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NEET (UG) 2022 (PHASE 2)

Question Paper · answer key at the end

Time: 3 Hours 20 Minutes **Max. Marks:** 800 **Questions:** 200

General Instructions:

1. The duration of the paper is 3 hours 20 minutes. It has 200 questions: Physics 50, Chemistry 50, Biology 100.
2. Each subject has Section A (35 questions) and Section B (15 questions — attempt any 10).
3. Every question has four options with only one correct answer.
4. Marking: +4 for each correct answer, −1 for each wrong answer, 0 for a question not answered.
5. The answer key is at the end. Scan the QR code beside any question for its step-by-step solution.
6. Practise this paper as a timed test on the real exam screen, free, at pyqside.com.

Section A (MCQ) — 200 questions

Q.1 An energy of 484 J is spent in increasing the speed of a flywheel from 60 rpm to 360 rpm. The moment of inertia of the flywheel is :

[NEET (UG) 2022 (Phase 2)]

(1) 0.07 kg m^2 (2) 0.7 kg m^2
(3) 3.22 kg m^2 (4) 30.8 kg m^2

Scan or tap for the full solution

Q.2 Let R_1 be the radius of the second stationary orbit and R_2 be the radius of the fourth stationary orbit of an electron in Bohr's model. The ratio $\frac{R_1}{R_2}$ is :

[NEET (UG) 2022 (Phase 2)]

(1) 4 (2) 0.25 (3) 0.5 (4) 2

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Q.3 During a cloudy day, a primary and a secondary rainbow may be created, then the :

[NEET (UG) 2022 (Phase 2)]

(1) secondary rainbow is due to single internal reflection and is formed above the primary one.
(2) primary rainbow is due to double internal reflection and is formed above the secondary one.
(3) primary rainbow is due to double internal reflection and is formed below the secondary one.
(4) secondary rainbow is due to double internal reflection and is formed above the primary one.

Scan or tap for the full solution

Q.4 The reciprocal of resistance is :

[NEET (UG) 2022 (Phase 2)]

(1) conductance (2) reactance
(3) mobility (4) conductivity

Scan or tap for the full solution

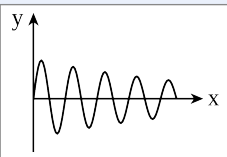
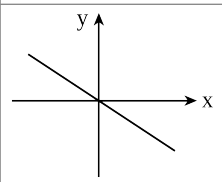
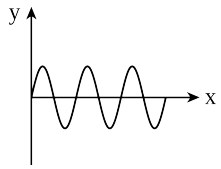
Q.5 Two copper vessels A and B have the same base area but of different shapes. A takes twice the volume of water as that B requires to fill upto a particular common height. Then the correct statement among the following is :

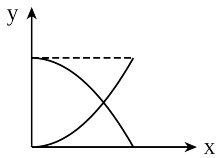
[NEET (UG) 2022 (Phase 2)]

(1) Vessel B weighs twice that of A.
(2) Pressure on the base area of vessels A and B is same.
(3) Pressure on the base area of vessels A and B is not same.
(4) Both vessels A and B weigh the same.

Scan or tap for the full solution

Q.6 Match **List-I** with **List-II**

	List-I (x-y graphs)
a.	
b.	
c.	

List-I (x-y graphs)	
d.	

List-II (Situations)	
i.	Total mechanical energy is conserved
ii.	Bob of a pendulum is oscillating under negligible air friction
iii.	Restoring force of a spring
iv.	Bob of a pendulum is oscillating along with air friction

Choose the correct answer from the options given below [NEET (UG) 2022 (Phase 2)]

(1) (a)-(iii), (b)-(ii), (c)-(i), (d)-(iv)

(2) (a)-(iv), (b)-(ii), (c)-(iii), (d)-(i)

(3) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

(4) (a)-(i), (b)-(iv), (c)-(iii), (d)-(ii)

Scan or tap for the full solution

Q.7 The distance covered by a body of mass 5 g having linear momentum 0.3 kg m/s in 5 s is : [NEET (UG) 2022 (Phase 2)]

(1) 0.3 m (2) 300 m (3) 30 m (4) 3 m

Scan or tap for the full solution

Q.8 The distance between the two plates of a parallel plate capacitor is doubled and the area of each plate is halved. If C is its initial capacitance, its final capacitance is equal to [NEET (UG) 2022 (Phase 2)]

(1) $\frac{C}{4}$ (2) 2C (3) $\frac{C}{2}$ (4) 4C

Scan or tap for the full solution

Q.9 A closely packed coil having 1000 turns has an average radius of 62.8 cm. If current carried by the wire of the coil is 1 A, the value of magnetic field produced at the centre of the coil will be (permeability of free space $= 4\pi \times 10^{-7}$ H/m) nearly [NEET (UG) 2022 (Phase 2)]

(1) 10^{-3} T (2) 10^{-1} T (3) 10^{-2} T (4) 10^{2} T

Scan or tap for the full solution

Q.10 The magnetic field of a plane electromagnetic wave is given by

$\vec{B} = 3 \times 10^{-8}\cos(1.6 \times 10^{3}x + 48 \times 10^{10}t)\hat{j}$, then the associated electric field will be : [NEET (UG) 2022 (Phase 2)]

(1) $9\cos(1.6 \times 10^{3}x + 48 \times 10^{10}t)\hat{k}$ V/m

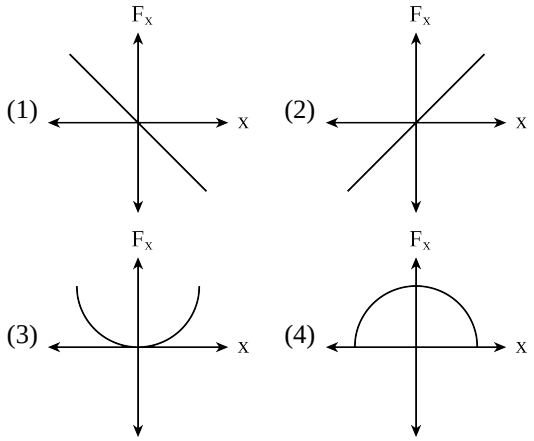
(2) $3 \times 10^{-8}\cos(1.6 \times 10^{3}x + 48 \times 10^{10}t)\hat{i}$ V/m

(3) $3 \times 10^{-8}\sin(1.6 \times 10^{3}x + 48 \times 10^{10}t)\hat{i}$ V/m

(4) $9\sin(1.6 \times 10^{3}x - 48 \times 10^{10}t)\hat{k}$ V/m

Scan or tap for the full solution

Q.11 The restoring force of a spring with a block attached to the free end of the spring is represented by [NEET (UG) 2022 (Phase 2)]



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Q.12 Given below are two statements : One is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): When a fire cracker (rocket) explodes in mid air, its fragments fly in such a way that they continue moving in the same path, which the fire cracker would have followed, had it not exploded.

Reason (R): Explosion of cracker (rocket) occurs due to internal force only and no external force acts for this explosion.

In the light of the above statements, choose the most appropriate answer from the options given below [NEET (UG) 2022 (Phase 2)]

(1) (A) is not correct but (R) is correct

(2) Both (A) and (R) are correct and (R) is the correct explanation of (A)

(3) Both (A) and (R) are correct but (R) is not the correct explanation of (A)

(4) (A) is correct but (R) is not correct

Scan or tap for the full solution

Q.13 A cricket ball is thrown by a player at a speed of 20 m/s in a direction 30° above the horizontal. The maximum height attained by the ball during its motion is

($g = 10$ m/s^2) [NEET (UG) 2022 (Phase 2)]

(1) 25 m (2) 5 m (3) 10 m (4) 20 m

Scan or tap for the full solution

Q.14 Given below are two statements

Statement-I: In an a.c circuit, the current through a capacitor leads the voltage across it.

Statement-II: In a.c circuit containing pure capacitance only, the phase difference between the current and voltage is π.

In the light of the above statements, choose the most appropriate answer from the options given below [NEET (UG) 2022 (Phase 2)]

(1) Statement-I is incorrect but Statement-II is correct

(2) Both Statement-I and Statement-II are correct

(3) Both Statement-I and Statement-II are incorrect

(4) Statement-I is correct but Statement-II is incorrect

Scan or tap for the full solution

Q.15 A cell of emf 4 V and internal resistance 0.5 Ω is connected to a 7.5 Ω external resistance. The terminal potential difference of the cell is [NEET (UG) 2022 (Phase 2)]

(1) 0.375 V (2) 3.75 V (3) 4.25 V (4) 4 V

Scan or tap for the full solution

Q.16 An ideal gas follows a process described by the equation $PV^2 = C$ from the initial (P_1, V_1, T_1) to final (P_2, V_2, T_2) thermodynamic states, where C is a constant. Then [NEET (UG) 2022 (Phase 2)]

(1) If $P_1 > P_2$ then $V_1 > V_2$

(2) If $P_1 > P_2$ then $T_1 < T_2$

(3) If $V_2 > V_1$ then $T_2 > T_1$

(4) If $V_2 > V_1$ then $T_2 < T_1$

Scan or tap for the full solution

Q.17 The shape of the magnetic field lines due to an infinite long, straight current carrying conductor is [NEET (UG) 2022 (Phase 2)]

(1) a plane (2) a straight line

(3) circular (4) elliptical

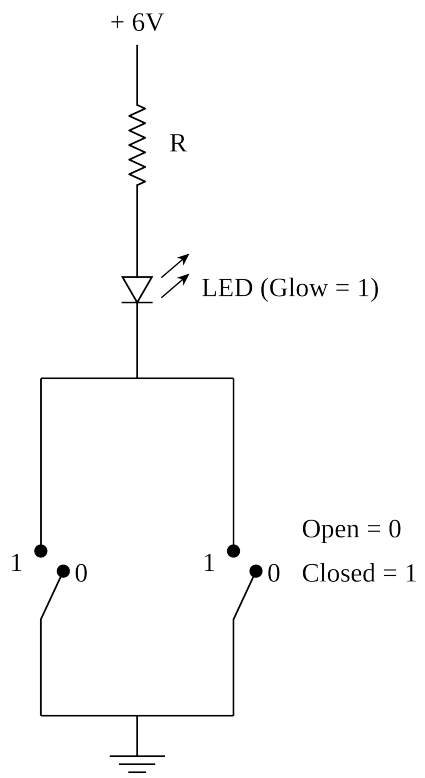
Scan or tap for the full solution

Q.18 The light rays having photons of energy 4.2 eV are falling on a metal surface having a work function of 2.2 eV. The stopping potential of the surface is [NEET (UG) 2022 (Phase 2)]

(1) 6.4 V (2) 2 eV (3) 2 V (4) 1.1 V

Scan or tap for the full solution

Q.19



Identify the equivalent logic gate represented by the given circuit [NEET (UG) 2022 (Phase 2)]

(1) NAND (2) OR (3) NOR (4) AND

Scan or tap for the full solution

Q.20 Identify the function which represents a non-periodic motion. [NEET (UG) 2022 (Phase 2)]

(1) $\sin(\omega t + \pi/4)$ (2) $e^{-\omega t}$

(3) $\sin \omega t$ (4) $\sin \omega t + \cos \omega t$

Scan or tap for the full solution

Q.21 An inductor of inductance 2 mH is connected to a 220 V, 50 Hz ac source. Let the inductive reactance in the circuit is X_1. If a 220 V dc source replace the ac source in the circuit, then the inductive reactance in the circuit is X_2. X_1 and X_2 respectively are : [NEET (UG) 2022 (Phase 2)]

(1) 0.628 Ω, infinity (2) 6.28 Ω, zero

(3) 6.28 Ω, infinity (4) 0.628 Ω, zero

Scan or tap for the full solution

Q.22 The ratio of the magnitude of the magnetic field and electric field intensity of a plane electromagnetic wave in free space of permeability μ_0 and permittivity ε_0 is (Given that c - velocity of light in free space) [NEET (UG) 2022 (Phase 2)]

(1) $\frac{\sqrt{\mu_0\varepsilon_0}}{c}$ (2) c

(3) $\frac{1}{c}$ (4) $\frac{c}{\sqrt{\mu_0\varepsilon_0}}$

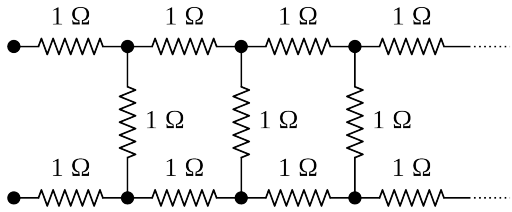
Scan or tap for the full solution

Q.23 The threshold frequency of a photoelectric metal is ν_0. If light of frequency $4\nu_0$ is incident on this metal, then the maximum kinetic energy of emitted electrons will be : [NEET (UG) 2022 (Phase 2)]

(1) $4h\nu_0$ (2) $h\nu_0$ (3) $2h\nu_0$ (4) $3h\nu_0$

Scan or tap for the full solution

Q.24 The equivalent resistance of the infinite network given below is : [NEET (UG) 2022 (Phase 2)]



(1) $(1+\sqrt{5})\Omega$ (2) 2 Ω

(3) $(1+\sqrt{2})\Omega$ (4) $(1+\sqrt{3})\Omega$

Scan or tap for the full solution

Q.25 If the screen is moved away from the plane of the slits in a Young's double slit experiment, then the : [NEET (UG) 2022 (Phase 2)]

(1) linear separation of the fringes decreases

(2) angular separation of the fringes increases

(3) angular separation of the fringes decreases

(4) linear separation of the fringes increase

Scan or tap for the full solution

Q.26 If $\vec{F}=2\hat{i}+\hat{j}-\hat{k}$ and $\vec{r}=3\hat{i}+2\hat{j}-2\hat{k}$, then the scalar and vector products of $\vec{F}$ and $\vec{r}$ have the magnitudes respectively as [NEET (UG) 2022 (Phase 2)]

(1) 10, 2 (2) 5, $\sqrt{3}$ (3) 4, $\sqrt{5}$ (4) 10, $\sqrt{2}$

Scan or tap for the full solution

Q.27 The physical quantity that has the same dimensional formula as pressure is [NEET (UG) 2022 (Phase 2)]

(1) Coefficient of viscosity

(2) Force

(3) Momentum

(4) Young's modulus of elasticity

Scan or tap for the full solution

Q.28 The effective capacitances of two capacitors are 3 μF and 16 μF, when they are connected in series and parallel respectively. The capacitance of two capacitors are : [NEET (UG) 2022 (Phase 2)]

(1) 1.2 μF, 1.8 μF (2) 10 μF, 6 μF

(3) 8 μF, 8 μF (4) 12 μF, 4 μF

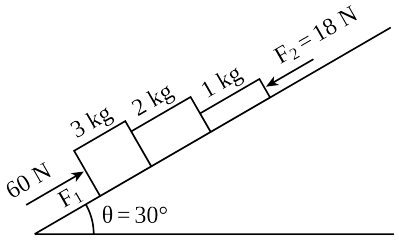
Scan or tap for the full solution

Q.29 After passing through a polariser a linearly polarised light of intensity I is incident on an analyser making an angle of 30° with that of the polariser. The intensity of light emitted from the analyser will be [NEET (UG) 2022 (Phase 2)]

(1) $\frac{2I}{3}$ (2) $\frac{I}{2}$ (3) $\frac{I}{3}$ (4) $\frac{3I}{4}$

Scan or tap for the full solution

Q.30 In the diagram shown, the normal reaction force between 2 kg and 1 kg is (Consider the surface, to be smooth) :
(Given g = 10 m s^{-2}) [NEET (UG) 2022 (Phase 2)]



(1) 10 N (2) 25 N (3) 39 N (4) 6 N

Scan or tap for the full solution

Q.31 The incorrect statement about the property of a Zener diode is : [NEET (UG) 2022 (Phase 2)]

(1) p and n regions of Zener diode are heavily doped

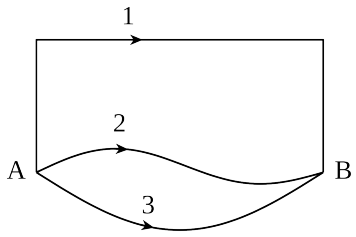
(2) Zener voltage remains constant at breakdown

(3) It is designed to operate under reverse bias

(4) Depletion region formed is very wide

Scan or tap for the full solution

Q.32 A gravitational field is present in a region and a mass is shifted from A to B through different paths as shown. If W_1, W_2 and W_3 represent the work done by the gravitational force along the respective paths, then : [NEET (UG) 2022 (Phase 2)]



(1) $W_1 < W_2 < W_3$ (2) $W_1 = W_2 = W_3$
(3) $W_1 > W_2 > W_3$ (4) $W_1 > W_3 > W_2$

Scan or tap for the full solution

Q.33 A standard filament lamp consumes 100 W when connected to 200 V ac mains supply. The peak current through the bulb will be :

[NEET (UG) 2022 (Phase 2)]

(1) 2 A (2) 0.707 A (3) 1 A (4) 1.414 A

Scan or tap for the full solution

Q.34 The terminal velocity of a copper ball of radius 5 mm falling through a tank of oil at room temperature is 10 cm s^{-1}. If the viscosity of oil at room temperature is 0.9 kg m^{-1} s^{-1}, the viscous drag force is : [NEET (UG) 2022 (Phase 2)]

(1) 4.23×10^{-6} N (2) 8.48×10^{-3} N
(3) 8.48×10^{-5} N (4) 4.23×10^{-3} N

Scan or tap for the full solution

Q.35 In a gravitational field, the gravitational potential is given by, $V = -\frac{K}{x}$ (J/Kg). The gravitational field intensity at point (2, 0, 3) m is

[NEET (UG) 2022 (Phase 2)]

(1) $+\frac{K}{4}$ (2) $+\frac{K}{2}$ (3) $-\frac{K}{2}$ (4) $-\frac{K}{4}$

Scan or tap for the full solution

Q.36 The percentage error in the measurement of g is : (Given that $g = \frac{4\pi^2 L}{T^2}$, L = (10 ± 0.1) cm, T = (100 ± 1) s) [NEET (UG) 2022 (Phase 2)]

(1) 7% (2) 2% (3) 5% (4) 3%

Scan or tap for the full solution

Q.37 Two very long, straight, parallel conductors A and B carry current of 5 A and 10 A respectively and are at a distance of 10 cm from each other. The direction of current in two conductors is same. The force acting per unit length between two conductors is : ($\mu_0 = 4\pi \times 10^{-7}$ SI unit)

[NEET (UG) 2022 (Phase 2)]

(1) 1×10^{-4} N m^{-1} and is repulsive (2) 2×10^{-4} N m^{-1} and is attractive
(3) 2×10^{-4} N m^{-1} and is repulsive (4) 1×10^{-4} N m^{-1} and is attractive

Scan or tap for the full solution

Q.38 The magnetic field on the axis of a circular loop of radius 100 cm carrying current $I = \sqrt{2}$ A, at point 1 m away from the centre of the loop is given by :

[NEET (UG) 2022 (Phase 2)]

(1) 6.28×10^{-4} T (2) 3.14×10^{-7} T
(3) 6.28×10^{-7} T (4) 3.14×10^{-4} T

Scan or tap for the full solution

Q.39 Two rods one made of copper and other made of steel of same length and same cross sectional area are joined together. The thermal conductivity of copper and steel are 385 J s^{-1} K^{-1} m^{-1} and 50 J s^{-1} K^{-1} m^{-1} respectively. The free ends of copper and steel are held at 100°C and 0°C respectively. The temperature at the junction is, nearly : [NEET (UG) 2022 (Phase 2)]

(1) 88.5°C (2) 12°C (3) 50°C (4) 73°C

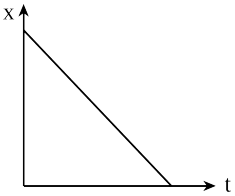
Scan or tap for the full solution

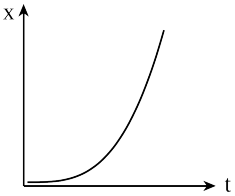
Q.40 The ratio of Coulomb's electrostatic force to the gravitational force between an electron and a proton separated by some distance is 2.4×10^{39}. The ratio of the proportionality constant, $K = \frac{1}{4\pi\varepsilon_0}$ to the gravitational constant G is nearly (Given that the charge of the proton and electron each = 1.6×10^{-19} C, the mass of the electron = 9.11×10^{-31} kg, the mass of the proton = 1.67×10^{-27} kg) : [NEET (UG) 2022 (Phase 2)]

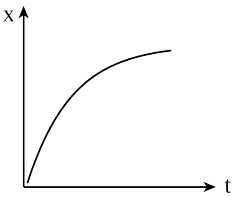
(1) 10 (2) 10^{20} (3) 10^{30} (4) 10^{40}

Scan or tap for the full solution

Q.41 The position-time (x - t) graph for positive acceleration is [NEET (UG) 2022 (Phase 2)]

(1)


(2)


(3)


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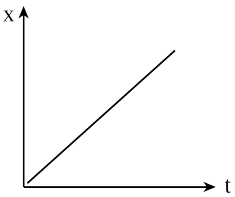
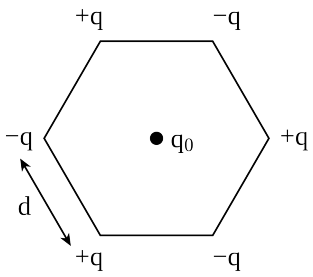


Scan or tap for the full solution

Q.42 Six charges +q, −q, +q, −q, +q, and −q are fixed at the corners of a hexagon of side d as shown in the figure. The work done in bringing a charge q_0 to the centre of the hexagon from infinity is
(ε_0 - permittivity of free space)
[NEET (UG) 2022 (Phase 2)]



(1) $\frac{-q^2}{4\pi\varepsilon_0 d}\left(6-\frac{1}{\sqrt{2}}\right)$ (2) Zero

(3) $\frac{-q^2}{4\pi\varepsilon_0 d}$ (4) $\frac{-q^2}{4\pi\varepsilon_0 d}\left(3-\frac{1}{\sqrt{2}}\right)$

Scan or tap for the full solution

Q.43 An astronomical refracting telescope is being used by an observer to observe planets in normal adjustment. The focal lengths of the objective and eye piece used in the construction of the telescope are 20 m and 2 cm respectively. Consider the following statements about the telescope :
The correct statements are :
A. The distance between the objective and eye piece is 20.02 m
B. The magnification of the telescope is (−) 1000
C. The image of the planet is erect and diminished
D. The aperture of eye piece is smaller than that of objective [NEET (UG) 2022 (Phase 2)]

(1) A, B and D only (2) A, B and C only
(3) B, C and D only (4) C, D and A only

Scan or tap for the full solution

Q.44 The magnetic flux linked to a circular coil of radius R is
$\varphi = 2t^3 + 4t^2 + 2t + 5$ Wb
The magnitude of induced emf in the coil at t = 5 s is [NEET (UG) 2022 (Phase 2)]

(1) 192 V (2) 108 V (3) 197 V (4) 150 V

Scan or tap for the full solution

Q.45 Three vessels of equal capacity have gases at the same temperature and pressure. The first vessel contains helium (monoatomic), the second contains fluorine (diatomic) and the third contains sulfur hexafluoride (polyatomic). The correct statement, among the following is : [NEET (UG) 2022 (Phase 2)]

(1) The root mean square speed of sulfur hexafluoride is the largest
(2) All vessels contain unequal number of respective molecules
(3) The root mean square speed of molecules is same in all three cases
(4) The root mean square speed of helium is the largest

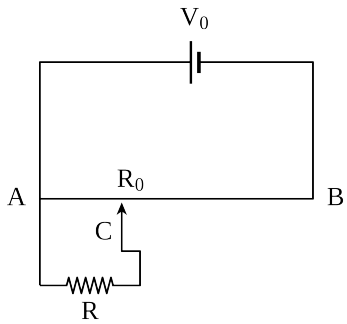
Scan or tap for the full solution

Q.46 An organ pipe filled with a gas at 27°C resonates at 400 Hz in its fundamental mode. If it is filled with the same gas at 90°C, the resonance frequency at the same mode will be [NEET (UG) 2022 (Phase 2)]

(1) 512 Hz (2) 420 Hz (3) 440 Hz (4) 484 Hz

Scan or tap for the full solution

Q.47 The sliding contact C is at one fourth of the length of the potentiometer wire (AB) from A as shown in the circuit diagram. If the resistance of the wire AB is R_0, then the potential drop (V) across the resistor R is [NEET (UG) 2022 (Phase 2)]



(1) $\frac{2V_0R}{2R_0+3R}$ (2) $\frac{4V_0R}{3R_0+16R}$

(3) $\frac{4V_0R}{3R_0+R}$ (4) $\frac{2V_0R}{4R_0+R}$

Scan or tap for the full solution

Q.48 Given below are two statements
Statement-I: The law of radioactive decay states that the number of nuclei undergoing the decay per unit time is inversely proportional to the total number of nuclei in the sample.
Statement-II: The half-life of a radionuclide is the sum of the life time of all nuclei, divided by the initial concentration of the nuclei at time t = 0.

In the light of the above statements, choose the most appropriate answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) Statement-I is incorrect but statement II is correct
(2) Both statement I and statement II are correct
(3) Both statement I and statement II are incorrect
(4) Statement-I is correct but statement II is incorrect

Scan or tap for the full solution

Q.49 At any instant, two elements X_1 and X_2 have same number of radioactive atoms. If the decay constant of X_1 and X_2 are 10λ and λ respectively, then the time when the ratio of their atoms becomes $\frac{1}{e}$ respectively will be : [NEET (UG) 2022 (Phase 2)]

(1) $\frac{1}{5\lambda}$ (2) $\frac{1}{11\lambda}$ (3) $\frac{1}{9\lambda}$ (4) $\frac{1}{6\lambda}$

Scan or tap for the full solution

Q.50 The collector current in a common base amplifier using n-p-n transistor is 24 mA. If 80% of the electrons released by the emitter is accepted by the collector, then the base current is numerically : [NEET (UG) 2022 (Phase 2)]

(1) 3 mA and entering the base
(2) 6 mA and leaving the base
(3) 3 mA and leaving the base
(4) 6 mA and entering the base

Scan or tap for the full solution

Q.51 Match **List-I** with **List-II** :

List-I (quantum number)		List-II (orbital)	
a.	n = 2, l = 1	i.	2s
b.	n = 3, l = 2	ii.	3s
c.	n = 3, l = 0	iii.	2p
d.	n = 2, l = 0	iv.	3d

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
(2) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)
(3) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)
(4) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

Scan or tap for the full solution

Q.52 The correct order of first ionization enthalpy for the given four elements is : [NEET (UG) 2022 (Phase 2)]

(1) C < F < N < O (2) C < N < F < O
(3) C < N < O < F (4) C < O < N < F

Scan or tap for the full solution

Q.53 The density of the solution is 2.15 g mL^{-1}, then mass of 2.5 mL solution in correct significant figures is : [NEET (UG) 2022 (Phase 2)]

(1) 53.75 g (2) 5375×10^{-3} g
(3) 5.4 g (4) 5.38 g

Scan or tap for the full solution

Q.54 Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): Chlorine is an electron withdrawing group but it is ortho, para directing in electrophilic aromatic substitution.

Reason (R): Inductive effect of chlorine destabilises the intermediate carbocation formed during the electrophilic substitution, however due to the more pronounced resonance effect, the halogen stabilises the carbocation at ortho and para positions.

In the light of the above statements, choose the most appropriate answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (A) is not correct but (R) is correct
(2) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(3) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
(4) (A) is correct but (R) is not correct

Scan or tap for the full solution

Q.55 Two half cell reactions are given below.

$Co^{3+} + e^- \longrightarrow Co^{2+}$, $E^0_{Co^{2+}/Co^{3+}} = -1.81$ V

$2Al^{3+} + 6e^- \longrightarrow 2Al(s)$, $E^0_{Al/Al^{3+}} = +1.66$ V

The standard EMF of a cell with feasible redox reaction will be : [NEET (UG) 2022 (Phase 2)]

(1) −3.47 V (2) +7.09 V (3) +0.15 V (4) +3.47 V

Scan or tap for the full solution

Q.56 Match **List-I** with **List-II** :

List-I (Compounds)		List-II (Molecular formula)	
a.	Borax	i.	$NaBO_2$
b.	Kernite	ii.	$Na_2B_4O_7 \cdot 4H_2O$
c.	Orthoboric acid	iii.	H_3BO_3
d.	Borax bead	iv.	$Na_2B_4O_7 \cdot 10H_2O$

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a)-(i), (b)-(iii), (c)-(iv), (d)-(ii)
(2) (a)-(iv), (b)-(ii), (c)-(iii), (d)-(i)
(3) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)
(4) (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)

Scan or tap for the full solution

Q.57 Predict the order of reactivity of the following four isomers towards S_N2 reaction.
(I) $CH_3CH_2CH_2CH_2Cl$
(II) $CH_3CH_2CH(Cl)CH_3$
(III) $(CH_3)_2CHCH_2Cl$
(IV) $(CH_3)_3CCl$ [NEET (UG) 2022 (Phase 2)]
(1) (IV) > (II) > (III) > (I)
(2) (IV) > (III) > (II) > (I)
(3) (I) > (II) > (III) > (IV)
(4) (I) > (III) > (II) > (IV)

Scan or tap for the full solution

Q.58 Match **List-I** with **List-II** :

List-I (Molecules)		List-II (Shape)	
a.	NH_3	i.	Square pyramidal
b.	ClF_3	ii.	Trigonal bipyramidal
c.	PCl_5	iii.	Trigonal pyramidal
d.	BrF_5	iv.	T-shape

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]
(1) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)
(2) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
(3) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
(4) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)

Scan or tap for the full solution

Q.59 Which of the following reactions is a part of the large scale industrial preparation of nitric acid?
[NEET (UG) 2022 (Phase 2)]
(1) $Cu(NO_3)_2 + 2NO_2 + 2H_2O \xrightarrow[500\ K,\ 9\ bar]{Pt} 4HNO_3 + Cu$
(2) $NaNO_3 + H_2SO_4 \xrightarrow[500\ K,\ 9\ bar]{Pt} NaHSO_4 + HNO_3$
(3) $4NH_3 + 5O_2\ (\text{from air}) \xrightarrow[500\ K,\ 9\ bar]{Pt} 4NO + 6H_2O$
(4) $4HPO_3 + 2N_2O_5 \xrightarrow[500\ K,\ 9\ bar]{Pt} 4HNO_3 + P_4O_{10}$

Scan or tap for the full solution

Q.60 $Na_2B_4O_7 \xrightarrow{heat} X + NaBO_2$
in the above reaction the product "X" is : [NEET (UG) 2022 (Phase 2)]
(1) NaB_3O_5 (2) H_3BO_3 (3) B_2O_3 (4) $Na_2B_2O_5$

Scan or tap for the full solution

Q.61 One mole of an ideal gas at 300 K is expanded isothermally from 1 L to 10 L volume. ΔU for this process is :
(Use R = 8.314 J K^{-1} mol^{-1}) [NEET (UG) 2022 (Phase 2)]
(1) 0 J (2) 1260 J (3) 2520 J (4) 5040 J

Scan or tap for the full solution

Q.62 Match **List-I** with **List-II** :

List-I (Complexes)		List-II (Types)	
a.	$[Co(NH_3)_5NO_2]Cl_2$ and $[Co(NH_3)_5ONO]Cl_2$	i.	ionisation isomerism
b.	$[Cr(NH_3)_6][Co(CN)_6]$ and $[Cr(CN)_6][Co(NH_3)_6]$	ii.	coordination isomerism
c.	$[Co(NH_3)_5(SO_4)]Br$ and $[Co(NH_3)_5Br]SO_4$	iii.	linkage isomerism
d.	$[Cr(H_2O)_6]Cl_3$ and $[Cr(H_2O)_5Cl]Cl_2 \cdot H_2O$	iv.	solvate isomerism

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]
(1) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)
(2) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)
(3) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
(4) (a)-(iii), (b)-(ii), (c)-(i), (d)-(iv)

Scan or tap for the full solution

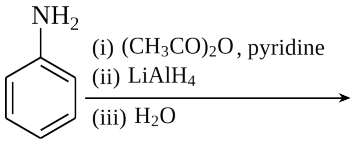
Q.63 0.01 M acetic acid solution is 1% ionised, then pH of this acetic acid solution is : [NEET (UG) 2022 (Phase 2)]
(1) 1 (2) 3 (3) 2 (4) 4

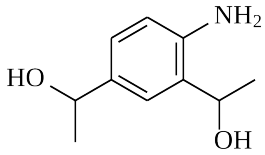
Scan or tap for the full solution

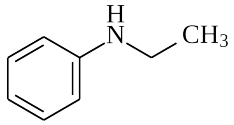
Q.64 The half life of a first order reaction is 2000 years. If the concentration after 8000 years is 0.02 M, then the initial concentration was : [NEET (UG) 2022 (Phase 2)]
(1) 0.04 M (2) 0.16 M (3) 0.32 M (4) 0.08 M

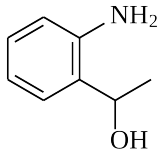
Scan or tap for the full solution

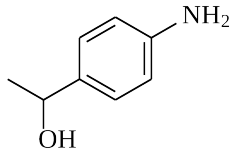
Q.65 The product formed from the following reaction sequence is : [NEET (UG) 2022 (Phase 2)]



(1) 

(2) 

(3) 

(4) 

Scan or tap for the full solution

Q.66 The decreasing order of boiling points of the following alkanes is :

A. heptane B. butane

C. 2-methylbutane D. 2-methylpropane

E. hexane

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) A > E > C > B > D (2) A > C > E > D > B

(3) C > D > A > E > B (4) A > E > B > C > D

Scan or tap for the full solution

Q.67 Decrease in size from left to right in actinoid series is greater and gradual than that in lanthanoid series due to [NEET (UG) 2022 (Phase 2)]

(1) 5f orbitals have greater shielding effect

(2) 4f orbitals are penultimate

(3) 4f orbitals have greater shielding effect

(4) 5f orbitals have poor shielding effect

Scan or tap for the full solution

Q.68 Which of the following reactions is not an example for nucleophilic addition-elimination reaction? [NEET (UG) 2022 (Phase 2)]

(1) $CH_3CHO + NH_3 \rightleftharpoons CH_3CH{=}NH + H_2O$

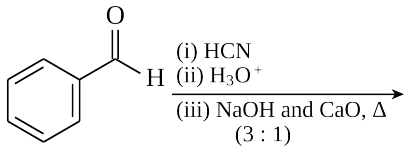
(2) $CH_3CHO + NaHSO_3 \rightleftharpoons CH_3{-}\underset{H}{\overset{OH}{C}}{-}SO_3Na$

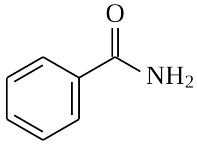
(3) $CH_3CHO + NH_2OH \rightleftharpoons CH_3CH{=}N{-}OH + H_2O$

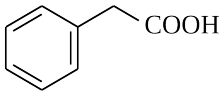
(4) $CH_3CHO + C_6H_5NHNH_2 \rightleftharpoons CH_3CH{=}N{-}NHC_6H_5 + H_2O$

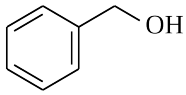
Scan or tap for the full solution

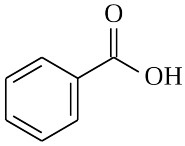
Q.69 The product formed from the following reaction sequence is [NEET (UG) 2022 (Phase 2)]



(1) 

(2) 

(3) 

(4) 

Scan or tap for the full solution

Q.70 Fluorine is a stronger oxidising agent than chlorine because :

A. F-F bond has a low enthalpy of dissociation.

B. Fluoride ion (F^-) has high hydration enthalpy.

C. Electron gain enthalpy of fluorine is less negative than chlorine.

D. Fluorine has a very small size.

Choose the most appropriate answer from the options given : [NEET (UG) 2022 (Phase 2)]

(1) B and C only (2) A and B only

(3) A and C only (4) A and D only

Scan or tap for the full solution

Q.71 K_H value for some gases at the same temperature 'T' are given :

Gas	K_H/kbar
Ar	40.3
CO_2	1.67
HCHO	1.83×10^{-5}
CH_4	0.413

where K_H is Henry's Law constant in water. The order of their solubility in water is : [NEET (UG) 2022 (Phase 2)]

(1) $HCHO < CH_4 < CO_2 < Ar$
(2) $Ar < CO_2 < CH_4 < HCHO$
(3) $Ar < CH_4 < CO_2 < HCHO$
(4) $HCHO < CO_2 < CH_4 < Ar$

Scan or tap for the full solution

Q.72 Which of the following reactions is a decomposition redox reaction?

[NEET (UG) 2022 (Phase 2)]

(1) $P_4(s) + 3OH^-(aq) + 3H_2O(l) \longrightarrow PH_3(g) + 3H_2PO_2^-(aq)$
(2) $2Pb(NO_3)_2(s) \longrightarrow 2PbO(s) + 4NO_2(g) + O_2(g)$
(3) $N_2(g) + O_2(g) \longrightarrow 2NO(g)$
(4) $Cl_2(g) + 2OH^-(aq) \longrightarrow ClO^-(aq) + Cl^-(aq) + H_2O(l)$

Scan or tap for the full solution

Q.73 What is the hybridization shown by C_1 and C_2 carbons, respectively in the given compound?

$OHC–\overset{1}{C}H=CH–\overset{2}{C}H_2COOCH_3$

[NEET (UG) 2022 (Phase 2)]

(1) sp^3 and sp^3
(2) sp^2 and sp^3
(3) sp^2 and sp^2
(4) sp^3 and sp^2

Scan or tap for the full solution

Q.74 Match the reagents (**List-I**) with the product (**List-II**) obtained from phenol.

List-I		List-II	
a.	(i) NaOH (ii) CO_2 (iii) H^+	i.	Benzoquinone
b.	(i) Aqueous NaOH + $CHCl_3$ (ii) H^+	ii.	Benzene
c.	Zn dust, Δ	iii.	Salicylaldehyde
d.	$Na_2Cr_2O_7$, H_2SO_4	iv.	Salicylic acid

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii)
(2) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)
(3) (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)
(4) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

Scan or tap for the full solution

Q.75 The correct order of bond angles in the following compounds/species is : [NEET (UG) 2022 (Phase 2)]

(1) $CO_2 < NH_3 < H_2O < \overset{\oplus}{N}H_4$
(2) $H_2O < NH_3 < \overset{\oplus}{N}H_4 < CO_2$
(3) $H_2O < \overset{\oplus}{N}H_4 < NH_3 < CO_2$
(4) $H_2O < \overset{\oplus}{N}H_4 = NH_3 < CO_2$

Scan or tap for the full solution

Q.76 Match **List-I** with **List-II** :

List-I (Reaction)		List-II (Product formed)	
a.	Gabriel synthesis	i.	Benzaldehyde
b.	Kolbe synthesis	ii.	Ethers
c.	Williamson synthesis	iii.	Primary amines
d.	Etard reaction	iv.	Salicylic acid

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
(2) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)
(3) (a)-(ii), (b)-(iii), (c)-(i), (d)-(iv)
(4) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)

Scan or tap for the full solution

Q.77 If first ionization enthalpies of elements X and Y are 419 kJ mol^{-1} and 590 kJ mol^{-1}, respectively and second ionization enthalpies of X and Y are 3069 kJ mol^{-1} and 1145 kJ mol^{-1}, respectively. Then correct statement is :

[NEET (UG) 2022 (Phase 2)]

(1) Both X and Y are alkaline earth metals
(2) X is an alkali metal and Y is an alkaline earth metal
(3) X is an alkaline earth metal and Y is an alkali metal
(4) Both X and Y are alkali metals

Scan or tap for the full solution

Q.78 The incorrect statement about denaturation of proteins is : [NEET (UG) 2022 (Phase 2)]

(1) Uncoiling of the helical structure takes place
(2) It results due to change of temperature and/or pH
(3) It results in loss of biological activity of proteins
(4) A protein is formed from amino acids linked by peptide bonds

Scan or tap for the full solution

Q.79 Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): The metal carbon bond in metal carbonyls possesses both σ and π character.

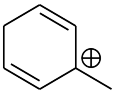
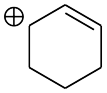
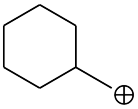
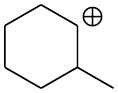
Reason (R): The ligand to metal bond is a π bond and metal to ligand bond is a σ bond.

In the light of the above statements, choose the most appropriate answer from the options given below. [NEET (UG) 2022 (Phase 2)]

(1) (A) is not correct but (R) is correct
(2) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(3) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
(4) (A) is correct but (R) is not correct

Scan or tap for the full solution

Q.80 Which of the following is the most stable carbocation? [NEET (UG) 2022 (Phase 2)]

(1) 
(2) 
(3) 
(4) 

Scan or tap for the full solution

Q.81 Given below are two statements :

Statement-I: Cr^{2+} is oxidising and Mn^{3+} is reducing in nature.

Statement-II: Sc^{3+} compounds are repelled by the applied magnetic field.

In the light of the above statements, choose the most appropriate answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) Statement-I is incorrect but Statement-II is correct
(2) Both Statement-I and Statement-II are correct
(3) Both Statement-I and Statement-II are incorrect
(4) Statement-I is correct but Statement-II is incorrect

Scan or tap for the full solution

Q.82 K_p for the following reaction is 3.0 at 1000 K.

$CO_2(g) + C(s) \rightleftharpoons 2CO(g)$

What will be the value of K_c for the reaction at the same temperature?

(Given : R = 0.083 L bar K^{-1} mol^{-1}) [NEET (UG) 2022 (Phase 2)]

(1) 3.6 (2) 0.36
(3) 3.6×10^{-2} (4) 3.6×10^{-3}

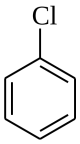
Scan or tap for the full solution

Q.83 A vessel contains 3.2 g of dioxygen gas at STP (273.15 K and 1 atm pressure). The gas is now transferred to another vessel at constant temperature, where pressure becomes one third of the original pressure. The volume of new vessel in L is : (Given : molar volume at STP is 22.4 L) [NEET (UG) 2022 (Phase 2)]

(1) 67.2 (2) 6.72 (3) 2.24 (4) 22.4

Scan or tap for the full solution

Q.84 Which one of the following reaction sequence is incorrect method to prepare phenol? [NEET (UG) 2022 (Phase 2)]

(1) , oleum, NaOH, H_3O^+
(2) Aniline, $NaNO_2$ + HCl, H_2O, heating
(3) Cumene, O_2, H_3O^+
(4)  , NaOH, STP condition

Scan or tap for the full solution

Q.85 For a chemical reaction

$4A + 3B \longrightarrow 6C + 9D$

Rate of formation of C is 6×10^{-2} mol L^{-1} s^{-1} and rate of disappearance of A is 4×10^{-2} mol L^{-1} s^{-1}. The rate of reaction and amount of B consumed in interval of 10 seconds, respectively will be : [NEET (UG) 2022 (Phase 2)]

(1) 10×10^{-2} mol L^{-1} s^{-1} and 30×10^{-2} mol L^{-1}
(2) 1×10^{-2} mol L^{-1} s^{-1} and 30×10^{-2} mol L^{-1}
(3) 10×10^{-2} mol L^{-1} s^{-1} and 10×10^{-2} mol L^{-1}
(4) 1×10^{-2} mol L^{-1} s^{-1} and 10×10^{-2} mol L^{-1}

Scan or tap for the full solution

Q.86 Standard electrode potential for the cell with cell reaction

$Zn(s) + Cu^{2+}(aq) \longrightarrow Zn^{2+}(aq) + Cu(s)$

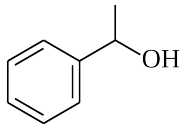
is 1.1 V. Calculate the standard Gibbs energy change for the cell reaction. (Given F = 96487 C mol^{-1}) [NEET (UG) 2022 (Phase 2)]

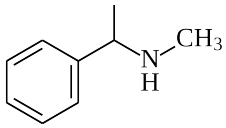
(1) -200.27 J mol^{-1} (2) -200.27 kJ mol^{-1}
(3) -212.27 kJ mol^{-1} (4) -212.27 J mol^{-1}

Scan or tap for the full solution

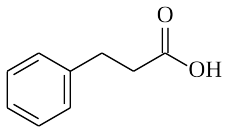
Q.87 The products A and B in the following reaction sequence are : [NEET (UG) 2022 (Phase 2)]

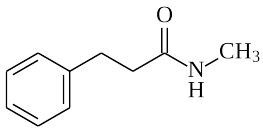
$$Ph{-}CH{=}CH_2 \xrightarrow[\text{(ii) Mg, dry ether; (iii) } CO_2,\ H_3O^+]{\text{(i) HBr}} A \xrightarrow[\text{(ii) } CH_3NH_2]{\text{(i) } SOCl_2} B$$

(1) 

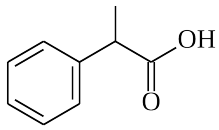
A


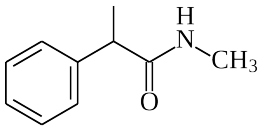
B

(2) 

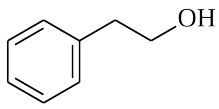
A


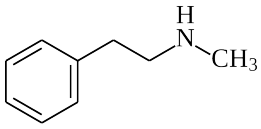
B

(3) 

A


B

(4) 

A


B

Scan or tap for the full solution

Q.88 The incorrect method for the synthesis of alkenes is [NEET (UG) 2022 (Phase 2)]

(1) Treating vicinal dihalides with Zn metal
(2) Treating of alkynes with Na in liquid NH_3
(3) Heating alkyl halides with alcoholic KOH
(4) Treating alkyl halides in aqueous KOH solution

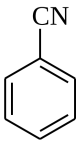
Scan or tap for the full solution

Q.89 When electromagnetic radiation of wavelength 300 nm falls on the surface of a metal, electrons are emitted with the kinetic energy of 1.68×10^5 J mol^{-1}. What is the minimum energy needed to remove an electron from the metal? ($h = 6.626 \times 10^{-34}$ J s, $c = 3 \times 10^8$ m s^{-1}, $N_A = 6.022 \times 10^{23}$ mol^{-1}) [NEET (UG) 2022 (Phase 2)]

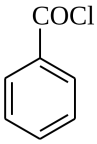
(1) 2.31×10^5 J mol^{-1} (2) 2.31×10^6 J mol^{-1}
(3) 3.84×10^4 J mol^{-1} (4) 3.84×10^{-19} J mol^{-1}

Scan or tap for the full solution

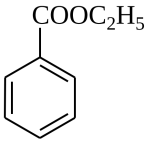
Q.90 The incorrect method to synthesize benzaldehyde is [NEET (UG) 2022 (Phase 2)]

(1) 

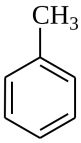
, CH_3MgBr, followed by H_3O^+

(2) 

, H_2, Pd–$BaSO_4$

(3) 

, DIBAL-H, followed by H_2O

(4) 

, CrO_2Cl_2 in CS_2, followed by H_3O^+

Scan or tap for the full solution

Q.91 Match **List-I** with **List-II** :

List-I (Defects)		List-II (Shown by)	
a.	Frenkel defect	i.	Non-ionic solids and density of the solid decreases
b.	Schottky defect	ii.	Non-ionic solids and density of the solid increases
c.	Vacancy defect	iii.	Ionic solids and density of the solid decreases
d.	Interstitial defect	iv.	Ionic solids and density of the solid remains constant

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)
(2) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)
(3) (a)-(i), (b)-(iii), (c)-(ii), (d)-(iv)
(4) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

Scan or tap for the full solution

Q.92 Match **List-I** with **List-II** :

List-I		List-II	
a.	Sodium laurylsulphate	i.	Toilet soap
b.	Cetyltrimethyl ammonium chloride	ii.	Non-ionic detergent
c.	Sodium stearate	iii.	Anionic detergent
d.	Polyethyleneglycyl stearate	iv.	Cationic detergent

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)

(2) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)

(3) (a)-(i), (b)-(iv), (c)-(ii), (d)-(iii)

(4) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)

Scan or tap for the full solution

Q.93 Which among the following is a thermoplastic polymer? [NEET (UG) 2022 (Phase 2)]

(1) Melamine polymer

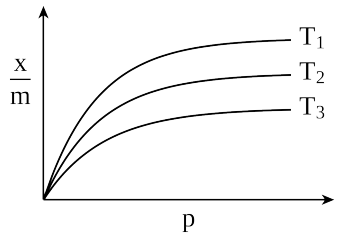
(2) Bakelite

(3) Polythene

(4) Urea-formaldehyde resin

Scan or tap for the full solution

Q.94 Shown below are adsorption isotherms for a gas 'X' at temperatures T_1, T_2 and T_3 :



p and $\frac{x}{m}$ represent pressure and extent of adsorption, respectively. The correct order of temperatures for the given adsorption is : [NEET (UG) 2022 (Phase 2)]

(1) $T_1 = T_2 > T_3$ (2) $T_1 > T_2 > T_3$

(3) $T_3 > T_2 > T_1$ (4) $T_1 = T_2 = T_3$

Scan or tap for the full solution

Q.95 The element used for welding metals with high melting points is [NEET (UG) 2022 (Phase 2)]

(1) He (2) Cl_2 (3) H_2 (4) Ne

Scan or tap for the full solution

Q.96 $CaCl_2$ and $Ca(OCl)_2$ are components of [NEET (UG) 2022 (Phase 2)]

(1) Lime water (2) Gypsum

(3) Portland cement (4) Bleaching powder

Scan or tap for the full solution

Q.97 Four gas cylinders containing He, N_2, CO_2 and NH_3 gases separately are gradually cooled from a temperature of 500 K. Which gas will liquefy first? (Given T_c in K – He : 5.3, N_2 : 126, CO_2 : 304.1 and NH_3 : 405.5) [NEET (UG) 2022 (Phase 2)]

(1) NH_3 (2) He (3) N_2 (4) CO_2

Scan or tap for the full solution

Q.98 Match **List-I** with **List-II** :

List-I		List-II	
a.	Biochemical oxygen demand	i.	oxidising mixture
b.	Photochemical smog	ii.	polar stratospheric cloud
c.	Classical smog	iii.	organic matter in water
d.	Ozone layer depletion	iv.	reducing mixture

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

(2) (a)-(i), (b)-(iv), (c)-(ii), (d)-(iii)

(3) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)

(4) (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)

Scan or tap for the full solution

Q.99 Which one of the following is not a calcination reaction? [NEET (UG) 2022 (Phase 2)]

(1) $CaCO_3 + 2HCl \xrightarrow{\Delta} CaCl_2 + H_2O + CO_2$

(2) $ZnCO_3 \xrightarrow{\Delta} ZnO + CO_2$

(3) $Fe_2O_3 . xH_2O \xrightarrow{\Delta} Fe_2O_3 + xH_2O$

(4) $CaCO_3 . MgCO_3 \xrightarrow{\Delta} CaO + MgO + 2CO_2$

Scan or tap for the full solution

Q.100 What fraction of Fe exists as Fe(III) in $Fe_{0.96}O$? (Consider $Fe_{0.96}O$ to be made up of Fe(II) and Fe(III) only) [NEET (UG) 2022 (Phase 2)]

(1) $\frac{1}{20}$ (2) $\frac{1}{12}$ (3) 0.08 (4) $\frac{1}{16}$

Scan or tap for the full solution

Q.101 Given below are two statements:

Statement-I: Sickle cell anaemia and haemophilia are autosomal dominant traits.
Statement-II: Sickle cell anaemia and haemophilia are disorders of the blood.

In the light of the above statements, choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) Statement-I is incorrect but Statement-II is correct
(2) Both Statement-I and Statement-II are correct
(3) Both Statement-I and Statement-II are incorrect
(4) Statement-I is correct but Statement-II is incorrect

Scan or tap for the full solution

Q.102 Which stage of meiosis can last for months or years in the oocytes of some vertebrates? [NEET (UG) 2022 (Phase 2)]

(1) Diakinesis (2) Leptotene
(3) Pachytene (4) Diplotene

Scan or tap for the full solution

Q.103 Give the correct descending order of organisms with reference to their estimated number found in Amazon forest.

A. Plants B. Invertebrates
C. Fishes D. Mammals
E. Birds

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) B > A > C > E > D (2) A > B > E > D > C
(3) A > C > D > B > E (4) B > A > E > D > C

Scan or tap for the full solution

Q.104 In lac operon, z gene codes for [NEET (UG) 2022 (Phase 2)]

(1) Transacetylase (2) β-galactosidase
(3) Permease (4) Repressor

Scan or tap for the full solution

Q.105 The 5-C compound formed during TCA cycle is [NEET (UG) 2022 (Phase 2)]

(1) Fumaric acid (2) α-ketoglutaric acid
(3) Oxalosuccinic acid (4) Succinic acid

Scan or tap for the full solution

Q.106 In meiosis, crossing over and exchange of genetic material between homologous chromosomes are catalyzed by the enzyme [NEET (UG) 2022 (Phase 2)]

(1) Polymerase (2) Phosphorylase
(3) Recombinase (4) Transferase

Scan or tap for the full solution

Q.107 All successions irrespective of the habitat proceed to which type of climax community? [NEET (UG) 2022 (Phase 2)]

(1) Edaphic (2) Xeric
(3) Mesic (4) Hydrophytic

Scan or tap for the full solution

Q.108 When one CO_2 molecule is fixed as one molecule of triose phosphate, which of the following photochemically made, high energy chemical intermediates are used in the reduction phase? [NEET (UG) 2022 (Phase 2)]

(1) 2 ATP + 2 NADPH (2) 1 ATP + 1 NADPH
(3) 1 ATP + 2 NADPH (4) 2 ATP + 1 NADPH

Scan or tap for the full solution

Q.109 The ability of plants to follow different pathways in response to environment leading to formation of different kinds of structures is called [NEET (UG) 2022 (Phase 2)]

(1) Differentiation (2) Redifferentiation
(3) Development (4) Plasticity

Scan or tap for the full solution

Q.110 Match **List-I** with **List-II** :

List-I		List-II	
a.	*Chlamydomonas*	i.	Moss
b.	*Cycas*	ii.	Pteridophyte
c.	*Selaginella*	iii.	Alga
d.	*Sphagnum*	iv.	Gymnosperm

Choose the correct answer from the options given below [NEET (UG) 2022 (Phase 2)]

(1) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv)
(2) (a) - (iii), (b) - (i), (c) - (ii), (d) - (iv)
(3) (a) - (iii), (b) - (iv), (c) - (ii), (d) - (i)
(4) (a) - (iii), (b) - (ii), (c) - (i), (d) - (iv)

Scan or tap for the full solution

Q.111 Interfascicular cambium is present between [NEET (UG) 2022 (Phase 2)]

(1) Secondary xylem and secondary phloem
(2) Primary xylem and primary phloem
(3) Pericycle and endodermis
(4) Two vascular bundles

Scan or tap for the full solution

Q.112 Which of the following growth regulators is an adenine derivative? [NEET (UG) 2022 (Phase 2)]
(1) Abscisic acid (2) Auxin
(3) Cytokinin (4) Ethylene

Scan or tap for the full solution

Q.113 The chromosomal theory of inheritance was proposed by [NEET (UG) 2022 (Phase 2)]
(1) Robert Brown (2) Thomas Morgan
(3) Sutton and Boveri (4) Gregor Mendel

Scan or tap for the full solution

Q.114 Which of the following statement is not correct? [NEET (UG) 2022 (Phase 2)]
(1) The rhizome is thick, prostrate and branched
(2) Rhizome is a condensed form of stem
(3) The apical bud in rhizome always remains above the ground
(4) The rhizome is aerial with no distinct nodes and internodes

Scan or tap for the full solution

Q.115 The phenomenon by which the undividing parenchyma cells start to divide mitotically during plant tissue culture is called as [NEET (UG) 2022 (Phase 2)]
(1) Secondary growth (2) Differentiation
(3) Dedifferentiation (4) Redifferentiation

Scan or tap for the full solution

Q.116 Match **List-I** with **List-II**

List-I		List-II	
a.	Adenine	i.	Pigment
b.	Anthocyanin	ii.	Polysaccharide
c.	Chitin	iii.	Alkaloid
d.	Codeine	iv.	Purine

Choose the correct answer from the options given below [NEET (UG) 2022 (Phase 2)]
(1) (a) - (i), (b) - (iv), (c) - (iii), (d) - (ii)
(2) (a) - (iv), (b) - (i), (c) - (ii), (d) - (iii)
(3) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)
(4) (a) - (iii), (b) - (i), (c) - (iv), (d) - (ii)

Scan or tap for the full solution

Q.117 The residual persistent part which forms the perisperm in the seeds of beet is [NEET (UG) 2022 (Phase 2)]
(1) Integument (2) Calyx
(3) Endosperm (4) Nucellus

Scan or tap for the full solution

Q.118 The World Summit on sustainable development held in 2002 in Johannesburg, South Africa pledged for [NEET (UG) 2022 (Phase 2)]
(1) Collection and preservation of seeds of different genetic strains of commercially important plants.
(2) A significant reduction in the current rate of biodiversity loss.
(3) Declaration of more biodiversity hotspots.
(4) Increase in agricultural production.

Scan or tap for the full solution

Q.119 The type of tissue commonly found in the fruit wall of nuts is : [NEET (UG) 2022 (Phase 2)]
(1) Sclereid (2) Parenchyma
(3) Collenchyma (4) Sclerenchyma

Scan or tap for the full solution

Q.120 The pioneer species in a hydrarch succession are [NEET (UG) 2022 (Phase 2)]
(1) Filamentous algae
(2) Free-floating angiosperms
(3) Submerged rooted plants
(4) Phytoplanktons

Scan or tap for the full solution

Q.121 Given below are two statements
Statement-I: DNA polymerases catalyse polymerisation only in one direction, that is $5' \longrightarrow 3'$.
Statement-II: During replication of DNA, on one strand the replication is continuous while on other strand it is discontinuous.

In the light of the above statements, choose the correct answer from the options given below: [NEET (UG) 2022 (Phase 2)]

(1) Statement-I is incorrect but Statement-II is correct
(2) Both Statement-I and Statement-II are correct
(3) Both Statement-I and Statement-II are incorrect
(4) Statement-I is correct but Statement-II is incorrect

Scan or tap for the full solution

Q.122 The species that come to appear in bare area are called [NEET (UG) 2022 (Phase 2)]
(1) Species of seral community
(2) Pioneer species
(3) Invasive species
(4) Competitive species

Scan or tap for the full solution

Q.123 Initiation of lateral roots and vascular cambium during secondary growth takes place in cells of [NEET (UG) 2022 (Phase 2)]
(1) Pericycle (2) Epiblema
(3) Cortex (4) Endodermis

Scan or tap for the full solution

Q.124 Match **List - I** with **List - II**.

	List - I		List - II
a.	In lac operon i gene codes for	i.	transacetylase
b.	In lac operon z gene codes for	ii.	permease
c.	In lac operon y gene codes for	iii.	β-galactosidase
d.	In lac operon a gene codes for	iv.	Repressor

Choose the correct answer from the options given below [NEET (UG) 2022 (Phase 2)]
(1) (a) - (iii), (b) - (i), (c) - (iv), (d) - (ii)
(2) (a) - (iii), (b) - (ii), (c) - (i), (d) - (iv)
(3) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)
(4) (a) - (iv), (b) - (i), (c) - (iii), (d) - (ii)

Scan or tap for the full solution

Q.125 To ensure that only the desired pollens fall on the stigma in artificial hybridization process
A. the female flower buds of plant producing unisexual flowers need not be bagged.
B. there is no need to emasculate unisexual flowers of selected female parent
C. emasculated flowers are to be bagged immediately after cross pollination
D. emasculated flowers are to be bagged after removal of anthers
E. bisexual flowers, showing protogyny are never selected for cross
Choose the correct answer from the options given below [NEET (UG) 2022 (Phase 2)]
(1) A, D and E only (2) A, B and C only
(3) B, C and D only (4) B, C and E only

Scan or tap for the full solution

Q.126 Match **List - I** with **List - II** :

	List - I		List - II
a.	Imbricate	i.	Calotropis
b.	Valvate	ii.	Cassia
c.	Vexillary	iii.	Cotton
d.	Twisted	iv.	Bean

Choose the correct answer from the options given below [NEET (UG) 2022 (Phase 2)]
(1) (a) - (i), (b) - (iii), (c) - (iv), (d) - (ii)
(2) (a) - (ii), (b) - (i), (c) - (iii), (d) - (iv)
(3) (a) - (ii), (b) - (i), (c) - (iv), (d) - (iii)
(4) (a) - (ii), (b) - (iv), (c) - (iii), (d) - (i)

Scan or tap for the full solution

Q.127 The number of time(s) decarboxylation of isocitrate occurs during single TCA cycle is [NEET (UG) 2022 (Phase 2)]
(1) Four (2) One (3) Two (4) Three

Scan or tap for the full solution

Q.128 Match **List-I** with **List-II**

	List - I		List - II
a.	Porins	i.	Pink coloured nodules
b.	Leghaemoglobin	ii.	Lumen of thylakoid
c.	H^+ accumulation	iii.	Amphibolic pathway
d.	Respiration	iv.	Huge pores in outer membrane of mitochondria

Choose the correct answer from the options given below. [NEET (UG) 2022 (Phase 2)]
(1) (a)-(ii), (b)-(iv), (c)-(i), (d)-(iii)
(2) (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)
(3) (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)
(4) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)

Scan or tap for the full solution

Q.129 In general the egg apparatus of embryo sac in angiosperm consists of [NEET (UG) 2022 (Phase 2)]

(1) One egg cell, two synergids, two antipodal cells, two Polar nuclei

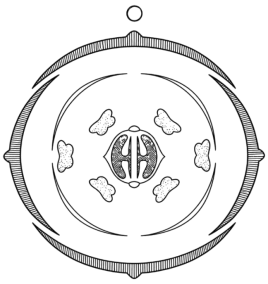
(2) One egg cell, two synergids, three antipodal cells, two Polar nuclei

(3) One egg cell, two synergids, two antipodal cells, three Polar nuclei

(4) One egg cell, three synergids, two antipodal cells, two Polar nuclei

Scan or tap for the full solution

Q.130 The Floral Diagram represents which one of the following families? [NEET (UG) 2022 (Phase 2)]



(1) Liliaceae (2) Fabaceae

(3) Brassicaceae (4) Solanaceae

Scan or tap for the full solution

Q.131 Primary proteins are also called as polypeptides because : [NEET (UG) 2022 (Phase 2)]

(1) They can assume many conformations

(2) They are linear chains

(3) They are polymers of peptide monomers

(4) Successive amino acids are joined by peptide bonds

Scan or tap for the full solution

Q.132 Match **List-I** with **List-II**:

List - I		List - II	
a.	Bacteriophage φX174	i.	48502 base pairs
b.	Bacteriophage lambda	ii.	5386 nucleotides
c.	*Escherichia coli*	iii.	3.3×10^9 base pairs
d.	Haploid content of human DNA	iv.	4.6×10^6 base pairs

Choose the correct answer from the options given below: [NEET (UG) 2022 (Phase 2)]

(1) (a)-(i), (b)-(ii), (c)-(iv), (d)-(iii)

(2) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)

(3) (a)-(ii), (b)-(iv), (c)-(i), (d)-(iii)

(4) (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)

Scan or tap for the full solution

Q.133 Which type of substance would face difficulty to pass through the cell membrane? [NEET (UG) 2022 (Phase 2)]

(1) Substance soluble in lipids

(2) Substance with hydrophobic moiety

(3) Substance with hydrophilic moiety

(4) All substances irrespective of hydrophobic and hydrophilic moiety

Scan or tap for the full solution

Q.134 What is the expected percentage of F_2 progeny with yellow and inflated pod in dihybrid cross experiment involving pea plants with green coloured, inflated pod and yellow coloured constricted pod? [NEET (UG) 2022 (Phase 2)]

(1) 9% (2) 100% (3) 56.25% (4) 18.75%

Scan or tap for the full solution

Q.135 Match **List - I** with **List - II** :

List - I		List - II	
a.	Carbon dissolved in oceans	i.	55 billion tons
b.	Annual fixation of carbon through photosynthesis	ii.	71%
c.	PAR captured by plants	iii.	4×10^{13} kg
d.	Productivity of oceans	iv.	2 to 10%

Choose the correct answer from the options given below: [NEET (UG) 2022 (Phase 2)]

(1) (a)-(iii), (b)-(ii), (c)-(i), (d)-(iv)

(2) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)

(3) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)

(4) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)

Scan or tap for the full solution

Q.136 If a female individual is with small round head, furrowed tongue, partially open mouth and broad palm with characteristic palm crease. Also the physical, psychomotor and mental development is retarded. The karyotype analysis of such an individual will show : [NEET (UG) 2022 (Phase 2)]

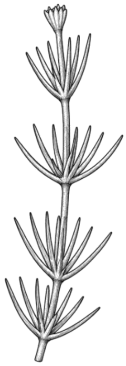
(1) Trisomy of chromosome 21
(2) 47 chromosomes with XXY sex chromosomes
(3) 45 chromosomes with XO sex chromosomes
(4) 47 chromosomes with XYY sex chromosomes

Scan or tap for the full solution

Q.137 Read the following statements and identify the characters related to the alga shown in the diagram :

A. It is a member of Chlorophyceae
B. Food is stored in the form of starch
C. It is monoecious plant showing oogonium and antheridium
D. Food is stored in the form of laminarin or mannitol
E. It shows dominance of pigments Chlorophyll a, c and Fucoxanthin

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]



(1) C, D and E only (2) A and B only
(3) A, B and C only (4) A, C and D only

Scan or tap for the full solution

Q.138 Match the **List-I** with **List-II** :

List - I		List - II	
a.	Sacred groves	i.	Alien species
b.	Zoological park	ii.	Release of large quantity of oxygen
c.	Nile perch	iii.	Ex-situ conservation
d.	Amazon forest	iv.	Khasi Hills in Meghalaya

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a) – (iv), (b) – (iii), (c) – (ii), (d) – (i)
(2) (a) – (iv), (b) – (iii), (c) – (i), (d) – (ii)
(3) (a) – (ii), (b) – (iv), (c) – (i), (d) – (iii)
(4) (a) – (iv), (b) – (i), (c) – (ii), (d) – (iii)

Scan or tap for the full solution

Q.139 Identify the correct sequence of events during Prophase I of meiosis:
Choose the correct answer from the options given below:

A. Synapsis of homologous chromosomes
B. Chromosomes become gradually visible under microscope
C. Crossing over between non-sister chromatids of homologous chromosomes
D. Terminalisation of chiasmata
E. Dissolution of synaptonemal complex

[NEET (UG) 2022 (Phase 2)]

(1) A, C, D, E, B (2) A, B, C, D, E
(3) B, C, D, E, A (4) B, A, C, E, D

Scan or tap for the full solution

Q.140 Which of the following pair represents free living nitrogen fixing aerobic bacteria?

[NEET (UG) 2022 (Phase 2)]

(1) *Pseudomonas* and *Thiobacillus*
(2) *Rhizobium* and *Frankia*
(3) *Azotobacter* and *Beijernickia*
(4) *Anabaena* and *Rhodospirillum*

Scan or tap for the full solution

Q.141 Frugivorous birds are found in large numbers in tropical forests mainly because of :

[NEET (UG) 2022 (Phase 2)]

(1) Temperature conducive for their breeding
(2) Lack of niche specialisation
(3) Higher annual rainfall
(4) Availability of fruits throughout the year

Scan or tap for the full solution

Q.142 Identify the correct statements regarding chemiosmotic hypothesis:
Choose the correct answer from the options given below:

A. Splitting of the water molecule takes place on the inner side of the membrane.
B. Protons accumulate within the lumen of the thylakoids.
C. Primary acceptor of electron transfers the electrons to an electron carrier.
D. NADP reductase enzyme is located on the stroma side of the membrane.
E. Protons increase in number in stroma.

[NEET (UG) 2022 (Phase 2)]

(1) B, C and E only (2) A, B and E only
(3) A, B and D only (4) B, C and D only

Scan or tap for the full solution

Q.143 Match **List-I** with **List-II**

	List - I		List - II
a.	*Chlamydomonas*	i.	Conidia
b.	*Penicillium*	ii.	Zoospores
c.	*Hydra*	iii.	Gemmules
d.	Sponge	iv.	Buds

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)
(2) (a)-(i), (b)-(iv), (c)-(iii), (d)-(ii)
(3) (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)
(4) (a)-(iii), (b)-(ii), (c)-(i), (d)-(iv)

Scan or tap for the full solution

Q.144 Bivalent or Tetrad formation is a characteristic feature observed during [NEET (UG) 2022 (Phase 2)]

(1) Chiasmata in zygotene stage
(2) Synaptonemal complex in zygotene stage
(3) Chiasmata in Diplotene stage
(4) Synaptonemal complex in Pachytene stage

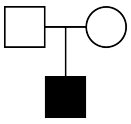
Scan or tap for the full solution

Q.145 The amount of biomass or organic matter produced per unit area over a time period by plants during photosynthesis is called [NEET (UG) 2022 (Phase 2)]

(1) Net primary production
(2) Secondary production
(3) Primary production
(4) Gross primary production

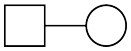
Scan or tap for the full solution

Q.146 Select the incorrect match regarding the symbols used in the Pedigree analysis: [NEET (UG) 2022 (Phase 2)]

(1)  – Parent with male child affected with disease

(2) – Sex unspecified

(3) – Affected individual

(4)  – Consanguineous mating

Scan or tap for the full solution

Q.147 If the pH in lysosomes is increased to alkaline, what will be the outcome? [NEET (UG) 2022 (Phase 2)]

(1) Lysosomal enzymes will be more active
(2) Hydrolytic enzymes will function more efficiently
(3) Hydrolytic enzymes will become inactive
(4) Lysosomal enzymes will be released into the cytoplasm

Scan or tap for the full solution

Q.148 Pathogenic bacteria gain resistance to antibiotics due to changes in their : [NEET (UG) 2022 (Phase 2)]

(1) Nucleoid (2) Cosmids
(3) Plasmids (4) Nucleus

Scan or tap for the full solution

Q.149 Mad cow disease in cattle and Cr Jacob disease in humans are due to infection by _____. [NEET (UG) 2022 (Phase 2)]

(1) Prion (2) Bacterium
(3) Virus (4) Viroid

Scan or tap for the full solution

Q.150 Western Ghats have a large number of plants and animal species that are not found anywhere else. Which of the following term is used to notify such species? [NEET (UG) 2022 (Phase 2)]

(1) Vulnerable species (2) Threatened species
(3) Keystone species (4) Endemic species

Scan or tap for the full solution

Q.151 Two butterfly species are competing for the same nectar of a flower in a garden. To survive and coexist together, they may avoid competition in the same garden by : [NEET (UG) 2022 (Phase 2)]

(1) Predating on each other
(2) Feeding at the same time
(3) Choosing different foraging patterns
(4) Increasing time spent on attacking each other

Scan or tap for the full solution

Q.152 If DNA contained sulfur instead of phosphorus and proteins contained phosphorus instead of sulfur, what would have been the outcome of Hershey and Chase experiment? [NEET (UG) 2022 (Phase 2)]

(1) Radioactive phosphorus in bacterial cells
(2) No radioactive sulfur in bacterial cells
(3) Both radioactive sulfur and phosphorus in bacterial cells
(4) Radioactive sulfur in bacterial cells

Scan or tap for the full solution

Q.153 Given below are two statements:

Statement-I: Amino acids have a property of ionizable nature of $-NH_2$ and $-COOH$ groups, hence have different structures at different pH.

Statement-II: Amino acids can exist as Zwitterionic form at acidic and basic pH.

In the light of the above statements, choose the most appropriate answer from the options given below: [NEET (UG) 2022 (Phase 2)]

(1) Statement-I is incorrect but Statement-II is correct

(2) Both Statement-I and Statement-II are correct

(3) Both Statement-I and Statement-II are incorrect

(4) Statement-I is correct but Statement-II is incorrect

Scan or tap for the full solution

Q.154 With respect to metaphase, which of the following statements is incorrect? [NEET (UG) 2022 (Phase 2)]

(1) Chromosomes lie at the equator of the cell

(2) Complete disintegration of nuclear envelope takes place

(3) Chromosomes are highly condensed

(4) Metaphase chromosomes are made up of four sister chromatids held together by centromere

Scan or tap for the full solution

Q.155 Against the codon 5' UAC 3', what would be the sequence of anticodon on tRNA? [NEET (UG) 2022 (Phase 2)]

(1) 5' GUA 3' (2) 5' AUG 3'

(3) 5' ATG 3' (4) 5' GTA 3'

Scan or tap for the full solution

Q.156 Which of the following are true about the taxonomical aid 'key'?

A. Keys are based on the similarities and dissimilarities.

B. Key is analytical in nature.

C. Keys are based on the contrasting characters in pair called couplet.

D. Same key can be used for all taxonomic categories.

E. Each statement in the key is called Lead.

Choose the most appropriate answer from the options given below: [NEET (UG) 2022 (Phase 2)]

(1) A, C, D and E only (2) A, B and C only

(3) B, C and D only (4) A, B, C and E only

Scan or tap for the full solution

Q.157 A normal girl, whose mother is haemophilic marries a male with no ancestral history of haemophilia. What will be the possible phenotypes of the offspring?

A. Haemophilic son and haemophilic daughter.

B. Haemophilic son and carrier daughter.

C. Normal daughter and normal son.

D. Normal son and haemophilic daughter.

Choose the most appropriate answer from the options given below: [NEET (UG) 2022 (Phase 2)]

(1) B and D only (2) A and B only

(3) B and C only (4) A and D only

Scan or tap for the full solution

Q.158 In the enzyme which catalyses the breakdown of:

$2H_2O_2 \longrightarrow 2H_2O + O_2$

the prosthetic group is : [NEET (UG) 2022 (Phase 2)]

(1) Niacin

(2) Nicotinamide adenine dinucleotide

(3) Haem

(4) Zinc

Scan or tap for the full solution

Q.159 If A and C make 30% and 20% of DNA, respectively, what will be the percentage composition of T and G? [NEET (UG) 2022 (Phase 2)]

(1) T : 20%, G : 20% (2) T : 20%, G : 30%

(3) T : 30%, G : 20% (4) T : 30%, G : 30%

Scan or tap for the full solution

Q.160 When a carrier protein facilitates the movement of two molecules across the membrane in same direction, it is called [NEET (UG) 2022 (Phase 2)]

(1) Symport (2) Uniport

(3) Transport (4) Antiport

Scan or tap for the full solution

Q.161 Which of the following protects nitrogenase inside the root nodule of a leguminous plant? [NEET (UG) 2022 (Phase 2)]

(1) Glutamate dehydrogenase

(2) Catalase

(3) leg haemoglobin

(4) Transaminase

Scan or tap for the full solution

Q.162 The ascent of xylem sap in plants is mainly accomplished by the [NEET (UG) 2022 (Phase 2)]

(1) root pressure
(2) size of the stomatal aperture
(3) distribution of stomata on the upper and lower epidermis
(4) cohesion and adhesion between water molecules

Scan or tap for the full solution

Q.163 Which of the following can be expected if scientists succeed in introducing apomictic gene into hybrid varieties of crops? [NEET (UG) 2022 (Phase 2)]
(1) There will be segregation of the desired characters only in the progeny
(2) Polyembryony will be seen and each seed will produce many plantlets
(3) Seeds of hybrid plants will show longer dormancy
(4) Farmers can keep on using the seeds produced by the hybrids to raise new crop year after year

Scan or tap for the full solution

Q.164 Why CNG is considered better fuel than diesel?
A. It can not be adulterated.
B. It takes less time to fill the fuel tank
C. It burns more efficiently.
D. It is cheaper.
E. It is less inflammable.
Choose the most appropriate answer from the options given below : [NEET (UG) 2022 (Phase 2)]
(1) C, D and E only (2) A, B, C and E only
(3) A, C and D only (4) A, B, D and E only

Scan or tap for the full solution

Q.165 Given below are two statements: one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.
Assertion (A): Spirulina is a microbe that can be used for reducing environmental pollution.
Reason (R): Spirulina is a rich source of protein, carbohydrates, fats, minerals and vitamins.
In the light of the above statements, choose the most appropriate answer from the options given below: [NEET (UG) 2022 (Phase 2)]
(1) (A) is not correct but (R) is correct
(2) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(3) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
(4) (A) is correct but (R) is not correct

Scan or tap for the full solution

Q.166 Select the incorrect statement with respect to inbreeding of animals. [NEET (UG) 2022 (Phase 2)]
(1) It exposes harmful recessive genes that are eliminated by selection.
(2) It is used for evolving pure lines in cattle.
(3) It helps in accumulation of superior genes and elimination of less desirable genes.
(4) It decreases homozygosity.

Scan or tap for the full solution

Q.167 Given below are two statements: one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.
Assertion (A): When a particular restriction enzyme cuts strand of DNA, overhanging stretches or sticky ends are formed.
Reason (R): Some restriction enzymes cut the strand of DNA a little away from the centre of palindromic site.
In the light of the above statements, choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]
(1) (A) is not correct but (R) is correct
(2) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(3) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
(4) (A) is correct but (R) is not correct

Scan or tap for the full solution

Q.168 Separation of DNA fragments is done by a technique known as [NEET (UG) 2022 (Phase 2)]
(1) Gel electrophoresis
(2) Polymerase Chain Reaction
(3) Recombinant technology
(4) Southern blotting

Scan or tap for the full solution

Q.169 The enzyme (a) is needed for isolating genetic material from plant cells and enzyme (b) for isolating genetic material from fungus. Choose the correct pair of options from the following : [NEET (UG) 2022 (Phase 2)]
(1) (a) Cellulase (b) Lipase
(2) (a) Cellulase (b) Protease
(3) (a) Cellulase (b) Chitinase
(4) (a) Chitinase (b) Lipase

Scan or tap for the full solution

Q.170 Match **List-I** with **List-II** :

List - I		List - II	
a.	Gene gun	i.	Replacement of a faulty gene by a normal healthy gene
b.	Gene therapy	ii.	Used for transfer of gene
c.	Gene cloning	iii.	Total DNA in the cells of an organism
d.	Genome	iv.	To obtain identical copies of a particular DNA molecule

Choose the correct answer from the options given below: [NEET (UG) 2022 (Phase 2)]

(1) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
(2) (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)
(3) (a)-(i), (b)-(iii), (c)-(ii), (d)-(iv)
(4) (a)-(iv), (b)-(i), (c)-(iii), (d)-(ii)

Scan or tap for the full solution

Q.171 Which of the following animals has three chambered heart? [NEET (UG) 2022 (Phase 2)]

(1) *Pteropus* (2) *Scoliodon*
(3) *Hippocampus* (4) *Chelone*

Scan or tap for the full solution

Q.172 Which of the following types of epithelium is present in the bronchioles and Fallopian tubes? [NEET (UG) 2022 (Phase 2)]

(1) Stratified squamous epithelium
(2) Simple squamous epithelium
(3) Simple columnar epithelium
(4) Ciliated epithelium

Scan or tap for the full solution

Q.173 Which of the following is not an Intra Uterine Device? [NEET (UG) 2022 (Phase 2)]

(1) Progestasert (2) Progestogens
(3) Multiload 375 (4) Lippes loop

Scan or tap for the full solution

Q.174 Which of the following reasons is mainly responsible for graft rejection in transplantation of organs? [NEET (UG) 2022 (Phase 2)]

(1) Cell-mediated response
(2) Inability of recipient to differentiate between 'self' and 'non-self' tissues/cells
(3) Humoral immune response only
(4) Auto-immune response

Scan or tap for the full solution

Q.175 Given below are two statements: one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A): FSH which interacts with membrane bound receptors does not enter the target cell.

Reason (R): Binding of FSH to its receptors generates second messenger (cyclic AMP) for its biochemical and physiological responses.

In the light of the above statements, choose the most appropriate answer from the options given below [NEET (UG) 2022 (Phase 2)]

(1) (A) is not correct but (R) is correct
(2) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(3) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
(4) (A) is correct but (R) is not correct

Scan or tap for the full solution

Q.176 Choose the correct statement about a muscular tissue [NEET (UG) 2022 (Phase 2)]

(1) Smooth muscles are multinucleated and involuntary.
(2) Skeletal muscle fibres are uninucleated and found in parallel bundles.
(3) Intercalated discs allow the cardiac muscle cells to contract as a unit.
(4) The walls of blood vessels are made up of columnar epithelium.

Scan or tap for the full solution

Q.177 Identify the region of human brain which has pneumotaxic centre that alters respiratory rate by reducing the duration of inspiration. [NEET (UG) 2022 (Phase 2)]

(1) Cerebrum (2) Medulla
(3) Pons (4) Thalamus

Scan or tap for the full solution

Q.178 According to the sliding filament theory: [NEET (UG) 2022 (Phase 2)]

(1) The actin filaments slide away from A-band resulting in shortening of sarcomere.
(2) Actin and myosin filaments slide over each other to increase the length of the sarcomere.
(3) Length of A-band does not change
(4) I-band increases in length.

Scan or tap for the full solution

Q.179 Panspermia, an idea that is still a favourite for some astronomers, means: [NEET (UG) 2022 (Phase 2)]

(1) Transfer of spores as unit of life from other planets to Earth
(2) Creation of life from dead and decaying matter
(3) Creation of life from chemicals
(4) Origin of sperm in human testes

Scan or tap for the full solution

Q.180 Which of the following statements are correct with respect to vital capacity?
A. It includes ERV, TV and IRV
B. Total volume of air a person can inspire after a normal expiration.
C. The maximum volume of air a person can breathe in after forced expiration.
D. It includes ERV, RV and IRV.
E. The maximum volume of air a person can breathe out after a forced inspiration.
Choose the most appropriate answer from the options given below : [NEET (UG) 2022 (Phase 2)]
(1) A and E only (2) B, D and E only
(3) A, C and D only (4) A, C and E only

Scan or tap for the full solution

Q.181 How many secondary spermatocytes are required to form 400 million spermatozoa? [NEET (UG) 2022 (Phase 2)]
(1) 400 million (2) 50 million
(3) 100 million (4) 200 million

Scan or tap for the full solution

Q.182 Arrange the components of mammary gland. (from proximal to distal).
A. Mammary duct B. Lactiferous duct
C. Alveoli D. Mammary ampulla
E. Mammary tubules
Choose the most appropriate answer from the options given below : [NEET (UG) 2022 (Phase 2)]
(1) E ⟶ C ⟶ D ⟶ B ⟶ A
(2) C ⟶ A ⟶ D ⟶ E ⟶ B
(3) B ⟶ C ⟶ E ⟶ D ⟶ A
(4) C ⟶ E ⟶ A ⟶ D ⟶ B

Scan or tap for the full solution

Q.183 Match **List-I** with **List-II** regarding the organs of Cockroach:

	List - I		List - II
a.	Crop	i.	Grinding the food particles
b.	Proventriculus	ii.	Secretion of digestive juice
c.	Hepatic caecae	iii.	Removal of nitrogenous waste
d.	Malpighian tubules	iv.	Storage of food

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]
(1) (a) - (i), (b) - (iv), (c) - (iii), (d) - (ii)
(2) (a) - (iv), (b) - (i), (c) - (ii), (d) - (iii)
(3) (a) - (iii), (b) - (ii), (c) - (i), (d) - (iv)
(4) (a) - (ii), (b) - (iv), (c) - (i), (d) - (iii)

Scan or tap for the full solution

Q.184 Given below are two statements: one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.
Assertion (A): During pregnancy the level of thyroxine is increased in the maternal blood.
Reason (R): Pregnancy is characterised by metabolic changes in the mother.
In the light of the above statements, choose the most appropriate answer from the options given below: [NEET (UG) 2022 (Phase 2)]
(1) (A) is not correct but (R) is correct
(2) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(3) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
(4) (A) is correct but (R) is not correct

Scan or tap for the full solution

Q.185 Choose the correct statements:
Choose the most appropriate answer from the options given below:
A. Bones support and protect softer tissues and organs
B. Weight bearing function is served by limb bones
C. Ligament is the site of production of blood cells.
D. Adipose tissue is specialised to store fats.
E. Tendons attach one bone to another.
[NEET (UG) 2022 (Phase 2)]
(1) A, B and E only (2) A, B and D only
(3) B, C and E only (4) A, C and D only

Scan or tap for the full solution

Q.186 Select the incorrect statements with respect to Cyclostomes:
A. They lack scales and paired fins.
B. They have circular mouth with jaws.
C. They bear 6-15 pairs of gills.
D. They migrate to deep sea for spawning.
Choose the most appropriate answer from the options given below: [NEET (UG) 2022 (Phase 2)]

(1) A and D only (2) A and B only
(3) B and C only (4) B and D only

Scan or tap for the full solution

Q.187 A unique vascular connection between the digestive tract and liver is called_____.
[NEET (UG) 2022 (Phase 2)]
(1) Hepato-cystic system
(2) Hepato-pancreatic system
(3) Hepatic portal system
(4) Renal portal system

Scan or tap for the full solution

Q.188 Milk of transgenic 'Cow Rosie' was nutritionally more balanced product for human babies than natural cow milk because it contained:
[NEET (UG) 2022 (Phase 2)]
(1) Human enzyme Adenosine Deaminase (ADA)
(2) Human protein α-1-antitrypsin
(3) Human alpha-lactalbumin
(4) Human insulin-like growth factor

Scan or tap for the full solution

Q.189 Gout is a type of disorder which leads to:
[NEET (UG) 2022 (Phase 2)]
(1) Weakening of bones due to low calcium level
(2) Inflammation of joints due to accumulation of uric acid crystals
(3) Weakening of bones due to decreased bone mass
(4) Inflammation of joints due to cartilage degeneration

Scan or tap for the full solution

Q.190 Which of the following methods is not commonly used for introducing foreign DNA into the plant cell? [NEET (UG) 2022 (Phase 2)]
(1) Bacteriophages
(2) *Agrobacterium* mediated transformation
(3) Gene gun
(4) 'Disarmed pathogen' vectors

Scan or tap for the full solution

Q.191 Arrange the following formed elements in the decreasing order of their abundance in blood in humans:
A. Platelets B. Neutrophils
C. Erythrocytes D. Eosinophils
E. Monocytes
Choose the most appropriate answer from the options given below: [NEET (UG) 2022 (Phase 2)]
(1) A, C, B, D, E (2) C, A, B, E, D
(3) C, B, A, E, D (4) D, E, B, A, C

Scan or tap for the full solution

Q.192 IUDs are small objects made up of plastic or copper that are inserted in the uterine cavity. Which of the following statements are correct about IUDs ?
A. IUDs decrease phagocytosis of sperm within the uterus.
B. The released copper ions suppress the sperm motility.
C. IUDs do not make the cervix hostile to the sperm.
D. IUDs suppress the fertilization capacity of sperm.
E. The IUDs require surgical intervention for their insertion in the uterine cavity.
Choose the most appropriate answer from the options given below: [NEET (UG) 2022 (Phase 2)]
(1) D only (2) A, D and E only
(3) B and C only (4) B and D only

Scan or tap for the full solution

Q.193 Select the correct statement regarding mutation theory of evolution. [NEET (UG) 2022 (Phase 2)]
(1) Large differences due to mutations arise gradually in a population
(2) This theory was proposed by Alfred Wallace
(3) Variations are small directional changes
(4) Single step large mutation is a cause of speciation

Scan or tap for the full solution

Q.194 Excretion in cockroach is performed by all, EXCEPT: [NEET (UG) 2022 (Phase 2)]
(1) Hepatic caeca (2) Uricose glands
(3) Malpighian tubules (4) Fat body

Scan or tap for the full solution

Q.195 Select the correct statements.
Choose the most appropriate answer from the options given below :
A. Angiotensin II activates the cortex of adrenal gland to release aldosterone.
B. Aldosterone leads to increase in blood pressure.
C. ANF acts as a check on renin-angiotensin mechanism.
D. ADH causes vasodilation.
E. Vasopressin is released from adenohypophysis.
[NEET (UG) 2022 (Phase 2)]

(1) A, B and C only (2) A, B and E only
(3) C, D and E only (4) B, C and D only

Scan or tap for the full solution

Q.196 Refer to the following statements for agarose-gel electrophoresis:

A. Agarose is a natural polymer obtained from sea-weed.
B. The separation of DNA molecules in agarose-gel electrophoresis depends on the size of DNA.
C. The DNA migrates from negatively-charged electrode to the positively-charged electrode.
D. The DNA migrates from positively-charged electrode to the negatively-charged electrode.

Choose the most appropriate answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) B, C and D only (2) A and B only
(3) A, B and C only (4) A, B and D only

Scan or tap for the full solution

Q.197 Match **List-I** with **List-II** :

List-I		List-II	
a.	Multipolar neuron	i.	Somatic neural system
b.	Bipolar neuron	ii.	Cerebral cortex
c.	Myelinated nerve fibre	iii.	Retina of Eye
d.	Unmyelinated nerve fibre	iv.	Spinal nerves

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
(2) (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)
(3) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)
(4) (a)-(ii), (b)-(iii), (c)-(i), (d)-(iv)

Scan or tap for the full solution

Q.198 Match **List-I** with **List-II** :

List-I		List-II	
a.	Cellular barrier	i.	Interferons
b.	Cytokine barrier	ii.	Mucus
c.	Physical barrier	iii.	Neutrophils
d.	Physiological barrier	iv.	HCl in gastric juice

Choose the correct answer from the options given below : [NEET (UG) 2022 (Phase 2)]

(1) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)
(2) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
(3) (a)-(ii), (b)-(iii), (c)-(i), (d)-(iv)
(4) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)

Scan or tap for the full solution

Q.199 Role of enamel is to [NEET (UG) 2022 (Phase 2)]

(1) Give basic shape to the teeth
(2) Connect crown of tooth with its root
(3) Masticate the food
(4) Form bolus

Scan or tap for the full solution

Q.200 Choose the incorrect enzymatic reaction: [NEET (UG) 2022 (Phase 2)]

(1) Dipeptides $\xrightarrow{\text{Dipeptidases}}$ Amino acids
(2) Maltose $\xrightarrow{\text{Maltase}}$ Glucose + Fructose
(3) Sucrose $\xrightarrow{\text{Sucrase}}$ Glucose + Fructose
(4) Lactose $\xrightarrow{\text{Lactase}}$ Glucose + Galactose

Scan or tap for the full solution

ANSWER KEY

Ques.	1	2	3	4	5	6	7
Ans.	2	2	4	1	2	3	2
Ques.	8	9	10	11	12	13	14
Ans.	1	1	1	1	1	2	4
Ques.	15	16	17	18	19	20	21
Ans.	2	4	3	3	2	2	4
Ques.	22	23	24	25	26	27	28
Ans.	3	4	4	4	4	4	4
Ques.	29	30	31	32	33	34	35
Ans.	4	2	4	2	2	2	4
Ques.	36	37	38	39	40	41	42
Ans.	4	4	2	1	2	2	2
Ques.	43	44	45	46	47	48	49
Ans.	1	1	4	3	2	3	3
Ques.	50	51	52	53	54	55	56
Ans.	4	1	4	3	4	4	2
Ques.	57	58	59	60	61	62	63
Ans.	4	3	3	3	1	4	4
Ques.	64	65	66	67	68	69	70
Ans.	3	2	1	4	2	3	2
Ques.	71	72	73	74	75	76	77
Ans.	2	2	2	4	2	1	2
Ques.	78	79	80	81	82	83	84
Ans.	4	4	1	1	3	2	4
Ques.	85	86	87	88	89	90	91
Ans.	2	3	3	4	1	1	1
Ques.	92	93	94	95	96	97	98
Ans.	4	3	3	3	4	1	4

Ques.	99	100	101	102	103	104	105
Ans.	**1**	**2**	**1**	**4**	**1**	**2**	**2**
Ques.	106	107	108	109	110	111	112
Ans.	**3**	**3**	**1**	**4**	**3**	**4**	**3**
Ques.	113	114	115	116	117	118	119
Ans.	**3**	**4**	**3**	**2**	**4**	**2**	**1**
Ques.	120	121	122	123	124	125	126
Ans.	**4**	**2**	**2**	**1**	**3**	**3**	**3**
Ques.	127	128	129	130	131	132	133
Ans.	**3**	**3**	**2**	**3**	**4**	**4**	**3**
Ques.	134	135	136	137	138	139	140
Ans.	**4**	**4**	**1**	**3**	**2**	**4**	**3**
Ques.	141	142	143	144	145	146	147
Ans.	**4**	**3**	**3**	**2**	**3**	**4**	**3**
Ques.	148	149	150	151	152	153	154
Ans.	**3**	**1**	**4**	**3**	**4**	**4**	**4**
Ques.	155	156	157	158	159	160	161
Ans.	**1**	**4**	**3**	**3**	**3**	**1**	**3**
Ques.	162	163	164	165	166	167	168
Ans.	**4**	**4**	**3**	**3**	**4**	**2**	**1**
Ques.	169	170	171	172	173	174	175
Ans.	**3**	**2**	**4**	**4**	**2**	**1**	**3**
Ques.	176	177	178	179	180	181	182
Ans.	**3**	**3**	**3**	**1**	**4**	**4**	**4**
Ques.	183	184	185	186	187	188	189
Ans.	**2**	**2**	**2**	**4**	**3**	**3**	**2**
Ques.	190	191	192	193	194	195	196
Ans.	**1**	**2**	**4**	**4**	**1**	**1**	**3**
Ques.	197	198	199	200			
Ans.	**1**	**1**	**3**	**2**			