

NEW STANDARD ACADEMY

Marks: 720

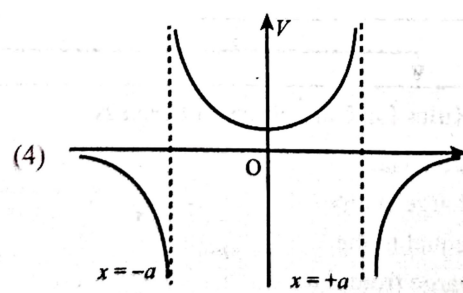
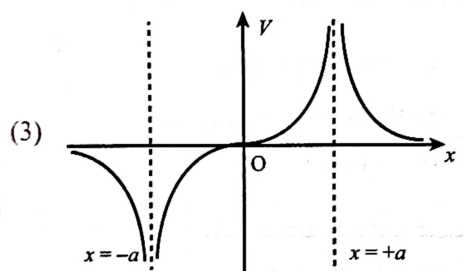
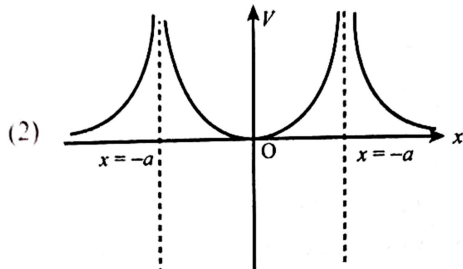
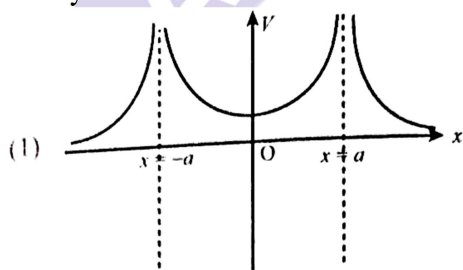
Date : 30-06-2026

CLASS : 12TH NEET

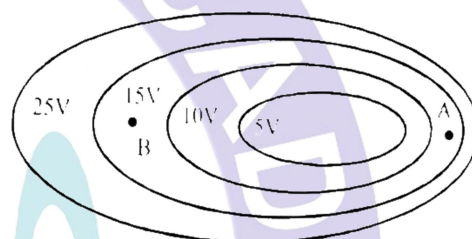
Time: 3 hours

PHYSICS

- 12 J of work has to be done against an existing electric field to take a charge of 0.01 C from A to B. How much is the potential difference $V_B - V_A$?
 (1) 120 V (2) 12 mV
 (3) 1250 V (4) 1200 V
- Two identical positive point charges q are placed on the x -axis at $x = -a$ and $x = +a$. The variation of V along the x -axis is given by



- A particle of charge Q and mass m travels through a potential difference V from rest. The final momentum of the particle is:
 (1) $\frac{mV}{Q}$ (2) $2Q\sqrt{mV}$
 (3) $\sqrt{2mQV}$ (4) $\sqrt{\frac{2QV}{m}}$
- The figure shows several equipotential lines. Comparing between points A and B, pick up the best possible statement.



- (1) the electric field has a greater magnitude at point A and is directed to left.
 (2) the electric field has a greater magnitude at point A and is directed to right.
 (3) the electric field has a greater magnitude at point B and is directed to left.
 (4) the electric field has a greater magnitude at point B and is directed to right.
- The radius of a soap bubble whose potential is 16 V is doubled. Then, new potential of the bubble is
 (1) 2 V (2) 4 V
 (3) 8 V (4) 16 V
- Two conducting spheres of radii 4 m and 5 m are charged to the same potential. If σ_1 and σ_2 are the respective values of the surface charge densities the two conductors, then the ratio σ_1/σ_2 is
 (1) 5/4 (2) 4/5
 (3) 25/16 (4) 16/25

7. If 'n' identical water drops assumed spherical each charged to a potential energy U coalesce to a single drop, the potential energy of the single drop is (Assume that drops are uniformly charged)

(1) $n^{1/3} U$ (2) $n^{2/3} U$
(3) $n^{4/3} U$ (4) $n^{5/3} U$

8. A positive point charge Q is brought near a neutral metal cube.

(1) The cube becomes negatively charged
(2) The cube becomes positively charged
(3) The interior becomes positively charged and the surface becomes negatively charged.
(4) The interior remains neutral and the surface gets non-uniform charge distribution.

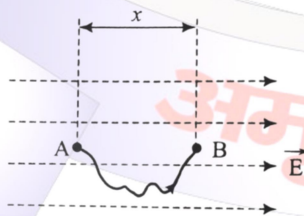
9. An equipotential surface is that surface -
(1) on which each and every point has the same potential

(2) which has negative potential
(3) which has positive potential
(4) which has zero potential

10. Two points P and Q are maintained at the potentials 10 V and -4 V respectively. Then workdone in moving electrons from P to Q is (charge on electron = 1.6×10^{-19} C)

(1) -19×10^{-17} J (2) 2.24×10^{-16} J
(3) -2.24×10^{-16} J (4) 9.6×10^{-17} J

11. A uniform electric field vector $\vec{E}$ exists along horizontal direction as shown. The electric potential at A is V small point charge q is slowly taken from A to B along the curved path as shown. The potential energy of the charge when it is at point B is

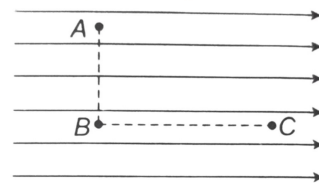


(1) $q[E_x - V_A]$ (2) qE_x
(3) $q[V_A - E_x]$ (4) $q[V_A + E_x]$

12. Point charge $q_1 = 2\mu\text{C}$ and $q_2 = -1\mu\text{C}$ are kept at points $x = 0$ and $x = 6$ respectively. Electrical potential will be X zero at points

(1) $x = 2$ and $x = 9$ (2) $x = 1$ and $x = 5$
(3) $x = 4$ and $x = 12$ (4) $x = -2$ and $x = 2$

13. Figure shows three points A, B and C in a region of uniform electric field $\vec{E}$. The line AB is perpendicular and BC is parallel to the field lines. Then which of the following holds good. Where V_A , V_B and V_C represent the electric potential at points A, B and C respectively



(1) $V_A = V_B = V_C$ (2) $V_A = V_B > V_C$
(3) $V_A = V_B < V_C$ (4) $V_A > V_B = V_C$

14. When one electron is taken towards the other electron, then the electric potential energy of the system

(1) Decreases (2) Increases
(3) Remains unchanged (4) Becomes zero

15. Two point charges $q_1, \sqrt{10} \mu\text{C}$ and $q_2(-25 \mu\text{C})$ are placed on the x-axis at $x = 1$ m and $x = 4$ m respectively. The electric field (in V/m) at a point $y = 3$ m on y-axis is,

$$\left[\text{take } \frac{1}{4\pi\epsilon_0} = 9 \times 10^9 \text{ Nm}^2 \text{C}^{-2} \right]$$

(1) $(-63\hat{i} + 27\hat{j}) \times 10^2$ (2) $(81\hat{i} - 81\hat{j}) \times 10^2$

(3) $(63\hat{i} - 27\hat{j}) \times 10^2$ (4) $(-81\hat{i} + 81\hat{j}) \times 10^2$

16. For a uniformly charged ring of radius R, the electric field on its axis has the largest magnitude at a distance h from its centre. Then value of h is

(1) $\frac{R}{\sqrt{5}}$ (2) R
(3) $\frac{R}{\sqrt{2}}$ (4) $\sqrt{2}R$

17. Four equal point charges Q each are placed in the xy plane at (0, 2), (4, 2), (4, -2) and (0, -2). The work required to put a fifth charge Q at the origin of the coordinate system will be:

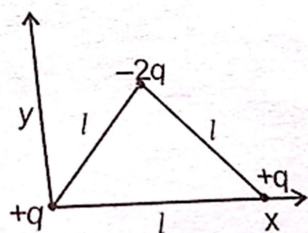
(1) $\frac{Q^2}{2\sqrt{2}\pi\epsilon_0}$ (2) $\frac{Q^2}{4\pi\epsilon_0} \left(1 + \frac{1}{\sqrt{5}}\right)$
(3) $\frac{Q^2}{4\pi\epsilon_0} \left(1 + \frac{1}{\sqrt{3}}\right)$ (4) $\frac{Q^2}{4\pi\epsilon_0}$

18. An electric field of 1000 V/m is applied to an electric dipole at angle of 45° . The

value of electric dipole moment is 10^{-29} C.m. What is the potential energy of the electric dipole ?

- (1) $-9 \times 10^{-20} \text{ J}$ (2) $-7 \times 10^{-27} \text{ J}$
(3) $-10 \times 10^{-29} \text{ J}$ (4) $-20 \times 10^{-18} \text{ J}$

19. Determine the electric dipole moment of the system of three charges, placed on the vertices of an equilateral triangle, as shown in the figure:



- (1) $(ql) \frac{i+j}{\sqrt{2}}$ (2) $\sqrt{3}ql \frac{i-j}{\sqrt{2}}$
(3) $\sqrt{3}ql \hat{j}$ (4) $2ql \hat{j}$

20. An electric dipole is formed by two equal and opposite charges q with separation d . The charges have same mass m . It is kept in a uniform electric field E . If it is slightly rotated from its equilibrium orientation, then its angular frequency ω is :-

- (1) $\sqrt{\frac{qE}{2md}}$ (2) $2\sqrt{\frac{qE}{md}}$
(3) $\sqrt{\frac{2qE}{md}}$ (4) $\sqrt{\frac{qE}{md}}$

21. The bob of a simple pendulum has mass 2g and a charge of $5.0 \mu\text{C}$. It is at rest in a uniform horizontal electric field of intensity 2000 V/m . At equilibrium, the angle that the pendulum makes with the vertical is : (take $g = 10 \text{ m/s}^2$)

- (1) $\tan^{-1}(5.0)$ (2) $\tan^{-1}(2.0)$
(3) $\tan^{-1}(0.5)$ (4) $\tan^{-1}(0.2)$

22. Four point charges $-q$, $+q$, $+q$ and $-q$ are placed on y -axis at $y = -2d$, $y = -d$, $y = +d$ and $y = +2d$, respectively. The magnitude of the electric field E at a point on the x -axis at $x = D$, With $D \gg d$, will behave as:-

- (1) $E \propto \frac{1}{D}$ (2) $E \propto \frac{1}{D^3}$
(3) $E \propto \frac{1}{D^2}$ (4) $E \propto \frac{1}{D^4}$

23. In free space, a particle A of charge $1 \mu\text{C}$ is held fixed at a point P. Another particle B of the same charge and mass $4 \mu\text{g}$ is kept at a distance of 1 mm from P. if B is released, then its velocity at a distance of 9 mm from P is :

$$\left[\text{Take } \frac{1}{4\pi\epsilon_0} = 9 \times 10^9 \text{ Nm}^2\text{C}^{-2} \right]$$

- (1) $2.0 \times 10^3 \text{ m/s}$ (2) $3.0 \times 10^4 \text{ m/s}$
(3) $1.5 \times 10^2 \text{ m/s}$ (4) 1.0 m/s

24. The surface of a conductor

- (1) is a non-equipotential surface
(2) has all the points at the same potential
(3) has different points at different potential
(4) has at least two points at the same potential

25. A point dipole $\vec{p} = -p_0 \hat{x}$ is kept at the origin . The potential and electric field due to this dipole on the y -axis at a distance d are, respectively: (Take $V = 0$ at infinity) :

- (1) $\frac{|p|}{4\pi\epsilon_0 d^2}, \frac{-\vec{p}}{4\pi\epsilon_0 d^3}$ (2) $0, \frac{\vec{p}}{4\pi\epsilon_0 d^3}$
(3) $\frac{|p|}{4\pi\epsilon_0 d^2}, \frac{\vec{p}}{4\pi\epsilon_0 d^3}$ (4) $0, \frac{-\vec{p}}{4\pi\epsilon_0 d^3}$

26. The force is given in terms of time t and displacement x by the equation

$$F = A \cos Bx + C \sin Dt \text{ The dimensional formula of } \frac{AD}{B} \text{ is}$$

- (1) $[M^0 L T^{-1}]$ (2) $[M L^2 T^{-3}]$
(3) $[M^1 L^1 T^{-2}]$ (4) $[M^2 L^2 T^{-3}]$

27. Which of the following is not a dimensionless quantity ?

- (1) Relative magnetic permeability (μ_r)
(1) Power factor
(2) Permeability of free space (μ_0)
(3) Quality factor

28. Match List-I with List-II.

List-I **List-II**

- (a) R_H (Rydberg constant) (i) $\text{kg m}^{-1} \text{s}^{-1}$
(b) h (Planck's constant) (ii) $\text{kg m}^2 \text{s}^{-1}$
(c) μ_B (Magnetic field energy density) (iii) m^{-1}
(d) η (coefficient of viscosity) (iv) $\text{kg m}^{-1} \text{s}^{-2}$

Choose the most appropriate answer from the options given below :

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

29. Match List-I with List-II :

List-I

- (a) h (Planck's constant)
 (b) E (kinetic energy)
 (c) V (electric potential)
 (d) P (linear momentum)

List-II

- (i) $[M L T^{-1}]$
 (ii) $[M L^2 T^{-1}]$
 (iii) $[M L^2 T^{-2}]$
 (iv) $[M L^2 T^{-1}]$

Choose the correct answer from the options given below :

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

30. If e is the electronic charge, c is the speed of light in free space and h is Planck's constant,

the quantity $\frac{1}{4\pi\epsilon_0} \frac{|e|^2}{hc}$ has dimensions of :

- (1) $[M^0 L^0 T^0]$ (2) $[L C^{-1}]$
 (3) $[M L T^{-1}]$ (4) $[M L T^0]$

31. In a typical combustion engine the work done by a gas molecule is given $W = \alpha \beta^2 e^{-\frac{x^2}{\alpha k T}}$

where x is the displacement, k is the Boltzmann constant and T is the temperature. If α and β are constants, dimensions of α will be :

- (1) $[MLT^{-2}]$ (2) $[M^0LT^0]$
 (3) $[M^2LT^{-2}]$ (4) $[MLT^{-1}]$

32. If 'C' and 'V' represent capacity and voltage respectively then what are the dimensions of λ , where $\frac{C}{V} = \lambda$?

- (1) $[M^{-2}L^{-3}I^2T^6]$ (2) $[M^{-3}L^{-4}I^3T^7]$
 (3) $[M^{-1}L^{-3}I^{-2}T^{-7}]$ (4) $[M^{-2}L^{-4}I^3T^7]$

33. If time (t), velocity (v), and angular momentum (l) are taken as the fundamental units. Then the dimension of mass (m) in terms of t , v and l is :

- (1) $[t^{-1} v^1 l^2]$ (2) $[t^1 v^2 l^{-1}]$
 (3) $[t^2 v^{-1} l^1]$ (4) $[t^{-1} v^{-2} l^1]$

34. If E , L , M and G denote the quantities as energy, angular momentum, mass and constant of gravitation respectively, then the dimensions of P in the formula $P = EL^2M^{-5}G^{-2}$ are :-

- (1) $[M^0 L^1 T^0]$ (2) $[M^{-1} L^{-1} T^2]$
 (3) $[M^1 L^1 T^{-2}]$ (4) $[M^0 L^0 T^0]$

35. Match List-I with List-II.

List-I		List-II	
(a)	Magnetic Induction	(i)	$ML^2T^{-2}A^{-1}$
(b)	Magnetic Flux	(ii)	$M^0L^{-1}A$
(c)	Magnetic Permeability	(iii)	$MT^{-2}A^{-1}$
(d)	Magnetization	(iv)	$MLT^{-2}A^{-2}$

Choose the most appropriate answer from the options given below :

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

36. The electron potential (V) as a function of distance (x) [in meters] is given by $V = (5x^2 + 10x - 9)$ volt.

The value of electric field at $x = 1$ m would be

- (1) -20 volt/m (2) 6 volt/m
 (3) 11 volt/m (4) -23 volt/m

37. If E and H represents the intensity of electric field and magnetising field respectively, then the unit of E/H will be :

- (1) ohm (2) mho
 (3) joule (4) newton

38. If force (F), length (L) and time (T) are taken as the fundamental quantities. Then what will be the dimension of density :

- (1) $[FL^{-4}T^2]$ (2) $[FL^{-3}T^2]$
 (3) $[FL^{-5}T^2]$ (4) $[FL^{-3}T^3]$

39. Match List-I with List-II.

List-I

- (a) Torque
 (b) Impulse
 (c) Tension
 (d) Surface Tension

List-II

- (i) MLT^{-1}
 (ii) MT^{-2}
 (iii) ML^2T^{-2}
 (iv) MLT^{-2}

Choose the **most appropriate** answer from the option given below :

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

40. Which of the following equations is dimensionally incorrect ?

Where t = time, h = height, s = surface tension, θ = angle, ρ = density, a , r = radius, g = acceleration due to gravity, v = volume, p = pressure, W = work done, T = torque, ϵ = permittivity, E = electric field, J = current density, L = length.

- (1) $v = \frac{\pi \rho a^2}{8\eta L}$ (2) $h = \frac{2s \cos \theta}{\rho r g}$
 (3) $J = \epsilon \frac{\partial E}{\partial t}$ (4) $W = T\theta$

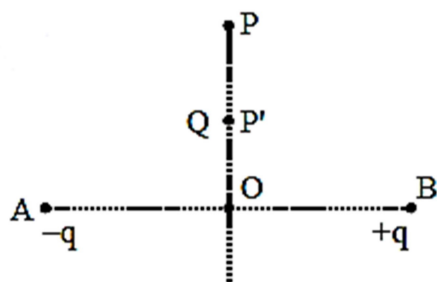
41. If velocity [V], time [T] and force [F] are chosen as the base quantities, the dimensions of the mass will be :

- (1) $[FT^{-1} V^{-1}]$ (2) $[FTV^{-1}]$
(2) $[FT^2 V]$ (4) $[FVT^{-1}]$

42. Three charges $+Q$, q , $+Q$ are placed respectively, at distance, 0, $d/2$ and d from the origin, on the x-axis. If the net force experienced by $+Q$, placed at $x = 0$, is zero, then value of q is :

- (1) $+Q/2$ (2) $-Q/2$
(3) $-Q/4$ (4) $+Q/4$

43. Charges $-q$ and $+q$ located at A and B, respectively, constitute an electric dipole. Distance $AB = 2a$, O is the mid point of the dipole and OP is perpendicular to AB. A charge Q is placed at P where $OP = y$ and $y \gg 2a$. The charge Q experiences an electrostatic force F . If Q is now moved along the equatorial line to P' such that $OP' = (\frac{y}{3})$, the force on Q will be close to : $(\frac{y}{3} \gg 2a)$



- (1) $\frac{F}{3}$ (2) $3F$
(3) $9F$ (4) $27F$

44. A charge Q is distributed over three concentric spherical shells of radii a, b, c ($a < b < c$) such that their surface charge densities are equal to one another. The total potential at a point at distance r from their common centre, where $r < a$, would be :

- (1) $\frac{Q}{4\pi\epsilon_0(a+b+c)}$ (2) $\frac{Q(a+b+c)}{4\pi\epsilon_0(a+b+c)}$
(3) $\frac{Q}{12\pi\epsilon_0} \frac{ab+bc+ca}{abc}$ (4) $\frac{Q(a^2+b^2+c^2)}{4\pi\epsilon_0(a^3+b^3+c^3)}$

45. The electric field in a region is given by $\vec{E} = (Ax + B)\hat{i}$, where E is in NC^{-1} and x is in metres. The values of constants are $A = 20$ SI unit and $B = 10$ SI unit. If the potential at $x = 1$ is V_1 and that at $x = -5$ is V_2 , then $V_1 - V_2$ is

- (1) $-48 V$ (2) $-520 V$
(3) $180 V$ (4) $320 V$

CHEMISTRY

46. Most powerful respectively are: oxidising and reducing agent

- (1) Cl_2 (2) I^-
(3) I_2 (4) Cl^-

47. Molar conductivity (Λ_m) of an electrolytic solution is

- (1) $\propto l$ (2) $\propto (1/A)$
(2) $\propto (1/C)$ (4) $\propto \sqrt{C}$

48. The ion having highest conductance in aqueous solution is

- (1) Li^+ (2) Na^+
(3) K^+ (4) Cs^+

49. H^+ ions are reduced at platinum electrode before the reduction of :

- (1) Zn^{2+} (2) Cu^{2+}
(3) Ag^+ (4) None of these

50. The electrode potential becomes equal to standard electrode potential when reactants and products molar ratio is:

- (1) equal to 1 (2) greater than 1
(3) less than 1 (4) none of these

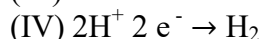
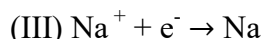
51. A standard hydrogen electrode has zero electrode potential because :

- (a) hydrogen is easiest to oxidise
(b) its electrode potential is assumed to be zero
(c) hydrogen atom has only one electron
(d) hydrogen is the lightest element

52. Which of the following metal does not displace H_2 from acids ?

- (1) Fe (2) Zn
(3) Cu (4) Mg

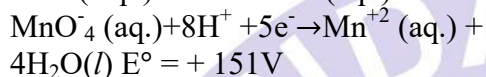
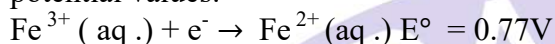
53. Which of the following will displace Br_2 from aqueous salt solution of Br^- ?
- (1) Cl^- (2) Cl_2
(3) I_2 (4) I_3^-
54. Standard reduction electrode potentials of three metals A, B and C are +0.5 V, -3.0 V, and -1.2 V respectively. The reducing power of these metals are:
- (1) $B > C > A$ (2) $A > B > C$
(3) $C > B > A$ (4) $A > C > B$
55. Which of the following metal is easily oxidised?
- (1) Cu (2) Al
(3) Ag (4) Pt
56. Which metal container may be used to keep H_2SO_4 in it?
- (1) Zn (2) Cu
(3) Fe (4) Ni
57. Which of the following oxide will be reduced by hydrogen?
- (1) Na_2O (2) MgO
(3) Al_2O_3 (4) Ag_2O
58. The standard reduction potentials of four alkali metals A, B, C and D are -3.06, -1.63, -0.40 and -0.80 V respectively. Among them strongest reducing agent is:
- (1) A (2) B
(3) C (4) D
59. Correct representation of following cell $\text{Zn} + 2\text{Ag}^+ \rightarrow \text{Zn}^{2+} + 2\text{Ag}$ is:
- (1) $\text{Ag}|\text{Ag}^+||\text{Zn}|\text{Zn}^{2+}$
(2) $\text{Zn}|\text{Zn}^{2+}||\text{Ag}^+|\text{Ag}$
(3) $2\text{Ag}|\text{Ag}^+||\text{Zn}|\text{Zn}^{2+}$
(4) $\text{Zn}|\text{Zn}^{2+}||2\text{Ag}|\text{Ag}^+$
60. The most durable metal plating to safeguard iron from corrosion will be:
- (1) Copper plating (2) Tin plating
(3) Zinc plating (4) Nickel plating
61. Which metal can not decolourise the blue colour of copper sulphate solution?
- (1) Mg (2) Fe
(3) Ag (4) Ca
62. Faraday's required to obtain 32g O_2 by electrolysis:
- (1) 1 (2) 2
(3) 3 (4) 4
63. Which reaction is not possible?
- (1) $2\text{KCl} + \text{Br}_2 \rightarrow 2\text{KBr} + \text{Cl}_2$
(2) $\text{Fe} + 2\text{HCl} \rightarrow \text{FeCl}_2 + \text{H}_2$
(3) $\text{Cu}^{2+} + \text{Zn} \rightarrow \text{Zn}^{2+} + \text{Cu}$
(4) $\text{F}_2 + 2\text{Cl}^- \rightarrow 2\text{F}^- + \text{Cl}_2$
64. Which reaction is possible?
- (1) $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$
(2) $\text{Na}_2\text{O} + \text{H}_2 \rightarrow 2\text{Na} + \text{H}_2\text{O}$
(3) $2\text{KBr} + \text{I}_2 \rightarrow 2\text{KI} + \text{Br}_2$
(4) $\text{Cu} + 2\text{Fe}^{2+} \rightarrow \text{Cu}^{2+} + 2\text{Fe}$
65. Which is used in fuel cell?
- (1) N_2 and O_2 (2) He and O_2
(3) H_2 and O_2 (4) C_2H_6 and O_2
66. Zinc is coated over iron to prevent rusting of iron because:
- (1) $E_{\text{Zn}^{2+}/\text{Zn}}^\ominus = E_{\text{Fe}^{2+}/\text{Fe}}^\ominus$
(2) $E_{\text{Zn}^{2+}/\text{Zn}}^\ominus < E_{\text{Fe}^{2+}/\text{Fe}}^\ominus$
(3) $E_{\text{Zn}^{2+}/\text{Zn}}^\ominus > E_{\text{Fe}^{2+}/\text{Fe}}^\ominus$
(4) None of these
67. Kohlrausch gave the following relation for strong electrolytes:
- $$\Lambda = \Lambda_0 - A\sqrt{C}$$
- Which of the following equality holds?
- (1) $\Lambda = \Lambda_0$ as $C \rightarrow \sqrt{A}$
(2) $\Lambda = \Lambda_0$ as $C \rightarrow \infty$
(3) $\Lambda = \Lambda_0$ as $C \rightarrow 0$
(4) $\Lambda = \Lambda_0$ as $C \rightarrow 1$
68. In an electrochemical process, a salt bridge is used:
- (1) as a reducing agent
(2) as an oxidizing agent
(3) to complete the circuit so that current can flow
(4) none of these
69. Which of the following cell is used in hearing aids?
- (1) Mercury cell (2) Dry cell
(3) Fuel cell (4) Zn-Cd cell
70. Which of the following solution of KCl will have highest specific conductance?
- (1) 0.5 M (2) 0.01 M
(3) 0.1 M (4) 1.0 M
71. Which will have highest conductance?
- (1) Ag at 30°C (2) Ag at 60°C
(3) Cu at 30°C (4) Cu at 60°C
72. When does electrochemical cell (Daniel cell) behaves like electrolytic cell if:
- (1) $\text{External} > E_{\text{cell}}^\ominus$ (2) $\text{External} < E_{\text{cell}}^\ominus$
(3) $\text{External} = E_{\text{cell}}^\ominus$ (4) None of these
73. The product formed at cathode in electrolysis of aq
- (1) H_2 (2) O_2
(3) Cl_2 (4) All of these
74. Four half reactions I to IV shown below:
- (I) $2\text{Cl}^- \rightarrow \text{Cl}_2 + 2\text{e}^-$
(II) $4\text{OH}^- \rightarrow \text{O}_2 + 2\text{H}_2\text{O} + 2\text{e}^-$



Which two of these reactions are most likely occur when concentrated brine is electrolysed?

- (a) (I) and (III) (b) (I) and (IV)
(c) (II) and (III) (d) (II) and (IV)

75. Consider the following standard electrode potential values:



What is the cell potential for the redox reaction?

- (a) -2.28 V (b) -0.74 V
(c) + 0.74 V (d) + 2.28 V

76. Corrosion of iron is the process:

- (a) decomposition (b) photochemical
(c) electrochemical (d) reduction

77. Incorrect statement is:

- (a) F_2 can displace $\text{Cl}_2, \text{Br}_2, \text{I}_2$ from their aqueous salt solutions.
(b) Cl_2 can displace Br_2 from KBr and I_2 from KI .
(c) Br_2 can displace I_2 from KI .
(d) I_2 can displace Br_2 and Cl_2 from their salt solutions

78. Which of the following solutions will have the highest value of molar conductivity?

- (a) 0.01 M (b) 1 M
(c) 0.5 M (d) 0.1 M

79. Faraday required to produce one mole of Zn from ZnSO_4 solution:

- (a) 1 F (b) 2 F
(c) 3 F (d) 4 F

80. Which is reversible cell?

- (a) Daniel cell (b) Mercury cell
(c) Lead storage battery
(d) Dry cell

81. The highest electrical conductivity of the following aqueous solution is of:

- (a) 0.1 M acetic acid
(b) 0.1 M chloroacetic acid
(c) 0.1 M fluoroacetic acid
(d) 0.1 M difluoroacetic acid

82. Formula of rust is:

- (a) Fe_2O_3 (b) FeO
(c) Fe_3O_4 (d) $\text{Fe}_2\text{O}_3 \cdot \text{H}_2\text{O}$

Note: The questions given below consists of an "Assertion" (A) and the "Reason" (R). Use the following key to choose the appropriate answer.

(a) If both assertion (A) and reason (R) are True and reason (R) is the True explanation of the assertion (A).

(b) If both assertion (A) and reason (R) are True, but reason (R) is not the True explanation of assertion (A).

(c) If assertion (A) is True, but reason (R) is False.

(d) If both assertion (A) and reason (R) are False.

(e) If assertion (A) is False, but reason (R) is True

83. **Assertion (A):** Copper gets readily corroded in acidic aqueous solution.

Reason (R): Free energy for this process is positive.

84. **Assertion (A):** Galvanised iron does not rust.

Reason (R): Zinc has a more negative electrode potential than iron.

85. **Assertion (A):** In the electrolysis of aqueous NaCl , Na is preferentially discharged at the mercury cathode forming sodium amalgam.

Reason (R): It is due to the fact that hydrogen has high overvoltage at mercury cathode.

86. **Assertion (A):** The cell potential of mercury cell is 1.35 V which remains constant.

Reason (R): In mercury cell, the electrolyte is a paste of KOH and HgO .

87. **Assertion (A):** On dilution, the equivalent as well as molar conductivity of the solution increases.

Reason (R): With dilution, the number of current carrying particles per cm^3 increases.

88. **Assertion (A):** As a lead storage battery gets discharged, density of the electrolyte present in it decreases.

Reason (R): Lead and lead dioxide both react with sulphuric acid to form lead sulphate.

89. **Assertion (A):** If a solution contains both H^+ and Na^+ ions, the H^+ ions are reduced first at cathode.

Reason (R): Cations with higher E° values are reduced first at cathode.

90. **Assertion (A):** In electrochemical cells, chemical energy is converted into electrical energy.

Reason (R) : An increase in free energy is responsible for flow of current.

BIOLOGY

91. Read the following statements:

How many statements is/are incorrect about sponges:

- A. Sponges are hermaphrodite
- B. Fertilization is external and development is indirect
- C. Larval stage is morphologically distinct from the adult
- D. Spongocoel and canal are lined by collar cell

- (1) Two (2) One
(3) Three (4) Four

92. The space between hump and mantle called mantle cavity in which.....A..... are present:

- (1) A-foot (2) A-feather like gills
(3) A-Radula (4) A-Eyes

93. Given below are two statements:

Statement I

In Echinodermata water vascular system present which help in locomotion, capture and transport of food and respiration.

Statement II:

In Scoliodon notochord is persistent through out life.

Choose the correct answer from the options given. below

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

94. Read the following statement and choose correct option:

- (i) Cyclostomes are marine but migrate for spawning to fresh water.

(ii) Cyclostomes have 6-15 pairs of gill slits for respiration.

(iii) In aves oil gland present at the base of tail

(iv) In aves hind limbs are modified into wings.

- (1) Only (i), (ii) are correct
(2) Only (ii), (iii), (iv) are correct
(3) Only (i), (ii), (iii) are correct
(4) (i), (ii), (iii), (iv) are correct

95. Which one of the following matching are correct:

- | | |
|---------------|-------------|
| (1) Polyp | Jelly fish |
| (2) Gorgonia | Sea pen |
| (3) Pennatula | Sea fan |
| (4) Meandrina | Brain coral |

96. In coelenterata cnidoblasts are used for:

- (1) Anchorage
(2) Defense
(3) Capture of prey
(4) All of the above

97. Match the following columns:

- | Column-1 | Column-II |
|-------------|-----------------|
| a. Ascaris | i. King crab |
| b. Gorgonia | ii. Sea lily |
| c. Limulus | iii. Round worm |
| d. Antedon | iv. Sea fan |

- (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-iii, b-iv, c-i, d-ii

98. Worm like, proboscis, collar and trunk with complete digestive system is:

- (1) Saccoglossus (2) Hemichordata
(3) Balanoglossus (4) All of the above

99. Which of the following animal is without operculum and bladder but with placoid scale, is/are:

- (1) Dog fish (2) Torpedo
(3) Trygon (4) All of the above

100. Match the following columns:

- | Column-I | Column-II |
|----------|-----------|
|----------|-----------|

- a. Pristis i. Electric organ
b. Trygon ii. Flying fish
c. Carcharodon iii. Saw fish
d. Torpedo iv. Great white shark
e. Exocoetus v. sting ray

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

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

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

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

101. Which one of the following worm is known worm:

- (1) Ascaris (2) Wuchereria
(3) Ancylostoma (4) Hirudinaria

102. Which is a correct matching set:

- | Column I | Column II |
|---------------|-----------------------------|
| a. Metamerism | i. Canal system constituent |
| b. Spongocoel | ii. Leech |
| c. Acoelomate | iii. Apis |
| d. Honey bee | iv. Platyhelminthes |

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

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

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

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

103. Read the following statement and choose correct option:

- (i) Body of Pleurobranchia bears eight external row of ciliated comb plates
(ii) Bioluminescence is well marked in ctenophores
(iii) Neries posses leteral appendages parapodia which help in swimming.
(iv) Feather like gills are present in sponges which help in respiration and excreation.

(1) Only (i), (ii) are correct

(2) Only (i), (ii), (iii) are correct

(3) Only (ii), (iii), (iv) are correct

(4) (i), (ii), (iii), (iv) are correct

104. Which is the correct matching set:

- | Column-1 | Column - II |
|------------------|----------------|
| (a) Compound eye | (i) Arthropoda |
| (b) Stomochord | (ii) Mollusca |

(c) Gills (iii) Saccoglossus

(d) Mantle cavity (iv) Pisces

(1) a-ii, b-ii, civ, d-i

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

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

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

105. How many animals among following have jointed appendages:

Bombyx, Apis, Limulus, Sepia, Octopus, Earthworm

(1) 3 (2) 4

(3) 5 (4) 6

106. Presence of cycloid and ctenoid scales is a characteristic of:

- (1) Chondrichthyes
(2) Osteichthyes
(3) Amphibia
(4) All

107. In which class of vertebrata heart is usually three chambered, but in some animals it is four chambered:

- (1) Aves (2) Mammalia
(3) Amphibia (4) Reptilia

108. Single opening for mouth and anus is found in:

- (1) Porifera (2) Platyhelminthes
(3) Annelida (4) Aschelminthes

109. The circulatory system in which the cells and tissues are directly bathed with blood is:

- (1) Closed type (2) Open type
(3) Complete type (4) Both 1 and 3

110. Given below are two statements:

Statement I:

Platyhelminthes are hermaphrodite and fertilisation is internal occur.

Statement II:

Sponges are exclusively marine and mostly are asymetrical.

Choose the correct answer from the options given below

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

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

111. Alimentary canal is complete with well develop muscular pharynx in:

- (1) Round worm (2) Liver Fluke
 (3) Tapeworm (4) 2 and 3

112. Notochord is derived from:

- (1) Ectoderm (2) Mesoderm
 (3) Endoderm (4) Both 1 and 3

113. Choanocytes or collar cells are the characteristic feature of:

- (1) Porifera (2) Coelenterata
 (3) Platyhelminthes (4) Aschelminthes

114. Funaria plant body is attached to the substratum by

- (1) Rhizoids (2) Stripe
 (3) Holdfast (4) Root

115. Sporophyte in bryophyte nourish by

- (1) Rhizoids (2) Root
 (3) Gametophytes (4) Spores

116. Bryophytes include

- a. Mosses**
b. Horsetail
c. Liverworts
d. Ferns

- (1) a.b (2) a, c
 (3) a.d (4) b,d

117. Volvox, Ulothrix, Spirogyra, Chara, Dictyota, Ectocarpus, Laminaria, Sargassum, Porphyra and Polysiphonia, etc., are the examples of green. plants.

Number of organism which having chlorophyll a and chlorophyll c are

- (1) Three (2) Four
 (3) Seven (4) Five

118. In liverworts asexual reproduction takes place by the formation of specialized structures called

- (1) Gemmae (2) Sporangia
 (3) Zoospores (4) Both 1 and 2

119. Match the following

- | | |
|----------------|-----------------|
| a. Lycopsida | i) Dryopteris |
| b. Pteropsida | ii) Selaginella |
| c. Sphenopsida | iii) Psilotum |
| d. Psilopsida | iv) Equisetum |

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

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

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

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

120. In Gymnosperms leaves are

- (1) Simple (2) Compound
 (3) Needle like (4) All of these

121. In cycas

- (1) Male cones and megasporophylls are borne on same trees
 (2) Male cones and megasporophylls are borne on different trees
 (3) May be on same or different trees
 (4) Both 1 and 2

122. In Angiosperms when pollen tube enters the embryo sac how many male gametes take parts in double fertilization parts

- (1) One (2) Two
 (3) Three (4) Multiple

123. Diplontic life cycle is present in

- | | |
|--------------|----------------|
| (a) Cycas | (b) Eucalyptus |
| (c) Funaria | (d) Dictyota |
| (e) Adiantum | |

- (1) b,c,d (2) c.d
 (3) ce (4) a, b

124. The tallest tree species of the gymnosperms is

- (1) Eucalyptus (2) Pinus
 (3) Cedrus (4) Sequoia

125. Which of the following is considered an important step in evolution as it is a precursor to the seed habit:

- (1) Haplontic life cycle
 (2) Free-living gametophyte
 (3) Dependent sporophyte

(4) Development of embryo inside the female gametophyte

126. Given are a few statements

- (a) Important soil binders
- (b) They are the first terrestrial land plant with vascular tissues
- (c) Cones are present

Choose the option for which all three statements hold true

- (1) Ulothrix (2) Pinus
- (3) Cycas (4) Equisetum

127. Characteristic of angiosperms which distinguishes them from gymnosperms

- (1) Seeds covered by ovary
- (2) Zygote and triploid endosperm form after double fertilization
- (3) The pollen grains and ovules are developed in specialised structures called flower
- (4) All of the above

128. Given below are two statements:

Statement I:

Fusion between one large, non motile, static female gamete and a smaller mobile male gamete is called oogamous.

Statement II:

At least half of total carbon dioxide fixation on Earth is carried out by algae through photosynthesis.

Choose the correct answer from the options given below

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

129. Read the following statement and choose correct

- (i) Evolutionary pteridophytes are the first

terrestrial plants to possess vascular tissue.

(ii) The main plant body of pteridophytes is gametophytic

(iii) In gymnosperms the male and female gametophytes have an independent free living existence

(iv) In conifers needle like leaves reduce the surface area

(1) i, ii correct and iii, iv incorrect

(2) ii, iii correct and i, iv incorrect

(3) i, iv correct and ii, iii incorrect

(4) i, iii, iv correct and ii incorrect

130. Read the following statement and choose correct option

(i) Gymnosperms are heterosporous

(ii) Prothallus is a gametophyte, free living photosynthetic structure form in pteridophyte

(iii) Mosses possess vascular tissue xylem and phloem

(iv) Mosses are of great ecological importance.

(1) i, ii correct and iii, iv incorrect

(2) i, ii, iv correct and iii incorrect

(3) i, ii, iii correct and iv incorrect

(4) i, ii, iii, iv correct

131. Given below are two statements:

Statement I:

In Rhodophyceae food is stored as complex carbohydrate in the form of manitol.

Statement II

Manitol starch very similar to amylopectin and glycogen in structure.

Choose the correct answer from the options given below

(1) Both Statement I and Statement II are incorrect

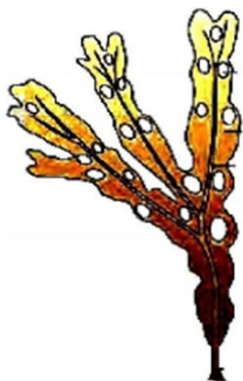
(2) Statement I is correct but Statement II is incorrect

(3) Statement I is incorrect but Statement II is correct

(4) Both, Statement I and Statement II are

correct

132. Recognise the given figure and find out correct statement for it.:



- (i) It is a member of Rhodophyceae
- (ii) Oogamous type reproduction occur.
- (iii) Diplontic life cycle present
- (iv) It possesses chlorophyll a and c as major pigment.
- (1) (i), (ii) are correct
- (2) (ii), (iii), (iv) are correct
- (3) (i), (iii), (iv) are correct
- (4) (i), (ii), (iv) are correct

133. Read the following statement and choose correct option

- (i) In chlorophyceae stored food is starch
- (ii) Anisogamous type reproduction present in Eudorina
- (iii) Volvox is filamentous algae
- (iv) In Bryophyte antheridiums produce biflagellated antherozoids.
- (1) Only i, ii correct
- (2) Only iii, iv correct
- (3) Only i, ii, iv correct
- (4) i, ii, iii, iv correct

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

Assertion (A): Genera Selaginella and Salvinia are known as heterosporous.

Reason (R): They produce two kinds of spores, macro (large) and micro (small).

In the light of the above statements, choose the correct answer from the

options given below:

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

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

Assertion (A): Bryophyte and pteridophyte have haplodiplontic life cycle.

Reason (R): Volvox, Spirogyra, Fucus and Chlamydomonas have Haplontic life cycle.

In the light of the above statements, choose the correct answer from the options given below:

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

136. In Algae algin and carrageen are obtained from which type of algae respectively

- (1) Marine brown and red algae
- (2) Marine red algae and brown algae
- (3) Fresh water brown algae and marine red algae
- (4) Fresh water red algae and brown algae

137. Zygotic and sporic meiosis takes place in:

- (1) Spirogyra and moss respectively
- (2) Bryophytes and Dryopteris respectively
- (3) Cycas and Pinus respectively
- (4) Chlamydomonas and Spirogyra respectively

138. Which of the following is incorrect:

- (1) In Pinus male and female cone/strobili borne on same tree
- (2) In Cycas male cone and megasporophyll born on different tree
- (3) Cycas plants are monoecious

(4) Both 1 and 2

139. A taxon is a:

- (1) Group of related species
- (2) Group of related families
- (3) Type of living organisms
- (4) Taxonomic group of any ranking

140. Solanum and Panthera are:

- (1) Genus and species
- (2) Genus and genus
- (3) Species and species
- (4) Only species

141. Taxa" differs from "taxon" due to:

- (1) This being a higher taxonomic category than taxon
- (2) This being a lower taxonomic category than taxon
- (3) This being the plural of taxon
- (4) This being the singular of taxon

142. Go through the given statements regarding an order and choose the codes with all correct statements.

I. It is an assemblage of families.

II. It contains less similar characters than genera.

III. It is higher in systematic hierarchy than class.

IV. It is higher in systematic hierarchy than phylum.

Codes:

- (1) I, II, and IV
- (2) I and II
- (3) II and IV
- (4) II and III

143. Binomial epithet includes:

- (1) Generic epithet + author citation
- (2) Specific epithet
- (3) Generic epithet + specific citation
- (4) Generic epithet + specific epithet + author citation

144.

T

axonomic category with a group of related genera is characterized on the basis of:

(1) Cell structure

(2) Vegetative features

(3) Vegetative and reproductive features

(4) Only floral characters

145. Read the following statements and choose the incorrect option:

- a. In organisms like bacteria, unicellular algae and Hydra, reproduction is synonymous with growth.
- b. In single-celled organisms, we are not very clear about the usage of these two terms-growth and reproduction.
- c. Mules, sterile worker bees and fertile human couples do not reproduce.
- d. Growth and reproduction are the defining properties of living organisms.

(1) b, c and d

(2) a, c and d

(3) a, b and c

(4) a, b, c and d

146. Higher the taxonomic category, _____ is the number of organisms and _____ is the number of common features.

(1) Higher, more

(2) Fewer, less

(3) Higher, fewer

(4) Fewer, more

147. Which of the following taxonomic categories are common for Triticum and Mangifera?

(1) Division, kingdom

(2) Division, class

(3) Order, class

(4) Family, order

148. Taxonomic category with a group of related genera is:

(1) Anacardiaceae, Primata

(2) Poaceae, Diptera

(3) Hominidae, Canidae

(4) Sapindales, Anacardiaceae

149. Choose correct option for the missing words.

Solanum + A → Solanaceae

Panthera + B → C

(1) A-Lycopersicon, B - Canis, C - Canidae

(2) A-Datura, B - Felis, C - Felidae

(3) A-Mangifera, B-Canis, C - Canidae

(4) A-Oryza, B- Felis, C - Felidae

150. Which of the following group of organisms represent taxa at same level?

- (1) Monocots, angiosperms
- (2) Lion, animals
- (3) Wheat, mango
- (4) Tiger, chordates

151. Which of the following processes are the basis of taxonomy?

- i. Characterisation ii. Identification
- iii. Classification iv. Nomenclature
- v. Ecological information of organisms
- vi. External and internal structure, along with the structure of cell
- (1) i, ii, iii and iv (2) v and vi
- (3) iii, iv and v (4) All i to vi

152. Select the wrong statements.

- I. Lower the taxa, more are the characteristics that the members within the taxa share.
- II. Order is the assemblage of genera which exhibit a few similar characters.
- III. Cat and dog are included in the same family Felidae.
- IV. Binomial nomenclature was introduced by Carolus Linnaeus.
- (1) I, II and III (2) II, III and IV
- (3) I and IV (4) II and III

153. Match the column I with column II for housefly classification and select the correct option using the codes given below.

Column I	Column II
a. Family	i. Diptera
b. Order	ii. Arthropoda
c. Class	iii. Muscidae
d. Phylum	iv. Insecta

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

154. Taxon and category differ in:

- (1) Taxon is recognized and assigned,

whereas category is abstract

- (2) Taxon is a group of real organisms, whereas category is a rank or level in a hierarchy
- (3) Both (1) and (2)
- (4) None of these

155. The category that includes related species is:

- (1) Class (2) Order
- (3) Division (4) Genera

156. Find the odd one (with respect to category).

- (1) Algae (2) Moss
- (3) Fern (4) Conifer

157. Find the odd one (with respect to taxonomic categories).

- (1) Muscidae (3) Sapindales
- (2) Primata (4) Poales

158. Which of the following are the taxonomic categories for wheat showing hierarchical arrangement is descending order?

- (1) aestivum → Triticum → Poaceae Poales → Monocotyledonae → Angiospermae → Plantae
- (2) aestivum → Triticum Poaceae Poales → Dicotyledonae → Angiospermae → Plantae
- (3) Plantae → Angiospermae → Dicotyledonae → Poales → Poaceae → Triticum → aestivum
- (4) Plantae Angiospermae → Monocotyledonae → poales → Poaceae Triticum → aestivum

IN EACH OF THE FOLLOWING QUESTION, A STATEMENT OF ASSERTION IS FOLLOWED BY A CORRESPONDING STATEMENT OF REASON. MARK THE CORRECT ANSWER AS PER THE INSTRUCTIONS GIVEN BELOW.

(1) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(2) If both Assertion and Reason are true

but Reason is not the correct explanation of Assertion.

(3) If Assertion is true but Reason is false.

(4) If both Assertion and Reason are false.

159. **Assertion:** At lower taxa level, members share more number of characters.

Reason: As we move on higher taxa number of organisms increase

160. **Assertion:** Genus may have one or more than one species epithet

Reason: Genus comprises of a group of related species.

161. **Assertion:** Species is a group of individuals with fundamental similarities.

Reason: It is the lowest category in taxonomic hierarchy.

162. According to Five kingdom classification, all eukaryotic unicellular organisms belong to kingdom

- (1) Monera (3) Fungi
(2) Protista (4) Bacteria

163. One of the following disease is not caused by Prion?

- (1) BSE (Bovine Spongiform Encephalopathy)
(2) Kuru disease
(3) CJD (Creutzfeldt-Jakob disease)
(4) PSTD (Potato Spindle Tuber Disease)

164. The organism that completely lack cell wall, are the smallest living cells known, and can survive without oxygen are:

- (1) Actinomycetes (2) PPLO
(3) Rickettsia (4) Chlamydiae

165. Fruiting body is absent in

- (1) Yeast (2) Puccinia
(3) Aspergillus (4) Both (1) and (2)

166. Gonyaulax undergoes rapid multiplication that they make the sea appear red. This phenomenon is called as:

- (1) Red sea (2) Red snow
(3) Red tide (4) Red drop

167. The phrase "Contagium vivum fluidum to describe an organism was first proposed by

- (1) D. J. Ivanowsky (2) Robert Hooke
(3) Stanley (4) M. W. Beijerinck

168. Sac fungi which is extensively used in genetic work is

- (1) Claviceps purpurea
(2) Aspergillus niger
(3) Neurospora
(4) Penicillium chrysogenum

169. Which of the following correctly differentiates virus from viroid?

- (1) Absence of protein coat in viroid but present in virus
(2) Presence of low molecular weight RNA in virus but absent in viroid
(3) Both (1) and (2)
(4) None of the above

170. Organisms belonging to class phycomycetes usually inhabit

- (i) Aquatic habitats (ii) Decaying wood
(iii) Moist and damp places
(iv) Plants as obligate parasites
Select the correct option.

- (1) None of the above
(2) (i) and (iv) (3) (ii) and (iii)
(4) All of the above

171. The asexual spores formed in zygomycetes are:

- (1) Sporangiospores (2) Zoospores
(3) Ascospores (4) Conidium

172. Match the following columns

Column I	Column II
1. Endogenous spores	(i) Basidiospore
2. Exogenous spores	(ii) Conidia
	(iii) Ascospore
	(iv) Zoospore

- (1) 1-(iv), (i), 2-(ii), (m)
(2) 1-(iv), (ii), 2-(i), (iii)
(3) 1-(iv), (iii), 2-(i), (ii)
(4) 1-(iii), (i), 2-(ii), (iv)

173. Basidiomycetes are characterised by all

given features, except

- (1) Presence of dolipore septum
- (2) Conidia formation
- (3) Dominant dikaryotic mycelium
- (4) Basidium as the site of karyogamy and meiosis

substratum by

- (1) Rhizoids
- (2) Stripe
- (3) Holdfast
- (4) Root

174. Which one of the following statements about mycoplasma is wrong?

- (1) They are pleomorphic.
- (2) They are sensitive to penicillin.
- (3) They cause diseases in plants.
- (4) They are also called PPLO.

175. Nutrition in Protists is:

- (1) Holophytic
- (2) Holozoic
- (3) Saprozoic
- (4) All of these

176. HIV is classified as a retrovirus because its genetic information is carried in:

- (1) DNA instead of RNA
- (2) DNA
- (3) RNA instead of DNA
- (4) Protein coat

177. Five kingdom classification was based on

- (A) Cell structure
- (B) Body organisation
- (C) Mode of Nutrition
- (D) Phylogenetic relationships
- (E) Reproduction

Choose the correct option.

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

178. How many of the following organism is not hermaphrodite sponge, cockroach, leech, earthworm, tape worm

- (1) One
- (2) Two
- (3) Three
- (4) All of these

179. The phylum 'Arthropoda' is characterised by:

- (1) Chitinous exoskeleton
- (2) Jointed appendages
- (3) Malpighian tubules
- (4) All of these

180. Funaria plant body is attached to the