1 ANSWER KEY MAJOR TEST (XI)

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

Q.1 (1)

$$\frac{\Delta p}{p} \times 100 = \frac{1}{2} \left(\frac{\Delta a}{a} + \frac{\Delta b}{b} + \frac{\Delta c}{c} \right) \times 100 + \frac{\alpha \Delta d}{d} \times 100$$

$$\Rightarrow 2 = \frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} + \frac{1}{2} \right) + \alpha \left(\frac{1}{2} \right)$$



$$\Rightarrow 2 = \frac{3}{4} + \frac{\alpha}{2} \Rightarrow \frac{\alpha}{2} = 2 - \frac{3}{4} = \frac{5}{4} \Rightarrow \alpha = \frac{5}{2}$$

Q.2 (2

Average speed,
$$V_{avg} = \frac{Total \ distance \ travelled}{total \ time \ taken}$$

Area of velocity - time gives displacement

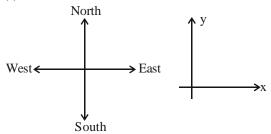
Distance travelled $= |\vec{S}_{0 \text{ to } 40s}| + |\vec{S}_{40 \text{ to } 80s}|$

$$=\frac{1}{2} \times 40 \times 10 + \frac{1}{2} \times 40 \times 10$$



$$V_{avg} = \frac{400}{80} = 5 \,\text{m/s}$$

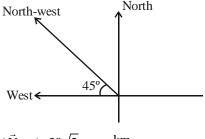
Q.3 (1



$$\vec{V}_{A} = 30 \frac{km}{h} \hat{i} \quad \vec{V}_{B} = 30 \frac{km}{h} \hat{j}$$



$$\vec{V}_{B/A} = \vec{V}_B - \vec{V}_A = 30(\hat{j} - \hat{i}) \frac{km}{h}$$



$$|\vec{V}_{B/A}| = 30\sqrt{2} = 42\frac{km}{h}$$

Work done by variable force, $WD = \int_{1}^{1} f dx$

$$\Rightarrow$$
 WD = $\int_{0}^{1} (20 + 20x) dx$



$$= \left(20x + \frac{20x^2}{2}\right)_0^1 = 20 + 10 = 30 \text{ J}$$

Q.5 (1)

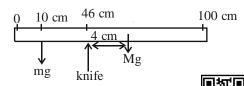
Distance of masses

from x-axis =
$$\sqrt{y^2 + z^2}$$



Moment of inertia, $I = m_1 r_1^2 + m_2 r_2^2 + m_3 r_3^2 + m_4 r_4^2$ \Rightarrow I = (1)(0)+(2)(0)+(3)(3)²+(4)(2)² $= 27 + 16 = 43 \text{ kg m}^2$

Q.6 (3)



Balancing torque about knife (mg)(36) = mg(4)

$$\Rightarrow$$
 M = 9 m = (9 × 8) gram = 72 g

Q.7 (2)

F-T=2a and T=1(a)=a

$$\therefore a = \frac{F}{3} = \frac{10}{3} \text{ m/s}^2$$



and $T = \frac{10}{3} N$; Stress $= \frac{T}{\pi r^2} = \frac{6.25}{3\pi} \times 10^9$

$$r = 4 \times 10^{-5} \,\mathrm{m}$$

Q.8 Q = Av $\mathbf{A}_1\mathbf{v}_1 = \mathbf{A}_2\mathbf{v}_2$



$$\frac{\mathbf{v}_1}{\mathbf{v}_2} = \frac{\mathbf{A}_2}{\mathbf{A}_1} = \frac{\frac{\pi}{4} \mathbf{d}_2^2}{\frac{\pi}{4} \mathbf{d}_1^2}$$

$$\frac{\mathbf{v}_1}{\mathbf{v}_2} = \frac{9}{4}$$

Q.9 (1)

$$\begin{split} W &= S \times 8\pi R^2 \\ &= 4.8 \times 10^{-2} \times 8 \times 3.14 \times (4 \times 10^{-2})^2 \end{split}$$







Heat flow, $\Delta Q = mS\Delta T$ where S = specific heat capacity



$$\Rightarrow S = \frac{\Delta Q}{m\Delta T} \left(\frac{J}{kg - K} \right)$$

Specific heat capacity remains constanat for small temperature variations. But for large temperature variation, it varies with temperature.

Q.11 (2)

Work done by gas in expansion is positve. Work done by gas in compression is negative. From graph, we can can clude that volume is



decreasing \Rightarrow compression \Rightarrow negative workdone

Q.12

Both the gases will occupy volume equal to volume of container.



$$PV = nRT \Rightarrow \frac{P_1}{P_2} = \frac{n_1}{n_2} = \frac{5}{3}$$

Q.13

$$T=2\pi\sqrt{\frac{\ell}{g}}=4\,s$$



Given $g = \pi^2$

$$4 = 2\pi \sqrt{\frac{\ell}{\pi^2}}$$
; $2 = \sqrt{\ell}$; $\ell = 4m$

Q.14 **(4)**

$$L.C. = \frac{Pitch}{Number of division on circular scale}$$

$$\Rightarrow$$
 0.01mm = $\frac{\text{Pitch}}{50}$ \Rightarrow Pitch = 0.5 mm



Q.15

average speed
$$\langle \vec{v} \rangle = \frac{\text{displacement}}{\text{time}}$$



$$= \frac{ut + \frac{1}{2}at^2}{t} = u + \frac{1}{2}at$$

Q.16 **(2)**

Horizontal range



$$= \frac{2u_x \cdot u_y}{g} = \frac{2 \times 6 \times 8}{10} = \frac{48}{5}$$

 $R = 9.6 \, \text{metre}$

Q.17 (1)

$$t_{\min} = \frac{12}{4} = 3\sec$$

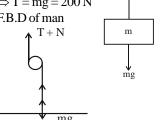


Q.18

Acceleration of block = 0 m/s^2

$$\Rightarrow T - mg = ma = 0$$

$$\Rightarrow T = mg = 200 \text{ N}$$
F.B.D of man



As man is at rest

$$\Rightarrow$$
 T + N = mg \Rightarrow 200 + N = 600 \times 10 \Rightarrow N = 400

Q.19



Equlibrium position means F = 0⇒ Possible points are A and C for unstable equilibrium, if particle is displaced from mean position, force and displacement is in same direction



 \Rightarrow Point C

Q.20 (2)Force required to pump



water =
$$V \frac{dm}{dt} = \rho A v^2$$

where ρ = density of water

A = cross-sectional area

v =speed of flow

Power =
$$\vec{F}.\vec{V} = \rho A v^3 = \left(\frac{mass}{volume}\right) (area) v^3$$

$$=$$
 $\left(\frac{\text{mass}}{\text{length}}\right) v^3 = 50 \times (4)^3 = 50 \times 64 = 3200 \text{ W}$

Q.21

Before collision







From mometnum conservation.

 $mu + 0 = mv_1 + 2mv_2$ \Rightarrow u = $v_1 + 2v_2$ (1)

From
$$e = \frac{\overrightarrow{v_2} - \overrightarrow{v_1}}{\overrightarrow{u_1} - \overrightarrow{u_2}} \Rightarrow 1 = \frac{v_2 - v_1}{u - 0}$$

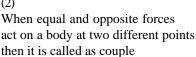


 \Rightarrow $\mathbf{v}_2 - \mathbf{v}_1 = \mathbf{u} \dots (2)$

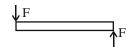
Solving (1) and (2), we get

$$v_2 = \frac{2u}{3} \text{ and } v_1 = -\frac{u}{3}$$

Q.22







 $F_{net} = F - F = zero$ \Rightarrow No linear motion

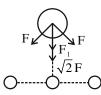
but torque about any point

is space $\neq 0$

 \Rightarrow torque $\neq 0$

⇒ there will be rotational motion

Q.23 (2)





$$F_1 = \frac{Gmm}{d^2}; F = \frac{Gmm}{\left(\sqrt{2}a\right)^2}$$

$$\overrightarrow{F}_{net} = F_1 + \sqrt{2}F$$
 $= \frac{Gmm}{d^2} + \frac{1}{\sqrt{2}} \frac{mm}{a^2}$

$$=\frac{\text{Gmm}}{\text{d}^2}(1+1/\sqrt{2})$$
 along PB

Q.24

(3)Slope of stress vs strain graph gives modulus of electrcity (young's modulus).



Young's modulus for B, $Y_B = \tan 60^\circ = \sqrt{3}$

Young's modulus for A, $Y_A = \tan 30^\circ = \frac{1}{\sqrt{3}}$

$$\Rightarrow \frac{Y_B}{Y_A} = \frac{\sqrt{3}}{\frac{1}{\sqrt{3}}} = \frac{3}{1}$$

$$P_{\text{excess}} = \frac{4T}{r} \text{ and } V \propto r^3$$

$$V_1: V_2 = 8: 1 \Rightarrow r_1: r_2 = 2: 1$$

$$P_{\text{excess}} \propto \frac{1}{r}$$



Bernoulli's theorem is energy conservation in liquid flow where sum of pressure energy, kinetic energy and gravitational potential energy remains constant.

ie
$$P + \rho gh + \frac{1}{2}\rho v^2$$
 = energy per unit volume

Q.27 (1)

$$\frac{\Delta V}{V} = \gamma \Delta T \Rightarrow \frac{0.12}{100} = (3\alpha) \times 20$$



$$\Rightarrow \alpha = \frac{0.12}{100 \times 60} = 2 \times 10^{-5} {}^{\circ}\text{C}^{-1}$$

Q.28

In cyclic process;
$$dU = 0$$

 $Q_1 + Q_2 + Q_3 + Q_4 = W_1 + W_2 + W_3 + W_4$
Hence $W_4 = 765 \text{ J}$



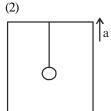
Q.29

Use,
$$TV^{\gamma-1}$$
 = constant

$$\Rightarrow \frac{T_2}{300} = (8)^{\frac{5}{3}-1}$$

$$T_2 = 1200 \text{ K} = 927^{\circ}\text{C}$$

Q.30





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

$$\frac{T}{2} = 2\pi \sqrt{\frac{\ell}{a+g}}$$

$$\frac{T^2}{4} = 4\pi^2 \frac{\ell}{a+g}$$

$$\frac{4\pi^2\ell}{4g} = 4\pi^2 \frac{\ell}{a+g}$$

$$a + g = 4g \Rightarrow a = 3g$$

Q.31

Comparing from standard equation, $y = A \sin(\omega t - kx)$



and
$$k = \frac{2\pi}{\lambda}$$

$$\Rightarrow \lambda = 50 \text{ cm}$$

Q.32 (1)

$$[Energy] = [ML^2T^{-2}]$$

$$[Speed] = [LT^{-1}]$$

$$[Energy \times speed] = [ML^3T^{-3}]$$

$$\Rightarrow$$
 a = 1, b = 3, c= -3

0.0000 5041

In significant

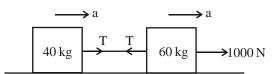


(2)

4 significant digits



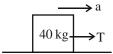
Q.34 (2)



$$a = \frac{1000}{40 + 60} = 10 \text{ m/s}^2$$



For 40 kg block: -



T = ma = 40 a

$$=40 \times 10 = 400 \text{ N}$$

Q.35 (1)

$$\overrightarrow{r_{cm}} = \frac{m_1 \vec{r}_1 + m_2 \vec{r}_2 + m_3 \vec{r}_3 + m_4 \vec{r}_4}{m_1 + m_2 + m_3 + m_4}$$



$$\Rightarrow X_{cm} = \frac{m_1 x_1 + m_2 x_2 + m_3 x_3 + m_4 x_4}{m_1 + m_2 + m_3 + m_4}$$

$$\Rightarrow X_{cm} = \frac{m(1) + 2m(0) + 3m(-1) + 4m(0)}{m + 2m + 3m + 4m}$$

$$\Rightarrow X_{cm} = \frac{m-3m}{10m} = -\frac{1}{5}$$

Similarly,
$$y_{cm} = \frac{m_1 y_1 + m_2 y_2 + m_3 y_3 + m_4 y_4}{m_1 + m_2 + m_3 + m_4}$$

$$\Rightarrow y_{cm} = \frac{m(0) + 2m(1) + 3m(0) + 4m(-1)}{m + 2m + 3m + 4m}$$

$$= \frac{-2m}{10m} = -\frac{1}{5}$$

Q.36 (1

We know,



$$1 = \sum_{i=1}^{n} m_i r_i^2$$

Also,
$$I = mk^2$$
 $\therefore k = \sqrt{\frac{1}{m}}$

and
$$\vec{L}=2m\!\!\left(\frac{d\vec{A}}{dt}\right)$$

$$\vec{\tau}=\vec{r}\times\vec{F}$$

Q.37 (4

$$Y = \frac{FL}{A(\Delta \ell)} = \frac{WL}{\pi r^2 \Delta \ell}$$



 $\Delta\ell$ will be minimum for that wire whose $\frac{W}{r^2}$ is minimum.

Q.38 (1)



- (I) In case of mercury, Cohesive force is much greater than that of water.
- (II) Excess pressure -

$$\Delta P = \frac{4T}{r}$$

Q.39 (1) $200 = Q_1 - 200 = Q_2 - 100$ $\Rightarrow Q_1 = 400 \text{ J}, Q_2 = 300 \text{ J}$



Q.40 (2)

$$y = 10\sin\left(2\pi t + \frac{\pi}{3}\right)$$



$$v = \frac{dy}{dt}$$

$$v = 20\pi \cos\left(2\pi t + \frac{\pi}{3}\right)$$

At t=0,

$$v = 20\pi\cos\frac{\pi}{3}$$
; $v = 10\pi \text{ m/s}$

Q.41 (

Frequency of pipe closed at one end -



$$n_{_{1}}\!=\frac{V}{4L_{_{1}}}$$

frequency of pipe open at both ends -

$$n_{_2}\!=\,\frac{V}{2L_{_2}}$$

After joining the pipes -

$$n = \frac{V}{4(L_1 + L_2)} \quad \{Closed \text{ at one end}\}$$

$$n = \frac{V}{4\left(\frac{V}{4n_1} + \frac{V}{2n_2}\right)} \Rightarrow n = \frac{n_1 n_2}{\left(n_2 + 2n_1\right)}$$

Q.42 (3)



Wave number = $\frac{1}{\lambda}$ =[L⁻¹]

Q.43 (4) at t = 4 sec, f = 40 N $f_2 = 0.5 \times 100$ = 50 N

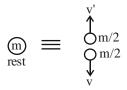


i.e., friction force f = 40 N

Q.44 (1)

From Linear momentum conservation,

$$\overrightarrow{p_i} = \overrightarrow{p_f}$$





$$0 = \frac{m}{2}v' + \frac{m}{2}(-v)$$

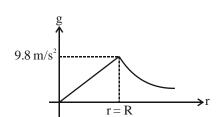
 \Rightarrow v' = v m/s

As v' is positive \Rightarrow it will move up.

Q.45 (1)



Weight of any object = mg
where m = mass of object
g = gravity due to earth at that location
We know,



where R = radius of earth

$$\begin{array}{l} {g_{\text{mine}}} < g \\ {sea-level} > g \\ {mountatin} \\ \Longrightarrow W_{\text{mine}} < W_{sea-level} > W_{mountain} \end{array}$$

Q.46

No. of molecules

$$(\text{oxygen}) = \frac{16}{32} \times N_A = \frac{1}{2} N_A$$

In 14g N₂, no. of molecules =
$$\frac{14}{28} \times N_A = \frac{1}{2} N_A$$

Q.47



$$m_{e^{-}}:m_{p^{+}}:m_{n^{0}}$$

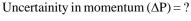
$$9.1 \times 10^{-31} : 1.6726 \times 10^{-27} : 1.675 \times 10^{-27}$$

$$\frac{9.11\times 10^{-31}}{9.11\times 10^{-31}} \div \frac{1.673\times 10^{-27}}{9.11\times 10^{-31}} \div \frac{1.6749\times 10^{-27}}{9.11\times 10^{-31}}$$

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Q.48 (4)

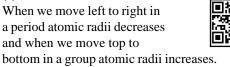




$$\Delta x.\Delta P \geq \frac{h}{4\pi} \ ; \ \Delta P \geq \frac{h}{4\pi \times \Delta x} \ ; \ \Delta P \geq \frac{h}{4\pi \times 0}$$

 $\Delta P = infinite$

Q.49





Q.50



Unununium (Z = 111) it is Rontgenium (Rg) not darmstadtium.





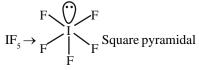
Ozone molecule contain 2σ , 1π bond

Q.52 (3)

$$SnCl_2 \rightarrow Sn$$
 Bent



$$ClF_3 \rightarrow \bigcirc Cl - F$$
 T-shape





Q.53

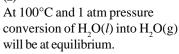
$$N_2^+ \to KK^* \sigma 2s^2, \sigma^* 2s^2 (\pi 2p_x^2 = \pi 2p_y^2) \sigma 2p_z^1$$

$$N_{2}^{-} \rightarrow KK^{*}\sigma 2s^{2}, \sigma^{*}2s^{2}(\pi 2p_{x}^{2} = \pi 2p_{y}^{2})\sigma 2p_{z}^{2}$$

$$(\pi^{*}2p_{x}^{1} = \pi^{*}2p_{y})$$

 N_2^+ is more stable than N_2^- because in N_2^+ number of e^-s in ABMO is less than N_2^- .

O.54





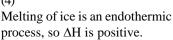
$$\Delta S_{\text{universe}} = 0$$

$$\Delta S_{\text{system}} + \Delta S_{\text{surrounding}} = 0$$

 $\Delta S_{\text{system}}^{\text{unred}} + \Delta S_{\text{surrounding}} = 0$ Since ΔS_{system} is positive as liquid is converted into

gas, So
$$\Delta S_{\text{surrounding}}$$
 will be negative.
 $\Delta S_{\text{system}} > 0$ and $\Delta S_{\text{surrounding}} < 0$







Q.56 (4)

$$C_x H_y \rightarrow x CO_2 + \frac{y}{2} H_2 O$$

0.5L 2.5L 3L

$$x = \frac{2.5}{0.5} = 5$$

$$\frac{y}{2} = \frac{3}{0.5} \Rightarrow y = 12 [C_5 H_{12}]$$

$$pH = pka + log \frac{[Salt]}{[Acid]}; 4 = 5 + log \frac{[Salt]}{[Acid]}$$



$$\frac{[Salt]}{[Acid]} = 10^{-1}$$

Q.58 (1)

In CH₄, oxidation state of C is -4 which is the lowest possible oxidation state of carbon, so it can act as reducing agent only.

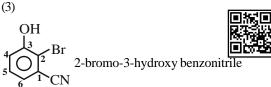


Q.59 (1)

Due to inert pair effect Pb⁺² is more stable than Pb⁺⁴. So PbO, behave as oxidising agent.



Q.60





Q.61 (2)



only one chiral carbon, So it will be optically active (chiral).

Q.62 (1)

> Electron rich groups act as ortho and para directing groups as they increases electron density at these two positions.

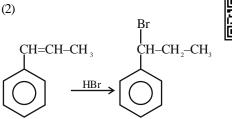


Out of the given groups, following are electron rich and deficient,

Electron rich — OH, — OCH₂, —NHCOCH₂ Electron deficient — CN, —CO₂H, — CHO

Hence, — OH, —OCH, and — NHCOCH, acts as ortho and para-directing groups towards electrophilic substitution reactions.

Q.63





Q.64 Number of significant figures in 2.0400 is 5.



Q.65 $E_2 - E_1 > E_3 - E_2 > E_4 - E_3 > E_5 - E_4$



Q.66

According to $(n + \ell)$ rule, lower value of $(n + \ell)$ orbitals are filled 1st, which is not followed in (2)



Q.67 (1)

I.E. order \rightarrow N > Be > B > Li

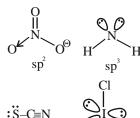


Q.68

Sn and Pb form amphoteric oxides.



Q.69 (1)





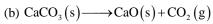
Q.70 (1)





Q.71 (3)

(a) On cooling, entropy decrease





 $\Delta n_g > 0$; So entropy \uparrow

(c)
$$N_2(g) + 3H_2(g) \longrightarrow 2NH_3(g)$$

 $\Delta n_{_{g}} < 0$; So entropy \downarrow

(d)
$$HCl(g) + NH_3(g) \longrightarrow NH_4Cl(s)$$

 $\Delta n_{_{\rm g}} < 0$; So entropy \downarrow

(e)
$$Cl_2(g) \rightarrow 2Cl(g)$$

 $\Delta n_{g} > 0$; So entropy \uparrow

(f) $H_2O(s) \rightarrow H_2O(\ell)$

When ice melts, entropy ↑

- (g) Rusting of iron, entropy \downarrow
- (h) On crystallisation, entropy ↓
- (i) On boiling egg, entropy ↑

$$(j) \underset{\text{(10 atm)}}{N_2(g)} \longrightarrow \underset{\text{(1 atm)}}{N_2(g)}$$

Gas of less pressure has more entropy, so entropy ↑



Q.73 (3) pH = 3 \Rightarrow [H⁺] = $C\alpha$ = 10^{-3} $\Rightarrow \alpha = 10^{-2}$ $\Rightarrow K_a = C\alpha^2 = 0.1 \times (10^{-2})^2 = 10^{-5}$

 $\Delta ng = 0$; So $k_p = k_C \neq 0$

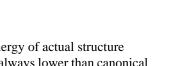


Q.74 $Cr_2 O_7^{-2} + 14H^+ + 6e^- \rightarrow 2Cr^{3+} + 7H_2O$ $X^{n+} + 3H_2O \rightarrow XO_3^- + (5-n)e^- + 6H^+$ Ratio Cr₂ $O_7^{-\frac{5}{2}}$: x^{n+} $6 \times 10^{-3} : 9 \times 10^{-3} :: (5-n) : 6$ $6 \times 10^{-3} \times 6 = (5 - n) \times 9 \times 10^{-3}$ \therefore n = 1

Q.75 (2)Purest form of carbon is fullerene and thermodynamically most stable allotrope of carbon is graphite.



Q.76 **(1)** 4-ethyl cyclo but-2-en-1-ol ·CH₂--CH₃





Q.77 (4) Energy of actual structure is always lower than canonical structures.

 $\frac{\text{mass}}{\text{atomic mass}} = \frac{\text{no.of atoms}}{6.02 \times 10^{23}}$

Q.78

(4)



atomic mass = $\frac{\text{mass}}{\text{no.of atoms}} \times 6.02 \times 10^{23}$

$$= \frac{1.15}{3.011 \times 10^{22}} \times 6.02 \times 10^{23} = 23 \text{ amu}$$

Q.79 (3)Pure covalent and pure ionic species is an ideal condition.



Q.87

(3)

Covalent species also contain some ionic character and ionic species also contain some covalent character.

Q.80 $H_2(g) + \frac{1}{2}O_2(g) \rightarrow H_2O(l); \Delta H = -285kJ \dots (i)$

 $N_2O_5(g) + H_2O(l) \rightarrow 2HNO_3(l); \Delta H = -76.6 \text{ kJ}(ii)$ $N_2(g) + 3O_2(g) + H_2(g) \rightarrow 2HNO_3(l); \Delta H = -348.2 \text{ kJ}$(iii)

Using $2 \times (iii) - 2 \times (ii) - 2 \times (i)$; we get $2N_2(g) + 5O_2(g) \longrightarrow 2N_2O_5(g)$. $\Delta H = 2 \times (-348.2) - 2 \times (-76.6) - 2 \times (-285)$ $\Delta H = +26.8 \text{ kJ}$

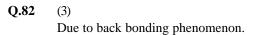


Q.81 (2) $2Cr + \frac{3}{2}O_2 \rightarrow Cr_2O_3, \Delta H = -1130kJ \dots (i)$

$$C + \frac{1}{2}O_2 \rightarrow CO, \Delta H = -110 kJ ...(ii)$$



Using 3(ii) - (i); we get $3C + Cr_2O_2 \rightarrow 2Cr + 3CO$ $\Delta H = 3 \times (-110) - (-1130) = 800 \text{ kJ}$





Q.83 % $N = \frac{2 \times 14}{60} \times 100 = 46.6$



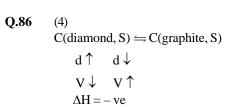
Q.84 Para-dichloro benzene has zero dipole moment, so it has low boiling point than its ortho form because ortho form has more dipole moment than para form.



Q.85 (2) $\Delta G = \Delta H - T\Delta S$

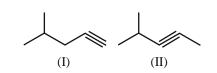


For spontaneous process; ΔG should be negative and for the process in which $\Delta H < 0$ and $\Delta S < 0$; process can not be spontaneous high temperature.

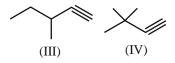




So favourable conditions are low temp and low pressure







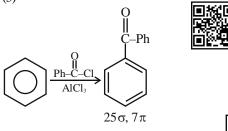
Q.88 (3)

Stability of carbanions $\propto \frac{-I}{+I}$



 $\textbf{Stability order } \overset{\Theta}{\text{CH}_2\text{CH}_3} < \overset{\Theta}{\text{CH}_3} < \overset{\Theta}{\text{CH}_2\text{CHO}} < \overset{\Theta}{\text{CH}_2\text{NO}_2}$

Q.89 (3)



Q.90 (3) Theory based

Q.91 (3)

New NCERT Pg. No. 4, 5, Class XI

- Biological names are latinised or derived from Latin to ensure universal understanding.
- Dogs, mammals, and animals represent different taxonomic levels such as species, class, and kingdom respectively.
- **Q.92** (3

New NCERT Pg. No. 13, 16, 18, Class XI

Statements a, c, d, and e are correct. Mycoplasma does not have a cell wall, making statement b incorrect.

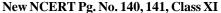
Q.93 (3

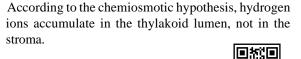
NEW NCERT Pg. No. 74, 75, Class XI

- Dicot roots typically have small and inconspicuous pith, while other pairs mentioned are incorrect.
- Monocot roots have radial, exarch condition.
- Monocot stem have conjoint endarch vascular bundles
- Dicot stem have conjoint endarch vascular bundles arranged in form of a ring.

Q.94 (1)

Hydrogen ions produced by water splitting accumulate in the stroma of chloroplast





Q.95 (2

New NCERT Pg. No. 125, Class XI

Mitosis is primarily for growth, repair, and regeneration, not for introducing genetic variations.

Q.96 (4)

New NCERT Pg. No. 69, Class XI

Brinjal flowers are actinomorphic, hypogynous with valvate aestivation in both calyx and corolla.

O.97 (3)

New NCERT Pg. No. 65, Class XI

Argemone does not exhibit free central placentation; it has parietal placentation.

Q.98 (4)

New NCERT Pg. No. 108, Class XI

Codeine is an alkaloid, a secondary metabolite derived from the opium poppy plant. It is used for its analgesic properties.

Q.99 (4)

New NCERT Page No. 88, 98

Here both the statements are incorrect.

I. Prokaryotic ribosomes are 70S has two subunit 50S and 30S eukaryotic ribosome are 80S has two subunits 40S and 60S.

II. Within the cell, ribosomes are found not only in the cytoplasm but also within the two organelles, chloroplast (in plants) and mitochondria and rough ER.

Q.100 (2)

New NCERT Pg. No. 106, Class XI

Tyrosine, phenylalanine and tryptophan are aromatic amino acids, whereas valine, glutamic acid, glycine, and serine are not.

Q.101 (

New NCERT Pg. No. 75, Class XI

Dicot stems typically have a starch sheath (i) and vascular bundles arranged in a ring (iii). Presence of sclerenchymatous hypodermis (ii) is characteristic of monocot stems.

Q.102 (3

New NCERT Pg. No. 121, Class XI

- Interphase (I) is the resting phase of the cell cycle (C).
- S phase (II) is the phase where DNA replication and centriole duplication occurs (A).











- M phase (III) is the most dramatic phase where mitosis or meiosis occurs (B).
- G, phase (IV) is the interval between mitosis and DNA replication (D).

Q.103 (1)

New NCERT Pg. No. 139, Class XI

The splitting of water molecules during the photochemical phase of photosynthesis occurs on the lumen side of the thylakoid membrane, releasing oxygen, protons, and electrons.

Q.104

New NCERT Pg. No. 76, Class XI

In a dorsiventral leaf, the mesophyll is differentiated into palisade and spongy parenchyma. Thus, the statement (2) is incorrect.

Q.105 (1)

New NCERT Pg. No. 65, Class XI

Marginal placentation is seen in pea where the placenta forms a ridge along the ventral suture of the ovary and the ovules are borne on this ridge forming two rows.

Q.106 (1)

New NCERT Pg. No. 176, Class XI

Gibberellin is a plant hormone composed of terpenes and is known to induce stem elongation in rosette plants like cabbage and lettuce.

Q.107 (3)

New NCERT Pg. No. 15, Class XI

Euglenoids do not have a typical cell wall; instead, they have a protein-rich layer called pellicle which makes them flexible.

Q.108

New NCERT Pg. No. 76, Class XI Features of Monocot stem.

- Monocot stem has a sclerenchymatous hypodermis.
- Contains many scattered vascular bundles.
- Large, conspicuous parenchymatous ground tissue.
- Vascular bundles are conjoint and closed.
- Periphereal vascular bundles are smaller than central ones.
- Phloem parenchyma is absent.
- Water-containing cavities are present within the vascular bundles.

Q.109

New NCERT Pg. No. 140, 141, Class XI

Cyclic photophosphorylation occurs in the thylakoid membrane, not in the stroma. The other statements about photophosphorylation are correct.

O.110

New NCERT Pg. No. 123, Class XI



The complete disintegration of the nuclear envelope marks the start of metaphase, where chromosomes align at the spindle equator.

Q.111

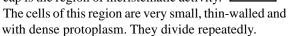
New NCERT Pg. No. 64, Class XI

The types of aestivation and their characteristics match as follows: Imbricate (margins overlap but not in any particular direction), Twisted (one margin overlaps the next), Valvate (margins just touch), and Vexillary (large petal overlaps lateral petals).

Q.112

New NCERT Pg. No. 59, Class XI

A few millimetres above the root cap is the region of meristematic activity.



0.113

New NCERT Pg. No. 116, Class XI

The graph showing the effect of temperature on the velocity of an enzymatic reaction typically follows a bell curve, with enzyme activity increasing to an optimum temperature and then decreasing as the temperature continues to rise.

Q.114 (1)

New NCERT Pg. No. 95, 96, Class XI

Statement A correctly describes the arrangement of Golgi cisternae. However, the cis and trans faces are functionally different but connected via the Golgi cisternae.

Q.115 (3)

New NCERT Pg. No. 24, Class XI

Volvox and Eudorina are colonial forms of algae, while Spirogyra and Ulothrix are filamentous. Algae can reproduce by vegetative, asexual, and sexual methods.

Q.116

New NCERT Pg. No. 176, 177, Class XI

2,4-D is used to kill dicot weeds, not monocot weeds. The other pairs are correctly matched.

0.117 (3)

New NCERT Pg. No. 113, Class XI

Inorganic catalysts can work efficiently at high temperatures and pressures, unlike enzymes which are sensitive to such conditions.

6. Anatomy of Flowering Plants

Q.118

New NCERT Pg. No. 74, 75, Class XI

The given characteristics match a Monocot root (A) and a dicot stem(B). Monocot root have radial vascular















bundles, and dicot stem have a collenchymatous hypodermis.

Q.119 (3)

New NCERT Pg. No. 125, Class XI

After meiosis-II, the resultant daughter cells are haploid with the same amount of DNA as a haploid gamete.

Q.120 (4)

New NCERT Pg. No. 146, Class XI

In C₄ plants, CO₂ fixation by PEP carboxylase occurs in mesophyll cells, and the Calvin cycle operates in bundle sheath cells.

Q.121 (2)

New NCERT Pg. No. 60, 61, Class XI

- B (A flower is a modified shoot) and D (Irregular flower cannot be divided into two similar halves) are correct.
- Flowers with bracts are called bracteate flowers.
- In legumes swollen leaf base is called pulvinus.

Q.122 (2)

New NCERT Pg. No. 177, Class XI

Both statements are true, but the reason provided does not explain the rapid internode/petiole elongation in deep water rice plants.

Q.123 (4)

New NCERT Pg. No. 156, Class XI

Glycolysis does not release carbon dioxide. It produces ATP, NADH + H+, and water as by-products of glucose metabolism.

Q.124 (4)

New NCERT Pg. No. 61, Class XI

In racemose inflorescence, the main axis continues to grow, and the flowers are borne in acropetal succession, with younger flowers at the apex and older flowers at the base.

Q.125 (1)

New NCERT Pg. No. 89, Class XI

The structures can be identified as Red blood cells (A) White blood cells (B) Columnar epithelial cells (C) Mesophyll cells (D)

Q.126 (3)

New NCERT Pg. No. 144, Class XI

In the reduction step of the Calvin cycle, each CO₂ molecule requires 2 ATP and 2 NADPH for the synthesis of one molecule of glyceraldehyde-3-phosphate (G3P).

Q.127 (3)

New NCERT Pg. No. 164, Class XI

The respiratory quotient (RQ) for fatty acids is less than 1 because their metabolism requires more oxygen than the carbon dioxide produced.

Q.128 (2

New NCERT Pg. No. 106, Class XI

The zwitter ionic form of an amino acid has both positive (NH₃⁺) and negative (COO⁻) charges, typically represented in a dipolar ion structure.

Q.129 (2

New NCERT Pg. No. 174, 175, Class XI

The discoveries related to plant growth regulators are:

A – Auxin from tips of canary grass,

B – Gibberellin were discovered from *Bakanae* disease of rice,

C – Cytokinins isolated from coconut milk,

D – Ethylene from ripened fruits.

Q.130 (1)

New NCERT Pg. No. 67, Class XI

In monocot seeds, the plumule is enclosed in a sheath called coleoptile, while the radicle is protected by coleorhiza.

Q.131 (4)

New NCERT Pg. No. 24, 27, Class XI

Rhodophyceae gametes are non-flagellated. The other pairs are correctly matched regarding their gamete characteristics.

Q.132 (

New NCERT Pg. No. 28, 29 Class XI

In *Marchantia*, antheridia and archegonia are produced on different thalli, making the statement incorrect.

Q.133 (3)

New NCERT Pg. No. 160, Class XI

Ubiquinone (coenzyme Q) receives electrons from complex I and complex II, not complex III.

Q.134 (2)

New NCERT Pg. No. 104, 105, 112, Class XI

Amino acids are organic compounds, not inorganic. They contain an amino group and an acidic group as substituents on the same carbon (the α -carbon).

Q.135 (4

New NCERT Pg. No. 175, Class XI

NAA and 2,4-D are synthetic auxins, not natural.

Q.136 (1)

New NCERT Pg. No. 140, Class XI





In cyclic photophosphorylation, no NADPH + H+ is formed because the electrons cycle back to PS I, generating ATP instead.

Q.137

Old NCERT Pg. No. 103, Class XI

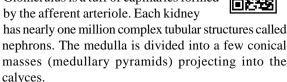
In dense regular connective tissue, fibres and fibroblasts are compactly packed and collagen fibres are present in rows between many parallel bundles of fibres. e.g., Tendons and ligaments.



Q.138 (1)

New NCERT Pg. No. 207, Class XI

Glomerulus is a tuff of capillaries formed by the afferent arteriole. Each kidney





New NCERT Pg. No. 47, Class XI

Members of the class cyclostomata are ectoparasites on fishes. They have circular sectorial mouth and



their body is devoid of scales. Unpaired fins are present. Cranium and vertebral column both are cartilaginous.

0.140

New NCERT Pg. No. 200, Class XI

The blood pumped by each ventricle during 1 cardiac cycle or 1 heart beat is called stroke volume.



Cardiac output = Stroke volume \times Heart rate

Q.141

New NCERT Pg. No. 126, Class XI

The complex formed by a pair of synapsed homologous chromosomes is called a bivalent or a tetrad. It is formed in zygotene however, these are more clearly visible at the next stage, pachytene.



Q.142

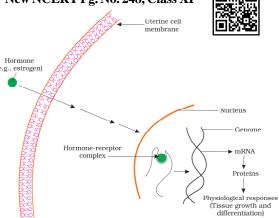
New NCERT Pg. No. 45, Class XI

The most distinctive feature of echinoderms is the presence of water vascular system which helps in locomotion, capture and transport of food and respiration.



Q.143 (3)

New NCERT Pg. No. 248, Class XI



Progesterone is a steroid hormone and hence binds to nuclear (intracellular) receptors.

0.144

New NCERT Pg. No. 235-236, Class XI

A deep cleft divides the cerebrum longitudinally into two halves, which are termed as the left and right cerebral hemispheres. The hemispheres are connected by a tract of nerve fibres called corpus callosum.



The hypothalamus contains a number of centres which control body temperature, urge for eating and drinking.

Q.145

New NCERT Pg. No. 97, Class XI

Mitochondria contain circular DNA in their matrix. This is one of the key pieces of evidence supporting the



endosymbiotic theory, which posits that mitochondria originated from free-living prokaryotes that were engulfed by ancestral eukaryotic cells. It is double membranous and possess cristae. It has 70s ribosomes.

Q.146

New NCERT Pg. No. 43, 44, Class XI

Green glands - Prawn Malphigian tubules - Cockroach Nephridia – Earthworm Flame cells - Planaria



Q.147

New NCERT Pg. No. 242, Class XI

Regulation of sleep-wake cycle is controlled by melatonin hormone secreted by pineal gland.

0.148

New NCERT Pg. No. 226, Class XI

Tibia is not the bone of human forelimbs it is the bone of hindlimbs.





0.149 New NCERT Pg. No. 126, 127, Class XI Splitting of centromere of each chromosomes occurs during



anaphase-II of meiosis-II. Q.150(2) New NCERT Pg. No. 84, Class XI

Correct pathway for passage of sperms in male frog:



Testes \rightarrow Vasa efferentia \rightarrow Kidney \rightarrow Bidder's canal \rightarrow Urinogenital duct \rightarrow Cloaca.

0.151 (1) New NCERT Pg. No. 190, Class XI Pneumotaxic centre is located in Pons region of hindbrain.



0.152

New NCERT Pg. No. 225, 226 Class XI



Tibia and fibula – Appendicular skeleton Sternum and occipital condyle - Axial skeleton Clavicle and scapula – pectoral girdle Pubis and ischium – Coxal bones

Q.153

New NCERT Pg. No. 124, 125 Class XII



- Statement I: "Cell plate between the walls of two adjacent cells is a characteristic feature of animal cells" is incorrect. The cell plate formation is a characteristic feature of plant cell cytokinesis, not animal cells.
- Statement II: "Meiosis involves pairing of nonhomologous chromosomes and recombination between two sister chromatids of homologous chromosomes" is incorrect. Meiosis involves pairing of homologous chromosomes and recombination occurs between nonsister chromatids of homologous chromosomes.

0.154 (2)

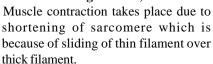
Old NCERT Pg. No. 102, Class XI



Gap junctions or communicating junctions facilitate the transfer of ions, small molecules and sometimes big molecules.

Q.155 (2)

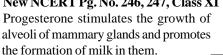
New NCERT Pg. No. 222, Class XI





0.156 (3)

New NCERT Pg. No. 246, 247, Class XI





Q.157 (3)

New NCERT Pg. No. 236, Class XI

Thalamus is a part of forebrain. Hindbrain is composed of pons, cerebellum and medulla oblongata.

O.158 (3)

New NCERT Pg. No. 101, Class XI

The type of chromosome where the centromere is situated close to its end forming one extremely short and one very long arm is called acrocentric.



0.159 (2)

New NCERT Pg. No. 48, Class XI

Salamandra is an amphibian which contains 3-chambered heart i.e., 2 auricles and 1 ventricle



0.160 (3)

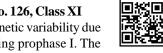
New NCERT Pg. No. 203, Class XI



Heart failure means the state of heart when it is not pumping blood effectively enough to meet the needs of the body. It is sometimes called congestive heart failure because congestion of lungs is one of the main symptoms of this disease.

Q.161

New NCERT Pg. No. 126, Class XI



Meiosis increases genetic variability due to crossing over during prophase I. The stage of meiosis I where this occurs is pachytene, and recombination nodules are the sites of crossing over.



Q.162

New NCERT Pg. No. 46, 47 Class XI

Salpa – urochordata Chelone - reptilia Petromyzon - cyclostomata Felis – mammalia



Q.163 (1)

New NCERT Pg. No. 241, 242, Class XI

Pituitary gland – Gigantism Pancreas – Diabetes mellitus Adrenal gland - Addison's disease Thyroid gland - Grave's disease



Q.164

Old NCERT Pg. No. 101, Class XI

Simple squamous epithelium is present in walls of blood vessels.



0.165

New NCERT Pg. No. 209, Class XI

Reabsorption in different segments of nephron takes place by active, passive and facilitated transport.



Q.166

New NCERT Pg. No. 93, Class XI

The cell membrane is composed of lipids arranged in a bilayer, and proteins are embedded within this lipid bilayer. The head faces the outside while tail is towards inside.



Q.167

New NCERT Pg. No. 110, Class XI

Cellulose lacks branches and complex helixes in its structure. In a polysaccharide, right end is reducing end and left end is non-reducing end.



O.168

New NCERT Pg. No. 198, Class XI

Heart is protected by a double walled bag like structure called pericardium. The atrium and ventricle of same side are separated by



0.169

New NCERT Pg. No. 44, Class XI

a thick atrio-ventricular septum.

Feather – like gill called ctenidia is present in the mantle cavity of the mollusca.



Q.170 (2)

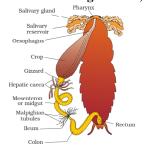
New NCERT Pg. No. 236, Class XI

Limbic system regulates emotions and human behaviour.



Q.171

Old NCERT Pg. No. 113, Class XI, CH.-7





Q.172

New NCERT Pg. No. 41, Class XI

Adamsia do not exhibits alternation of generation.



Q.173

New NCERT Pg. No. 207, Class XI

In a nephron, renal corpuscle or malphigian body is formed by Bowman's capsule and glomerulus.



Q.174 (3)

New NCERT Pg. No. 112, Class XI

In a protein chain, first amino acid is N-terminal and last amino acid is C-terminal.



Q.175 (3)

New NCERT Pg. No. 242, Class XI

Pineal gland is located on dorsal side of forebrain. It releases a hormone called melatonin.



Q.176

New NCERT Pg. No. 95, Class XI

Ribosomes are present in mitochondria, chloroplasts, and the endoplasmic reticulum. However, ribosomes are not found in the smooth endoplasmic reticulum, which is involved in lipid synthesis and lacks ribosomes.



New NCERT Pg. No. 108, 109, Class XI

The molecules present in acid insoluble fraction with the exception of lipids are polymeric substances. Lipid is not a polymer.



O.178 (1)

New NCERT Pg. No. 46, Class XI

In urochordates, notochord is present only in larval tail. While in cephalochordates, it extends from head to tail region and is persistent throughout life.



Q.179 (4)

New NCERT Pg. No. 205, Class XI

Ammonotelic: Bony fishes, aquatic amphibians and aquatic insects.

Ureotelic: Mammals, terrestrial amphibians and marine fishes.

Uricotelic: Reptiles, birds, land snails and insects.

Q.180 (3)

New NCERT Pg. No. 236, Class XI

Hypothalamus – lies at base of thalamus

Corpora quadrigemina – round swellings in midbrain

Corpus callosum – A tract of nerve fibres