ans (1)**
NCERT-XI, Pg # 102

195. **Ans (4)**
NCERT-XI, Pg # 111, 115

196. **Ans (4)**
NCERT-XI, Pg # 317, 318

197. **Ans (2)**
NCERT, Pg # 277

198. **Ans (3)**
NCERT-XII, Pg # 47

199. **Ans (1)**
NCERT, Pg # 201