मोशन है, तो भरोसा है

MOTION
18 YEARS OF LEGACY

NEET 2025
MOCK TEST PAPERS

MOTION

Sample Test Paper-1

Time Allowed: 3 hours **Maximum Marks: 720**

Important Instructions :

1. The Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars on ORIGINAL Copy carefully with **blue/black** ball point pen only.
2. The test is of **3 hours** duration and this Test Booklet contains **180** questions. Each question carries **4** marks. For each correct response, the candidate will get **4** marks. For each incorrect response, **one mark** will be deducted from the total scores. The maximum marks are 720.
3. Use **Blue/Black Ball Point Pen only** for writing particulars on this page/marking responses on Answer Sheet.
4. Rough work is to be done in the space provided for this purpose in the Test Booklet only.
5. On completion of the test, the candidate **must hand over the Answer Sheet (ORIGINAL and OFFICE Copy) to the Invigilator** before leaving the Room/Hall. The candidates are allowed to take away this Test Booklet with them.
6. The candidates should ensure that the Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet. Do not write your Form No. anywhere else except in the specified space in the Test Booklet/Answer Sheet.
7. Use of white fluid for correction is **NOT** permissible on the Answer Sheet.
8. Each candidate must show on-demand his/her Allen ID Card to the Invigilator.
9. No candidate, without special permission of the Invigilator, would leave his/her seat.
10. The candidates should not leave the Examination Hall without handing over their Answer Sheet to the Invigilator on duty and sign (with time) the Attendance Sheet **twice. Cases, where a candidate has not signed the Attendance Sheet second time, will be deemed not to have handed over the Answer Sheet and dealt with as an Unfair Means case.**
11. Use of Electronic/Manual Calculator is prohibited.
12. The candidates are governed by all Rules and Regulations of the examination with regard to their conduct in the Examination Room/Hall. All cases of unfair means will be dealt with as per the Rules and Regulations of this examination.
13. **No part of the Test Booklet and Answer Sheet shall be detached under any circumstances.**
14. The candidates will write the Correct Test Booklet Code as given in the Test Booklet/Answer Sheet in the Attendance Sheet.

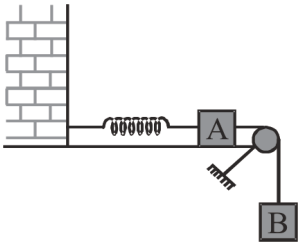
SUBJECT : PHYSICS

1. Polarising angle for water is 53°4'. If light is incident at this angle on the surface of water and partially reflected, the angle of refraction is :-

(1) 53°4' (2) 126°56'

(3) 36°4' (4) 36°56'

2. Consider the situation shown in figure. Mass of block A is m and that of block B is 2m. The force constant of the spring is k. Friction is absent everywhere. System is released from rest with the spring unstretched. The maximum extension of the spring x_m is



(1) $\frac{2mg}{k}$ (2) $\frac{4mg}{k}$ (3) $\frac{mg}{k}$ (4) $\frac{3}{2}\frac{mg}{k}$

3. If $P = \frac{A^3}{B^{5/2}}$ and ΔA is absolute error in A and ΔB is absolute error in B then absolute error ΔP in P is :

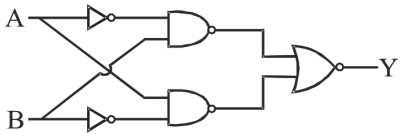
(1) $\Delta P = \pm\left(3\frac{\Delta A}{A} + \frac{5}{2}\frac{\Delta B}{B}\right)P$

(2) $\Delta P = \pm\left(3\frac{\Delta A}{A} + \frac{5}{2}\frac{\Delta B}{B}\right)$

(3) $\Delta P = \pm\left(3\frac{\Delta A}{A} - \frac{5}{2}\frac{\Delta B}{B}\right)P$

(4) $\Delta P = \pm\left(3\frac{\Delta A}{B} - \frac{5}{2}\frac{\Delta B}{A}\right)P$

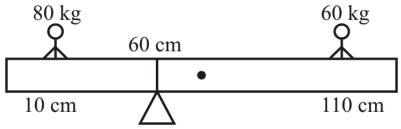
4. Output Y for the following logic circuit is:-



(1) $Y = \bar{A}\cdot B + A\cdot\bar{B}$ (2) $Y = A\cdot B + \bar{A}\cdot\bar{B}$

(3) $Y = A + B$ (4) $Y = A\cdot\bar{A}$

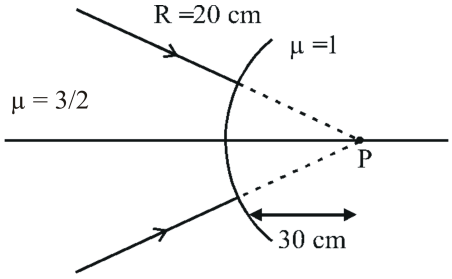
5. Two students A and B of mass 80 kg and 60 kg respectively are sitting on a uniform rod of length 200 cm which is balanced on a wedge placed at 60 cm mark. Student A is at 10 cm and student B is at 110 cm mark. Find mass of rod if the rod is in equilibrium.



(1) 50 kg (2) 25 kg

(3) 10 kg (4) 100 kg

6. The image for the converging beam after refraction through the curved surface is formed at :-



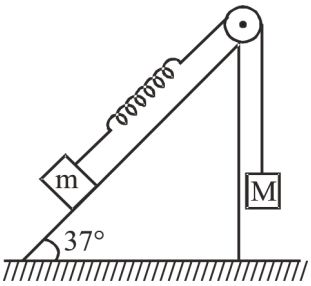
(1) 40 cm (2) 40/3 cm

(3) –40/3 cm (4) 20 cm

7. A block slides down an inclined plane of inclination θ with constant velocity. It is then projected up the inclined plane with an initial speed u. The distance up the plane it will move before coming to rest is

(1) $\frac{u^2}{g}$ (2) $\frac{u^2}{g \sin \theta}$

(3) $\frac{u^2}{2g \sin \theta}$ (4) $\frac{u^2}{4g \sin \theta}$

8. 

A block of mass m is attached with a massless spring of force constant K. The block is placed over a fixed rough inclined surface for which the coefficient of friction is $\mu = \frac{3}{4}$. The block of mass m is initially at rest. The block of mass M is released from rest with spring in unstretched state. The minimum value of M required to move the block up the plane is (Neglect mass of string and pulley and friction in pulley) :

(1) $\frac{3}{5}$ m (2) $\frac{4}{5}$ m (3) $\frac{6}{5}$ m (4) $\frac{3}{2}$ m

9. A nucleus with Z = 92 emits the following in a sequence : $\alpha, \alpha, \beta^-, \beta^-, \alpha, \alpha, \alpha, \alpha, \beta^-, \beta^-, \alpha, \beta^+, \beta^+, \alpha$. The Z of the resulting nucleus is-

(1) 76 (2) 78

(3) 82 (4) 74

10. When a hydrogen atom is raised from the ground state to an excited state,

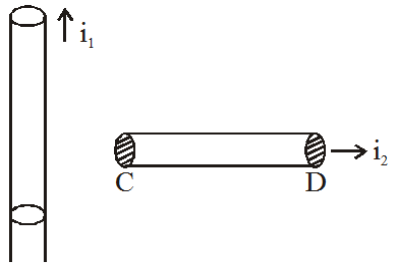
(1) both kinetic energy (KE) and potential energy (PE) increase

(2) both KE and PE decrease

(3) PE increases, KE decreases

(4) PE decreases, KE increases

11. An infinitely long straight conductor AB is fixed and a current is passed through it. Another movable straight wire CD of finite length and carrying current is held perpendicular to it and released. Neglect weight of the wire :-



(1) The rod CD will move upwards parallel to itself

(2) The rod CD will move downwards parallel to itself

(3) The rod CD will move upward and turn clockwise at the same time

(4) The rod CD will move upward and turn anti-clockwise at the same time

12. Magnetic moment of orbital electron in first orbit is μ_B then magnetic moment of that electron in n^{th} orbit :-

(1) μ_B (2) $\frac{\mu_B}{n}$ (3) $n\mu_B$ (4) $n^2\mu_B$

Space for Rough Work

13. A diatomic gas is heated at constant pressure The part of total heat given that will be used for external work :-

(1) $\frac{3}{5}$ (2) $\frac{2}{7}$ (3) $\frac{7}{5}$ (4) None

14. Heat capacity of a substance is infinite. It means:

(1) Heat is given out

(2) Heat is taken in

(3) No change in temperature whether heat is taken in or given out

(4) All of the above

15. The depth d at which the value of acceleration due to gravity become $\frac{1}{n}$ times the value at the surface is (R = Radius of earth) :-

(1) $\frac{R}{n}$ (2) $\frac{R}{n^2}$

(3) $R\left(\frac{n}{n+1}\right)$ (4) $R\left(\frac{n-1}{n}\right)$

16. Find gravitational field at point (2, 3) if gravitational potential is given by $V = 5x^2y$.

(1) 0 (2) $-80\hat{i}$

(3) $-60\hat{i} - 20\hat{j}$ (4) $-60\hat{i} - 80\hat{j}$

17. A wind with speed 40 ms^{-1} blows parallel to the roof that the pressure inside the house is atmospheric pressure, the force exerted by the wind on the roof and the direction of the force will be (p_{air} = 1.2 kgm^{-3}, roof area = 250 m^2):-

(1) 2.4×10^5 N, downwards

(2) 4.8×10^5 N, downwards

(3) 4.8×10^5 N, upwards

(4) 2.4×10^5 N, upwards

18. Water is entering in a cylindrical container open from top at the rate of α container is consist of an orifice of area A at base. Find maximum height upto which water can be filled :

(1) $\frac{\alpha}{2gA}$ (2) $\frac{\alpha^2}{2gA^2}$

(3) $\frac{\alpha^2}{2gA}$ (4) $\frac{\alpha}{2gA^2}$

19. The density of gold is ρ and its bulk modulus is B. The density of piece of gold when pressure P is applied uniformly from all sides.

(1) $\frac{\rho P}{2B}$ (2) $\frac{\rho B}{2P}$

(3) $\frac{\rho P}{B-P}$ (4) $\frac{\rho B}{B-P}$

20. The distance between an object and the screen is 80 cm. A lens produces an image on the screen when the lens is placed at either of the positions 20 cm apart. Focal length of the lens is :-

(1) 18.75 cm (2) 20.5 cm

(3) 10.5 cm (4) 24.5 cm

21. To know the resistance G of a galvanometer by half deflection method, a battery of emf V_E and resistance R is used to deflect the galvanometer by angle θ. If a shunt of resistance S is needed to get half deflection then G, R and S are related by the equation :-

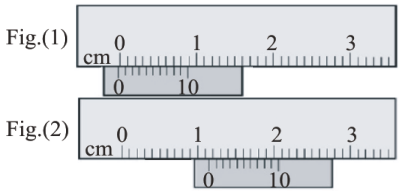
(1) 2S (R+G) = RG

(2) S (R+G) = RG

(3) 2G = S

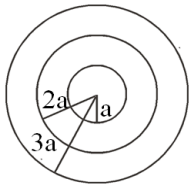
(4) 2S = G

22. The main scale of a Vernier calliper reads in mm and its Vernier is divided into 10 divisions which coincide with 9 divisions of the main scale. The reading for the situation is found to be (x/10) mm. Find the value of x. In fig (1) 8^{th} div. of V.S. coincides with M.S.D. & in fig (2) 6^{th} div. of V.S. coincides with M.S.D.



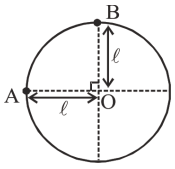
(1) 104 (2) 108 (3) 114 (4) 118

23. Three concentric metallic shell of radius a, 2a, 3a has charges Q, −2Q and 3Q respectively. When middle shell is earthed, then how much charge will flow from shell to earth :



(1) $-\frac{3Q}{2}$ (2) Q (3) −Q (4) zero

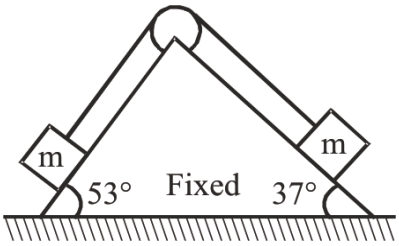
24. A bob of simple pendulum of length ℓ is moving in a vertical circle about point O such that tension in string at top most point B is zero. The acceleration of bob at point A is ($g = 10\ m/s^2$):-



(1) $10\sqrt{5}\ m/sec^2$ (2) $10\sqrt{10}\ m/sec^2$

(3) $10\ m/sec^2$ (4) $5\sqrt{10}\ m/sec^2$

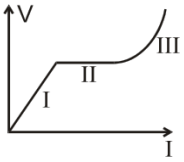
25. Find the magnitude of acceleration of centre of mass of two blocks as shown in figure.
Neglect friction everywhere. ($g = 10\ ms^{-2}$)



(1) $1\ ms^{-2}$ (2) $\frac{1}{\sqrt{2}} ms^{-2}$

(3) $\sqrt{2}\ ms^{-1}$ (4) Zero

26. Voltage V v/s I graph is shown in the figure.



(1) resistance in region I is ohmic, II & III are non-ohmic

(2) resistance in region II is zero and III is ohmic

(3) resistance in region II is zero and III is non-ohmic

(4) in I it is ohmic, II it is non-ohmic.

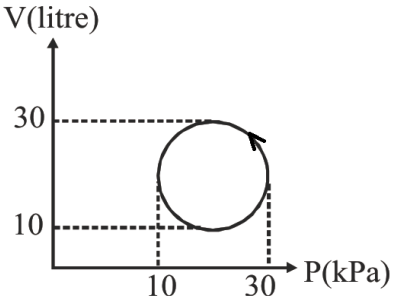
27. The springs of force constants K, 2K, 4K, 8K....∞ are connected vertically in series and a body of mass m is suspended from the last spring. If this system is set into oscillations, the time period will be :-

(1) $T = 2\pi\sqrt{\frac{m}{K}}$ (2) $T = \pi\sqrt{\frac{m}{K}}$

(3) $T = 2\pi\sqrt{\frac{m}{3K}}$ (4) $T = 2\pi\sqrt{\frac{2m}{K}}$

Space for Rough Work

28. Heat energy absorbed by a system in going through a cyclic process shown in figure is :-



(1) $10^7\ \pi J$ (2) $10^4\ \pi J$

(3) $10^2\ \pi J$ (4) $10^{-3}\ \pi J$

29. A tuning fork whose frequency as given by manufacturer is 512 Hz is being tested with an accurate oscillator. It is found that the fork produces a beat of 2Hz, when oscillator reads 514 Hz but produces a beat of 6 Hz when oscillator reads 510 Hz. The actual frequency of fork is :-

(1) 508 Hz

(2) 512 Hz

(3) 516 Hz

(4) 518 Hz

30. A point source of electromagnetic radiation has an average power output of 800 W. The maximum value of electric field at a distance of 4.0 m from the source is (approximately) :

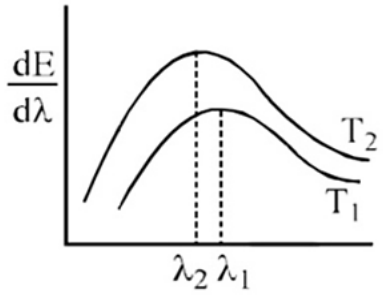
(1) 65 V/m

(2) 75 V/m

(3) 85 V/m

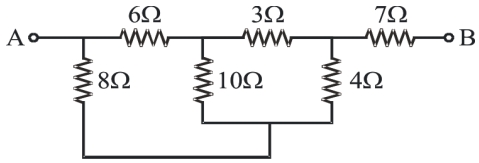
(4) 55 V/m

31. The spectral emissive power $E\lambda$ for a body at temperature T_1 is plotted against the wavelength and area under the curve is found to be A. At a different temperature T_2 the area is found to be 9 A. Then $\frac{\lambda_1}{\lambda_2} =$



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

32. The equivalent resistance between the points A and B is :-



(1) $\frac{36}{7}\Omega$

(2) $10\ \Omega$

(3) $\frac{85}{7}\Omega$

(4) None of these

33. Given that the displacement of a particle is given by $x = A^2 \sin^2 kt$ Where t denotes the time. The unit of k is

(1) hertz (2) metre

(3) radian (4) second

34. ***Assertion (A) :-*** The hard boiled egg and raw egg can be distinguished on the basis of spinning of both.
Reason (R):- The moment of inertia of hard boiled egg is more as compared to raw egg.

(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 incorrect but (R) is correct

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

35. An astronomical telescope has an eye piece of focal length 5 cm. If magnifying power of telescope is 14 when final image is formed at infinity. Calculate length of the telescope :-

(1) 75 cm

(2) 9 cm

(3) 50 cm

(4) 55 cm

36. Electrons with de-Broglie wavelength λ fall on the target in an X-ray tube. The cut-off wavelength of the emitted X-rays is :-

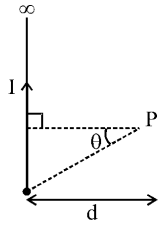
(1) $\lambda_0 = \frac{2mc\lambda^2}{h}$

(2) $\lambda_0 = \frac{2h}{mc}$

(3) $\lambda_0 = \frac{2m^2c^2\lambda^3}{h^2}$

(4) $\lambda_0 = \lambda$

37. Magnetic field due to semi infinite length wire at point P :-



(1) $B_p = \frac{\mu_0 I}{4\pi d}[\sin\theta + 1]$

(2) $B_p = \frac{\mu_0}{4\pi}\frac{d}{I}[\sin\theta]$

(3) $B_p = \frac{\mu_0}{4\pi}\frac{I}{d}[\sin\theta + \sin\theta]$

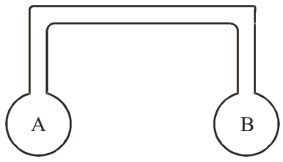
(4) $B_p = \frac{\mu_0}{4\pi}\frac{I}{d}[\sin 90 + \sin 90]$

38. Cobalt shows ferromagnetic property at room temperature. If the temperature is less then curie temperature then it will show :

(1) diamagnatims (2) paramagnetism

(3) anti ferromagnatims (4) ferromagnatism

39. Two spherical vessel of equal volume, are connected by a narrow tube. The apparatus contains an Ideal gas at one atomosphere and 300 K. Now if one vessel is immersed in a bath of constant temperature 600 K and other in a bath of constant temperature 300 K, then the common pressure will be :-



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

Space for Rough Work

40. If the terminal speed of a sphere of gold (density = 19.5 kg/m^3) is 0.2 m/s in a viscous liquid (density = 1.5 kg/m^3). Find the terminal speed of a sphere of silver (density=10.5 kg/m^3) of the same size in the same liquid.

(1) 0.4 m/s

(2) 0.133 m/s

(3) 0.1 m/s

(4) 0.2 m/s

41. A soap bubble of radius R is blown. After heating the solution a second bubble of radius 2R is blown. The work required to blow the second bubble in comparison to that required for the first bubble is:-

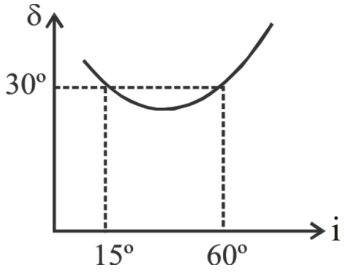
(1) Double

(2) Slightly less than double

(3) Slightly less than four times

(4) Slightly more than four times

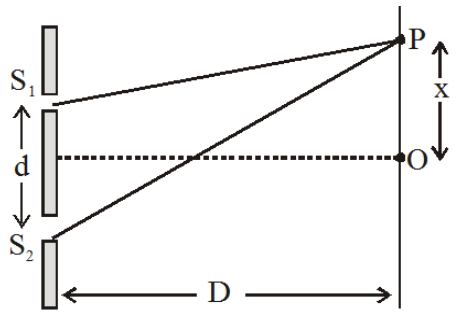
42. Figure shows graph of deviation (δ) versus angle of incidence (i) for a light ray striking a prism. Angle of prism is :-



(1) 30° (2) 45°

(3) 60° (4) 75°

43. In YDSE S_1 and S_2 have same intensity I_0, column-I has distance of a point P from O on screen and column B has intensity at P. Match column-I to column-II. (wavelength is λ)



Column-I		Column-II	
(A)	$x = \frac{D\lambda}{d}$	(P)	I_0
(B)	$x = \frac{D\lambda}{4d}$	(Q)	$2I_0$
(C)	$x = \frac{D\lambda}{3d}$	(R)	$3I_0$
(D)	$x = \frac{D\lambda}{6d}$	(S)	$4I_0$

(1) (A)-S, (B)-Q, (C)-P, (D)-R

(2) (A)-P, (B)-R, (C)-S, (D)-Q

(3) (A)-Q, (B)-P, (C)-S, (D)-R

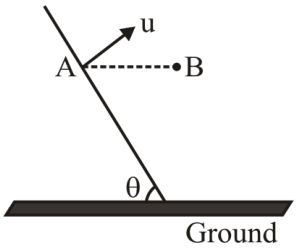
(4) (A)-P, (B)-Q, (C)-S, (D)-R

44. The force F on a particle of mass m moving in a straight line varies with its velocity v as $F = \frac{k}{v}$ where k is a constant. The work done by the force in time t is :-

(1) $\left(\frac{kt}{mv}\right)^2$ (2) $\frac{kt}{v}$

(3) $\frac{kt^2}{m}$ (4) kt

45. A particle is projected at point A from an inclined plane with inclination angle θ as shown in figure. The magnitude of projection velocity is u and its direction is perpendicular to the plane. After some time it passes from point B which is in the same horizontal level of A, with velocity $\vec{v}$. Then the angle between $\vec{u}$ and $\vec{v}$ will be :-



(1) π (2) 2θ

(3) $\pi - 2\theta$ (4) $90 + \theta$

Space for Rough Work

46. A clean metal surface is irradiated with light of three different wavelengths: λ_1, λ_2 and λ_3. The kinetic energies of ejected electrons are as follows:
λ_1: 2.9×10^{-29} J; λ_2: approximately zero;
λ_3: 4.2×10^{-19} J
The light in order of increasing wavelength is

(1) $\lambda_1 > \lambda_2 > \lambda_3$ (2) $\lambda_3 > \lambda_2 > \lambda_1$

(3) $\lambda_3 > \lambda_1 > \lambda_2$ (4) $\lambda_2 > \lambda_1 > \lambda_3$

47. When electron transition takes place from n = 4 to n = 2 in H atom then number of spectral lines are

(1) 6 (2) 4

(3) 5 (4) 3

48. If K_p for a reaction, $A(g) + 2B(g) \rightleftharpoons 3C(g) + D(g)$ is 0.05 atm at 1000 K, its K_c in terms of R will be :

(1) 20000 R (2) 0.02 R

(3) 5×10^{-5} R (4) $\frac{5 \times 10^{-5}}{R}$

49. For a gaseous reaction

$$H_{2(g)} + I_{2(g)} \longrightarrow 2HI_{(g)}$$

If 10 ml of $I_{2\,(g)}$ reacts completely with H_2 then find out the required volume of H_2 :

(1) 10 ml (2) 20 ml

(3) 5 ml (4) 100 ml

50. Which of the following is correct increasing order of oxidation number of oxygen :

(1) $OF_2 < KO_2 < BaO_2 < O_3$

(2) $BaO_2 < KO_2 < O_3 < OF_2$

(3) $BaO2 < O_3 < OF_2 < KO_2$

(4) $KO_2 < OF_2 < O_3 < BaO_2$

51. pK_a values of three acids A, B and C are 4.5, 3.5 and 6.5 respectively. Which of the following represents the correct order of acid strength ?

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

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

52. Standard entropy of X_2, Y_2 and XY_3 are 60, 40 and 50 $JK^{-1}mol^{-1}$. For the reaction, $\frac{1}{2}X_2 + \frac{3}{2}Y_2 \rightarrow XY_3$, If $\Delta H = -30$ KJ, to be at equilibrium the temperature will be :-

(1) 1250 K (2) 500 K

(3) 750 K (4) 1000 K

53. Select Incorrect statement (s) :-

(1) An adiabatic system can exchange energy with its surroundings.

(2) A thermodynamic property which is intensive is additive.

(3) Work done may be zero in a cyclic process

(4) For a simple compressible substance, the relation $dq - P.dV = 0$ is true for any cycle involving mechanical work only

54. Correct increasing order of metallic character is :-

(1) Si < P < S (2) As < P < N

(3) Al < Ge < As (4) Br < Se < As

55. Identify the **incorrect** match :

Name		IUPAC Official Name	
(a)	Unnilunium	(i)	Mendelevium
(b)	Unniltrium	(ii)	Lawrencium
(c)	Unnilhexium	(iii)	Seaborgium
(d)	Ununnnium	(iv)	Darmstadtium

(1) (d), (iv) (2) (a), (i)

(3) (b), (ii) (4) (c), (iii)

56. The electron affinity values for the halogens shows the following trend :–

(1) F < Cl > Br > I

(2) F < Cl < Br < I

(3) F > Cl > Br > I

(4) F < Cl > Br < I

57. In which of the following molecule is a most predominantly covalent molecule.

(1) $BeCl_2$ (2) NaCl

(3) $MgCl_2$ (4) LiCl

58. Which of the following compound does not show hydrolysis.

(1) NCl_3 (2) Mg_3N_2

(3) CCl_4 (4) SiH_4

59. In which of the following nitrate salt does not give brown colour gas on heating.

(1) $LiNO_3$ (2) $NaNO_3$

(3) $Fe(NO_3)_2$ (4) $Be(NO_3)_2$

60.

	List I (Compound)	List II (Structure)	
(A)	ClF_3	(P)	Square planar
(B)	PCl_5	(Q)	Tetrahedral
(C)	IF_5	(R)	Trigonal Bipyramidal
(D)	CCl_4	(S)	Square pyramidal
(E)	XeF_4	(T)	T-shaped

(1) A-T, B-S, C-R, D-Q, E-P

(2) A-T, B-R, C-S, D-Q, E-P

(3) A-T, B-R, C-S, D-P, E-Q

(4) A-S, B-R, C-T, D-Q, E-P

61. Ozonolysis products of an olefins are $\begin{matrix}CHO\\|\\CHO\end{matrix}$ and $\begin{matrix}CH_2{-}CHO\\|\\CH_2{-}CHO\end{matrix}$. The olefine is :-

(1) 

(2) 

(3) 

(4) 

Space for Rough Work

62. $CH_3-\underset{\underset{Cl}{|}}{CH}-CH_2-COOH \xrightarrow[\Delta]{\text{soda lime}}$ A(major),

A is :-

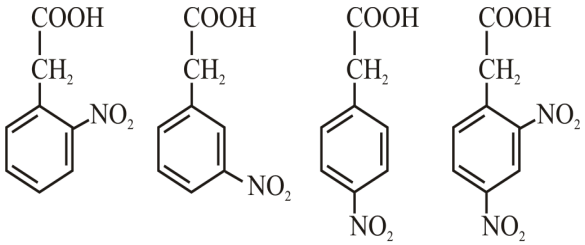
(1) $CH_3-\underset{\underset{Cl}{|}}{CH}-CH_3$

(2) $CH_3-CH_2-CH_3$

(3) $CH_3-CH=CH_2$

(4) $CH_3-\underset{\underset{OH}{|}}{CH}-CH_3$

63. The correct order for the rate of decarboxylation of following compounds with sodalime will be :-



(I) (II) (III) (IV)

(1) IV > I > III > II

(2) III > IV > I > II

(3) II > III > IV > I

(4) I > II > III > IV

64. Select the compound having minimum boiling point ?

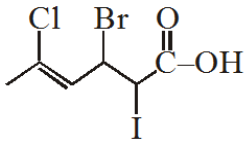
(1) $CH_3-CH_2-CH_2-CH_3$

(2) $CH_3-\underset{\underset{CH_3}{|}}{CH}-CH_3$

(3) $CH_3-\underset{\underset{CH_3}{|}}{CH}-CH_2-CH_3$

(4) $CH_3-CH_2-CH_2-CH_2-CH_3$

65.

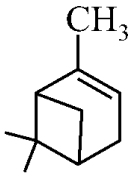


Total number of substituent present in the above compound :-

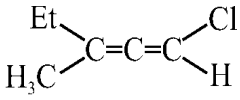
(1) 1 (2) 2 (3) 3 (4) 4

66. Which of the following is optically inactive.

(1)

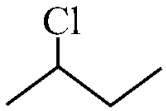


(2)



(3)

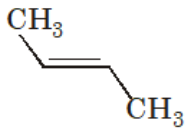
(4)



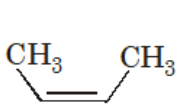
67. Incorrect one from given statements :

(1) $CH_3-O-CH_2-CH_2-CH_3$ and $CH_3-CH_2-O-CH_2-CH_3$ (are metamers)

(2)

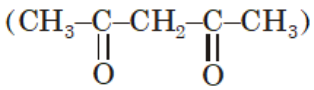


and



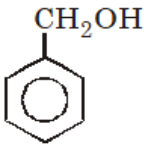
(are geometrical isomers)

(3) In Acetylacetone

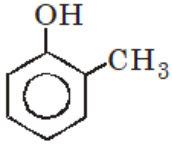


, enol form is more stable than keto form

(4)



and



(are chain isomers)

68. For a chemical reaction $4A + 5B \longrightarrow 3C + D$ rate of appearance of C is 6×10^{-2} mol/L/sec. The rate of A consumed

(1) $8 \times 10^{-2}\,M\,s^{-1}$ (2) $6 \times 10^{-2}\,M\,s^{-1}$

(3) $1.5 \times 10^{-2}\,M\,s^{-1}$ (4) $2 \times 10^{-2}\,M\,s^{-1}$

69. **Assertion (A)** : In zero order reaction, if the concentration of reactant is doubled then half life period is also doubled.

Reason (R) : Half life of zero order reaction is directly proportional to concentration of reactant.

Based on above statements, select the correct option :

(1) Both A and R are correct but R is not correct explination of A

(2) A is correct, R is incorrect

(3) Both A and R are incorrect

(4) A and R both are correct and R is correct explanation of A.

70. E.M.F. of cell $Ni\,|Ni^{2+}\,(1.0M)|\,|Au^{3+}(1.0M)|\,Au$ is .... if E° for Ni^{2+}/Ni is -0.25 V and E° for Au^{3+}/Au is 1.50 V :-

(1) +1.25 V (2) -1.75 V

(3) +1.75 V (4) +4.0 V

71. Which of the following statement is correct if the intermolecular force in liquids A, B and C are in the order A < B < C?

(1) B evaporates more readily than A

(2) B evaporates less readily than C

(3) A evaporates more readily than C

(4) A and B evaporate at the same rate

72. The Henry's law constant for solubility of gas in water at 298 K is 1×10^5 atm. The mole fraction of N_2 in air is 0.8. Then number of moles of N_2 of air dissolved in 10 moles of water at 298 K and 5 atm is :-

(1) 4×10^{-4} (2) 4.5×10^{-2}

(3) 4×10^{-5} (4) 2.7×10^{-2}

73. Which of the following is the expression of Raoult's law ? (P = vapour pressure of pure solvent, P_s = vapour pressure of the solution)

(1) $\frac{P - P_s}{P} = \frac{n}{n + N}$

(2) $\frac{P_s - P}{P} = \frac{N}{N + n}$

(3) $\frac{P - P_s}{P_s} = \frac{N}{N - n}$

(4) $\frac{P_s - P}{P_s} = \frac{N - n}{N}$

74. Which is incorrect for primary valency & secondary valency, as mentioned infront of the compound ?

(S = Secondary Valency, P = Primary Valency)

(1) $[Cr(NH_3)_6]Cl_3$, P = 3, S = 6

(2) $K_2[PtCl_4]$, P = 2, S = 4

(3) $[Pt(NH_3)_2Cl_2]$, P = 2, S = 4

(4) $[Cu(NH_3)_4]SO_4$, P = 4, S = 4

75. Which is correct :-

Complex	No. of Chilate rings
(1) $[Co(ox)_2Cl_2]^{-3}$	4
(2) $[Ni(dmg)_2]$	4
(3) $[Ca(EDTA)]^{-2}$	6
(4) Brown ring complex	1

Space for Rough Work

76. The correct order of magnetic moments (spin only values in B.M.) among the species involved is

(1) $[Fe(CN)_6]^{4-} > [CoCl_4]^{2-} > [MnCl_4]^{2-}$

(2) $[MnCl_4]^{2-} > [Fe(CN)_6]^{4-} > [CoCl_4]^{2-}$

(3) $[Fe(CN)_6]^{4-} > [MnCl_4]^{2-} > [CoCl_4]^{2-}$

(4) $[MnCl_4]^{2-} > [CoCl_4]^{2-} > [Fe(CN)_6]^{4-}$

77. Which of the following is spin free complex ?

(1) $[Co(NH_3)_6]^{+3}$

(2) $[Fe(CN)_6]^{-2}$

(3) $[CoF_6]^{-3}$

(4) $[Ni(CN)_4]^{-2}$

78. The melting point of Zn is lower as compared to those of the other element of 3d series because :-

(1) The d-orbitals are completely filled

(2) The d-orbitals are partially filled

(3) Zn is a transition element

(4) All of these

79. $K_2Cr_2O_7$ on Reaction with H_2O_2 gives a blue coloured compound in which oxidation state of metal is :-

(1) +6 (2) +3

(3) +2 (4) +4

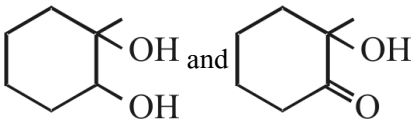
80. Which does not have six membered ring.

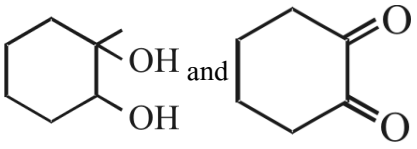
(1) P_4O_6 (2) P_4O_{10}

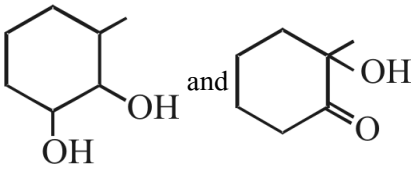
(3) B_2H_6 (4) Borax

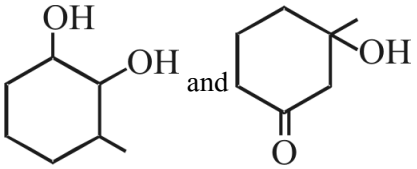
81. 

A and B are :-

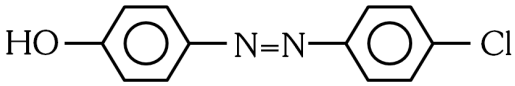
(1) 

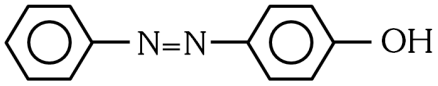
(2) 

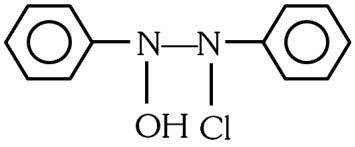
(3) 

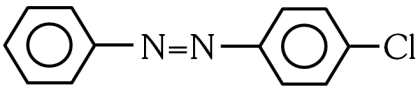
(4) 

82. Phenol reacts with benzenediazonium chloride solution to form a compound of the structure :-

(1) 

(2) 

(3) 

(4) 

83. **Statement-I :-** Primary amines have higher boiling point than isomeric secondary amines.
Statement-II :- Primary amines have more H-bonding.

(1) **Statement-I** & **Statement-II** both are correct.

(2) **Statement-I** is correct but **Statement-II** is incorrect.

(3) **Statement-I** is incorrect but **Statement-II** is correct.

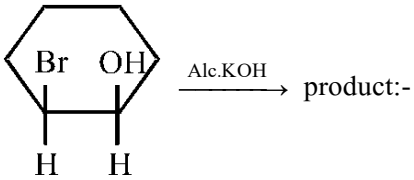
(4) **Statement-I** & **Statement-II** both are incorrect.

84. When acetone reacts with Grignard reagent followed by reaction with H_2O, gives :-

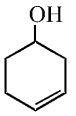
(1) 1° Alcohol (2) 2° Alcohol

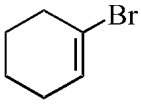
(3) 3° Alcohol (4) None of these

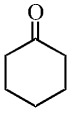
85.

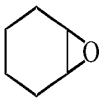


product:-

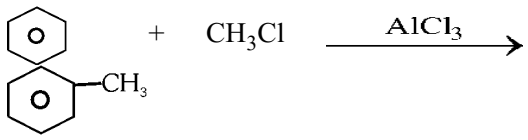
(1) 

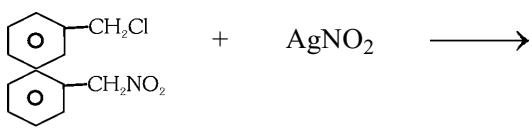
(2) 

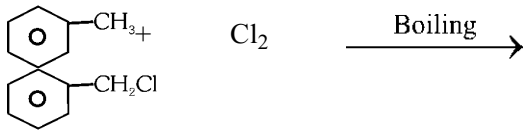
(3) 

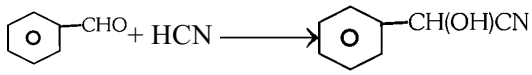
(4) 

86. Which one of the following is a free radical substitution :-

(1) 

(2) 

(3) 

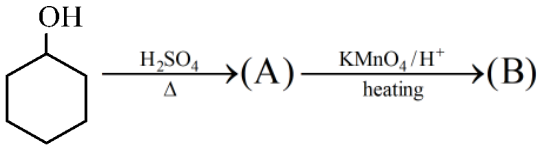
(4) 

87. In the Williamson synthesis of ethers given by the general equation :
R–X + R–ONa ⟶ R–O–R. The yield from R–X follows the sequence :-

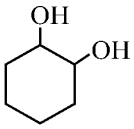
(1) $CH_3 > 1° > 2° > 3°$ (2) $CH_3 < 1° < 2° < 3°$

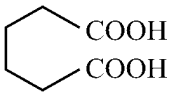
(3) $CH_3 < 1° < 2° > 3°$ (4) $CH_3 > 1° < 2° < 3°$

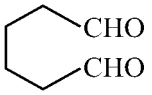
88.



Product B is :-

(1) 

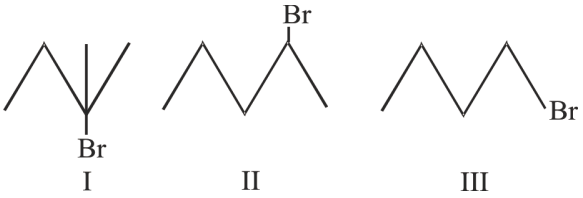
(2) 

(3) 

(4) None

Space for Rough Work

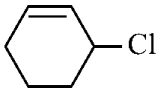
89. Dehydrobromination of the following in decreasing order :-

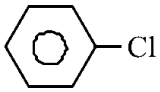


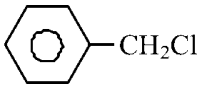
(1) III > II > I (2) I > II > III

(3) III > I > II (4) I > III > II

90. Which will give white ppt. with $AgNO_3$?

(1) 

(2) 

(3) 

(4) Both (1) & (3)

91. In F_2-generation, genotype and phenotypic ratios are same in case of :-

(1) Co-dominance

(2) Incomplete dominance

(3) Test cross

(4) All the above

92. What is antisense technology ?

(1) When a piece of RNA that is complementary in sequence is used to stop expression of a specific gene

(2) RNA polymerase producing DNA

(3) A cell displaying a foreign antigen used for synthesis of antigens

(4) Production of somaclonal variants in tissue cultures

93. Which of the following is a blood cholesterol lowering agent, produced by *Monascus purpureus* ?

(1) Cyclosporin-A (2) Statins

(3) Streptokinase (4) Amylase

94. DNA probe is used for :-

(1) Detection of gene mutation

(2) Medical genetics to find particular gene

(3) DNA finger printing

(4) All the above

95. The puffed-up appearance of dough is due to :-

(1) Growth of LAB

(2) Production of O_2 & ethanol

(3) Production of CO_2

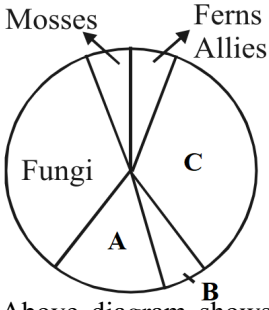
(4) Growth of *Monascus* yeast

96. Read the following statements :-
(A) Cyclosporin A is used as a clot buster
(B) Whisky, brandy & rum are produced by distillation of fermented broth
(C) NPV are the major baculoviruses used as biological control agents
(D) The biogas production technology in India in developed by ICAR
Which of the above statements are not **incorrect** ?

(1) A & B (2) B & C

(3) C & D (4) A & D

97.



Above diagram shows proportionate number of species of major taxa of plants, identify the A, B, C plant group :-

	A	B	C
(1)	Lichens	Angiosperms	Algae
(2)	Angiosperms	Algae	Lichen's
(3)	Lichens	Algae	Angiosperms
(4)	Algae	Lichens	Angiosperms

Space for Rough Work

98. According to Tilman, how species rich biological community show more stability:-

(1) Areas with more species show less year to year variation in total biomass

(2) Increased diversity contributed to higher productivity

(3) Provide resistance to invasions by alien species

(4) All of these

99. Which option is related with only monera and not related with other kingdom of R.H. Whittaker?

(1) Decomposer nature

(2) Presence of cell wall and cell membrene

(3) Well develop tissue system

(4) Nitrogen fixation ability

100. In the five kingdom classification which kingdom occupies intermediate position from phylogenetic point of view :-

(1) Monera

(2) Mycota

(3) Plantae

(4) Protista

101. Chemosynthetic bacteria helps in recycling

(1) Only Nitrogen

(2) Nitrogen and phosphorous

(3) Nitrogen, phosphorous and iron

(4) Only sulphur

102. Which of the following is <u>not a</u> feature of Bentham and Hookers classification ?

(1) It was based on actual observations

(2) It was a natural form of classification

(3) It was based on floral features

(4) It was a phylogenetic classification

103. Which of the followings feature was not used by Whittaker in his five kingdom classification ?

(1) Complexity of body / Thallus

(2) Complexity of cell

(3) Ecological role

(4) Mode of nutrition

104. There is a table given below according to Whittaker's five kingdom system. What are (A), (B) and (C) in the given table ?

Character	Monera	Protista	Fungi
Body organisation	(A)	Cellular	Multicellular or loose tissue
Cell wall	Present	(B)	Present
Sexual reproduction	Absent	Present	(C)

Options :

	(A)	(B)	(C)
(1)	Unicellular or multicellular	Absent	Absent
(2)	Multicellular or loose tissue	Present in some members	Absent
(3)	Multicellular or loose tissue	Present in all members	Absent
(4)	Only unicellular	Present in some members	Present

105. Aristotle made the classification of plants by using ?

(1) Internal morphological characters

(2) External morphological characters

(3) Histological characters

(4) Phylogenetic characters

106. In five kingdom system bacteria are included in monera but acellular organism like viruses and viroids, and lichens are included in :-

(1) Kingdom - Fungi (2) Kingdom - Animalia

(3) Kingdom - Protista (4) In no kingdom

107. *Chlorella, Chlamydomonas* and *Paramoecium, Amoeba* were earlier placed with plants and animals respectively but after Whittaker's 5 kingdom classification, they should be brought together in:-

(1) Monera (2) Protista

(3) Plantae (4) Animalia

108. Consider the following statements:-
(a) They grow in soil, on logs and tree stumps and in living plant bodies as parasites.
(b) The mycelium is branched and septate and the asexual spores are generally not found but vegetative reproduction by fragmentation is common.
(c) The sex organs are absent but plasmogamy is brought about by fusion of two vegetative or somatic cells of different strains or genotypes.
Above statements are related to the member of which class :-

(1) Phycomycetes (2) Ascomycetes

(3) Basidiomycetes (4) Deuteromycetes

109. Which of the following statements are correct?
(i) Genus comprises a group of related species.
(ii) Taxon represents a taxonomic group of individual organisms.
(iii) Family comprises a group of related genera.
(iv) Taxonomic category class includes related orders.

(1) (i), (ii), and (iv) (2) (iii) and (iv)

(3) (i), (iii) and (iv) (4) (ii), (iii) and (iv)

110. T.O. Diener discovered a

(1) free infectious DNA

(2) infectious protein

(3) bacteriophage

(4) free infectious RNA.

111. The primary cell wall is mainly made up of

(1) Lignin (2) Pectin

(3) Cellulose (4) Protein

112. *Cycas* and *Adiantum* resemble each other in having

(1) Motile sperms (2) Seeds

(3) Cambium (4) Vessels

113. Calcium oxalate crystals have been observed in some plants groups, this feature may be considered useful for classification by :-

(1) Cytotaxonomy

(2) Karyotaxonomy

(3) Chemotaxonomy

(4) Alpha taxonomy

Space for Rough Work

114. Both ovary and fruit are present in :-

(1) Pteridophyta (2) Gymnosperm

(3) Angiosperm (4) Bryophyta

115. In which of the following is a natural taxon ?

(1) Polymoniales

(2) Spermatophyta

(3) Solanum

(4) Tuberosum

116. Assertion:– Dark reactions are called biosynthetic phase of photosynthesis.
Reason:– Dark reactions do not directly depend on the presence of light but are dependent on the products of the light reaction, i.e., ATP and NADPH.

(1) Both (A) and (R) are true and (R) is the correct explanation of (A).

(2) Both (A) and (R) are true but (R) is not correct explanation of (A).

(3) Both (A) is true but (R) is false

(4) Both (A) and (R) are false.

117. Steps in non-cyclic photophosphorylation include passage of electrons along

(1) $FNR \rightarrow FD \rightarrow Cytb_6f \rightarrow PC \rightarrow Chl\text{-}a$

(2) $Chl\text{-}a \rightarrow Cytb_6f \rightarrow PC \rightarrow PS\ I \rightarrow FNR \rightarrow FD$

(3) $Chl\text{-}a \rightarrow PQ \rightarrow Cytb_6f \rightarrow PC \rightarrow PSI \rightarrow FNR \rightarrow FD$

(4) $PS\text{-}II \rightarrow PQ \rightarrow Cytb_6f \rightarrow PC \rightarrow PS\ I \rightarrow FD \rightarrow FNR$

118. Choose the correct statement from the following.

(1) F.Skoog and co-workers observed internodal segments gives callus in tomato stems.

(2) E.Kurosawa reported the symptoms of bakane disease in rice seedling.

(3) Charles Darwin and his son conducted experiments in tobacco.

(4) Miller alone crystallised the cytokinins (In 1965).

119. Statement-I: R Q value varies with nature of the respiratory substrate
Statement-II: The proportion of C-O is not the same in different respiratory substrates

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

(2) Statement-I is incorrect and Statement-II is correct

(3) Statement-I Is correct and Statement-II is incorrect

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

120. Compared to the gametophytes of the bryophytes, the gametophytes of vascular plants tends to be

(1) Larger but have smaller sex organs

(2) Larger and have large sex organs

(3) Smaller and have smaller sex organs

(4) Smaller but have larger sex organs

121. In China rose the flowers are

(1) Actinomorphic, hypogynous with twisted aestivation

(2) Actinomorphic, epigynous with valvate aestivation

(3) Zygomorphic, hypogynous with imbricate aestivation

(4) Zygomorphic, epigynous with twisted aestivation

122. The carbon dioxide acceptor in Calvin cycle of C_3 - plants is

(1) Phosphoenol Pyruvate (PEP)

(2) Ribulose 1, 5-Bisphosphate (RuBP)

(3) Phosphoglyceric Acid (PGA)

(4) Ribulose Monophosphate (RMP)

123. Which of the following plants are grown in green house by exploiting a fact that higher CO_2 leads more productivity?

(1) Tomatoes (2) Papaya

(3) Cycas (4) Pomegranate

124. Terminal cytochrome of respiratory chain which donates electrons to oxygen is

(1) cyt-b (2) cyt-c (3) cyt-a1 (4) cyt-a3

125. In photosynthetic plants internal factors are dependent on

(1) Genetic predisposition

(2) Growth of the plant

(3) Both (1) and (2)

(4) CO_2 concentration

126. C_4 plant adapted to

(1) Dry temperate regions

(2) Dry tropical regions

(3) Dry Desert

(4) Dry subtropical region

127. Chemiosmosis requires

a. A membrane
b. A proton pump
c. A proton gradient
d. ATP synthase

(1) a and b (2) a and d

(3) b and c (4) a, b, c and d

128. The placenta develops at the base of the ovary in

(1) Marigold (2) Dianthus

(3) Argemone (4) China rose

129. How many molecules of ATP and NADPH respectively are required for fixation of $3CO_2$ molecules in C_4 plants?

(1) 15 and 15 (2) 10 and 6

(3) 15 and 6 (4) 9 and 6

130. What will be the amount of DNA in meiosis-II products if meiocyte contains 48 pg DNA in G2 phase

(1) 48 pg (2) 96 pg

(3) 18 pg (4) 12 pg

131. The correct binomial name of onion

(1) Allium Cepa (2) Allium cepa

(3) allium cepa (4) allium Cepa

Space for Rough Work

132. In the life cycle of mosses, the gametophyte has two stages (A and B). These stages can be called

(1) A - Protonema B - Leafy stage

(2) A - Protonema B - Sporogonium

(3) A - Sporophyte B - Gametophyte

(4) A - Zygote ; B - Spore mother cell

133. Choose the wrong statement

(1) Gymnosperms lack tracheids in their xylem

(2) The cell wall of collenchyma is made up of cellulose. hemicellulose and pectin

(3) The first formed primary xylem elements are called protoxylem

(4) Gymnosperms have albuminous cells and sieve cells in their phloem

134. Assertion :– The alternate type of phyllotaxy is the arrangement of leaves in which a single leaf arises at each node in alternate manner.
Reason :– The alternate type of phyllotaxy is seen in China rose and mustard plant.

(1) Both (A) and (R) are true and (R) is the correct bexplanation of (A).

(2) Both (A) and (R) are true but (R) is not correct explanation of (A).

(3) Both (A) is true but (R) is false.

(4) Both (A) and (R) are false

135. Perisperm differs from endosperm in

(1) Being a haploid tissue

(2) It formed from integument

(3) Being a diploid tissue

(4) Its formation by fusion of secondary nucleus with several sperms

136. Which is not true with respect to the vision of cockroach ?

(1) Mosaic vision. (2) Superposition vision.

(3) More sensitivity. (4) Less resolution.

137. Which is incorrect for circulatory system of cockroach?

(1) Blood vessels are poorly developed.

(2) Plasma, haemocytes, erythrocytes are present.

(3) Heart chamber possess ostia on either side.

(4) Paired alary muscles are present.

138. Which is a correct match for the animal and its common name :

(1) *Obelia* – Jelly fish

(2) *Taenia* – Tapeworm

(3) *Neries* – Earthworm

(4) *Pila* – Pearl oyster

139. A vertebrate which doesn't possess jaws :

(1) *Balanoglossus* (2) *Petromyzon*

(3) *Salamandra* (4) *Scoliodon*

140. Select the correct pair.

(1) Arthropoda - Silver fish

(2) Echinodermata - Cuttle fish

(3) Pisces - Jelly fish

(4) Mollusca - Star fish

141. Select the incorrect statement for *Pteropus*

(1) Mammary glands are present

(2) External ear and pinna present

(3) It is oviparous

(4) It is a flying mammal

142. In forelimb and hindlimbs of frogs how many digits are present respectively :-

(1) Five and four (2) Four and five

(3) Five and five (4) Four and four

143. **Assertion :-** The frog have a pair of simple eyes which are spherical structure situated in the orbit of the skull.

Reason :- Frog have different types of sense organs, namely organs of touch, taste, smell, vision and hearing.

(1) Both Assertion & Reason are True but Reason is not a correct explanation of the Assertion.

(2) Both Assertion & Reason are True & the Reason is a correct explanation of the Assertion.

(3) Assertion is True but the Reason is False.

(4) Both Assertion & Reason are False.

144. How many statements is correct ?

(a) Lymph is the most commonly used body fluid for the higher organism

(b) Mollusca and chordates have a closed circulatory system

(c) Adrenal medullary hormones can also increase cardiac output

(1) 0 (2) 1 (3) 2 (4) 3

145. **Assertion :** Emphysema is a chronic disorder of Alveoli.

Reason : One of the major causes of Emphysema is cigarette smoking in which alveolar walls are damaged due to which respiratory surface is increased.

(1) Assertion and reason both are true and the reason is correct explanation of assertion.

(2) Assertion and reason both are true and the reason is not correct explanation of assertion.

(3) Assertion is true but reason is wrong.

(4) Assertion and reason both are wrong.

146. **Assertion (A):** Kidney transplantation is the ultimate method in the correction of renal failures.

Reason (R): A functioning kidney is used in transplantation from a donor, preferably a close relative.

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

(2) Both (A) and (R) are true and (R) is not the correct explanation of (A)

(3) (A) is true but (R) is false

(4) (A) is false but (R) is true

Space for Rough Work

147. Find out the incorrect statements and choose the **correct** option accordingly.
(I) Lymph is an important carrier for nutrients hormones, etc..
(II) Lymph and interstitial fluid have no larger proteins and RBCs
(III) Exchange of the nutrients and gases, etc, between the blood and cells always occurs through tissue fluid
(IV) Interstitial fluid has the same mineral distribution as that of the plasma.

(1) I and II

(2) II and III

(3) IV and III

(4) None of the above

148. How many given statements are corrects
(1) The AV node and Bundle of His constitute the only electrical link between the atria and the ventricles.
(2) The Bundle of His transfer signal for ventricular contraction
(3) SA node is called pacemaker of heart because it delay impulse for 0.1 sec.
(4) The featus haemoglobin has more affinity for oxygen than adult haemoglobin.

(1) Two (2) One

(3) Four (4) Three

149. The Hb content per 1000 ml of blood of a normal healthy human adult is

(1) 5-11 g (2) 12-16 g

(3) 25-30 g (4) 120-160 g

150. Read the following four statements (A–D) :-
(A) An adult male manufactures over 10^{12} to 10^{13} sperm cells each day.
(B) The glandular tissue of each breast is divided into 15–20 mammary lobes
(C) Presence or absence of hymen is not a reliable indicator of virginity
(D) Sperm formation continues even in old men, but formation of ovum ceases in women around the age of 50 years
How many of the above statements are right :-

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

151. RNA interference is useful for :-

(1) Micropropagation

(2) Cellular defence

(3) Cell proliferaction

(4) Cell differentiation

152. (A) *Australopithecus* - semi erect posture
(B) *Homo habilis* - tool maker
(C) *Homo erectus* - discovery of fire
(D) *Homo neanderthalensis* - ritual burial
How many of the following statements for human evolution are correct :-

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

153. Select the incorrect statement w.r.t. properties of hormones.

(1) Required in large quantities to be effective

(2) They can affect growth and differentiation in our body

(3) Highly specific in nature

(4) They do not provide energy

154. Under the influence of which hormone, interstitial cells in testes secrete androgens?

(1) FSH

(2) LH

(3) GH

(4) ACTH

155. The outline of principal event of urination is given below in unordered manner-

I. Stretch receptors on the wall of urinary bladder send signal to the CNS

II. The bladder fills with urine and becomes distended

III. Micturition

IV. CNS passes on motor messages to initiate the contraction of smooth muscles of bladder and simultaneous relaxation of urethral Sphincter

The correct order of steps for urination is-

(1) I ⟶ II ⟶ III ⟶ IV

(2) IV ⟶ III ⟶ II ⟶ I

(3) II ⟶ I ⟶ IV ⟶ III

(4) III ⟶ II ⟶ I ⟶ IV

156. Select the incorrect match :-

(1)	Transgenic mice	Polio vaccine
(2)	Rosie cow	α-lactalbumin gene
(3)	Micro propagation	Gene therapy
(4)	PCR	Molecular diagnosis

157. Match the column–I with column–II ?

	Column - I		**Column - II**
(i)	Golden rice	(A)	Increased shelf life
(ii)	Flavr savr tomato	(B)	Insulin
(iii)	E.coli	(C)	Vitamin A
(iv)	Bt. brinjal	(D)	Insect resistant

(1) (i) – C, (ii) – A, (iii) – B, (iv) – D

(2) (i) – B, (ii) – A, (iii) – C, (iv) – D

(3) (i) – B, (ii) – C, (iii) – A, (iv) – D

(4) (i) – D, (ii) – A, (iii) – B, (iv) – C

158. Which statement is wrong about enzyme :

(1) Most enzyme are proteinaceous although some are RNA molecule

(2) Most coenzymes are vitamins

(3) Prosthetic group is loosely bound to the protein part of an enzyme.

(4) A competitive enzyme inhibitor alters the Km but does not alter the V_{max} of the enzyme.

Space for Rough Work

159. Read the following statement and choose correct option :-

I. Recombinant DNA technology is used to improve crop plants by increasing their productivity, by making them more nutritious and by developing disease resistance

II. Bt cotton is resistant to bollworm infestation

III. *Bacillus thuringiensis* is not harmed by self Cry protein because of its occurrence as protoxin (inactive)

IV. Protoxin Cry protein is changed into active Cry protein in the stomach of insects due to acidic pH in stomach

(1) All are correct

(2) I and IV are correct

(3) Only IV is false

(4) All are false

160. pBR322, which is frequently used as a vector for cloning gene in *E.coli* is a/an :-

(1) Original bacterial plasmid

(2) Modified bacterial plasmid

(3) Viral genome

(4) Transposon

161. Which of the following is not the use of transgenic animal ?

(1) Study of normal physiology and development

(2) Testing of vaccine safety

(3) Production of biological products

(4) Molecular diagnosis

162. Which enzyme was targeted during the first clinical gene therapy given in 1990 to a 4 year old girl?

(1) Monamine oxidase

(2) Tyrosine oxidase

(3) Adenosine deaminase

(4) Pyruvate dehydrogenase.

163. Which is not an application of modern biotechnology?

(1) Production of Humulin

(2) Developing a DNA vaccine

(3) Gene therapy

(4) Production of cheese and butter

164. **Assertion :** ELISA is based on the principle of antigen antibody interaction.

Reason : Pathogen infection is usually detected by presence of antigens or detection of antibodies synthesized against the pathogen.

(1) If both the assertion and the reason are true and the reason is a correct explanation of the assertion

(2) If both the assertion and reason are true but the reason is not a correct explanation of the assertion

(3) If the assertion is true but the reason is false

(4) If both the assertion and reason are false

165. MSH is secreted in man by which part of pituitary ?

(1) Anterior Pituitary

(2) Middle lobe of pituitary

(3) Posterior lobe of pituitary

(4) None of these

166. Secondary rise in 'STH' leads to :

(1) Gigantism

(2) Acromegali

(3) Cushings syndrome

(4) Graves disease

167. Aldosterone helps in the :-

(1) Conservation of sodium and water and elimination of potassium

(2) Elimination of sodium, potassium and water

(3) Conservation of sodium, potassium and water

(4) Conservation of potassium and water and elimination of sodium

168. If a female can not produce labour pain during parturition, then what step should be taken by doctor ?

(1) Wait and watch

(2) Oxytocin injections given

(3) Progesterone is given

(4) Cesarian done

169. The adrenal cortex secretes many hormones, commonly called as corticoids. All of the following functions are of corticoids except one –

(1) Carbohydrate metabolism.

(2) Regulate the balance of water and electrolytes

(3) Development of secondary sex characters

(4) Uterine contractions during parturition

170. 'Marsupial mole' and kangaroo are the examples of :-

(1) Divergent evolution

(2) Convergent evolution

(3) Adaptive radiation

(4) Both (1) & (3)

171. Select the incorrect statements :-

(A) The essence of Darwinian theory of evolution is natural selection.

(B) Evolution is a directed process in the sense of determinism.

(C) The geological history of earth is not related with the biological history of earth.

(D) During evolution the rate of appearance of new forms is linked to the life span.

(1) A and B

(2) B and C

(3) A and D

(4) B and D

Space for Rough Work

172. Which of the following events can changed frequency of genes and alleles in future generations:-

(1) Mutation

(2) Gene recombination

(3) Gene flow

(4) All of the above

173. Which of following antibody will be produced during allergic reaction ?

(1) IgA (2) IgE (3) IgM (4) IgD

174. Saliva of mouth and tears of eye are included under which barrier ?

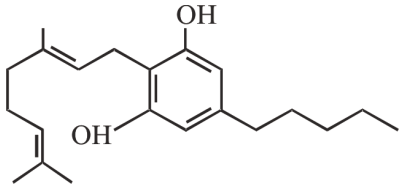
(1) Physiological barrier

(2) Physical barrier

(3) Cellular barrier

(4) Cytokine barrier

175. Identify the skeletal structure represented in the diagram and select the drug that represent it and the main function performed by it.



(1) LSD – Synthetic drug – Hallucinogen

(2) Cannabinoid – Bhang – Affects cardio vascular system

(3) Opioid – Morphine – Pain killer

(4) Cocaine – Caffeine – Stimulant

176. A particular drug after administration causes depression and slows down body functions. This drug is obtained from.....plant and receptors for this are present in .....

(1) *Papaver somniferum*, CNS & GIT

(2) *Cannabis sativa*, Kidney

(3) *Erythroxylum coca*, CNS

(4) *Atropa belladona*, Cardiovascular system

177. Which of the following side effect is not caused by performance enhancing anabolic steroids in male sports person ?

(1) Increase in size of testicles

(2) Decreased sperm count

(3) Breast enlargement

(4) Increased aggressiveness

178. In a female undergoing tubectomy, which one of the following event will not occur?

(1) Menstruation cycle

(2) Ovulation

(3) Fusion of sperm and ovum

(4) Formation of graafian follicle

179. Which may be a complication problem of STD, when it is not timely detected–

(1) PID (2) Still Birth

(3) Infertility (4) All of these

180. Contraceptive oral pills help in birth control by :-

(1) Killing the sperms in uterus

(2) Forming barriers between sperms and ova.

(3) Preventing ovulation

(4) Killing the ova

SPACE FOR ROUGH WORK

YOUR SUCCESS STARTS HERE

ADMISSION OPEN (JEE/NEET)

MOTION

PRE-ENGINEERING | **PRE-MEDICAL** | **Olympiads (Class 6th to 10th)**
JEE (Main+Advanced) | NEET | Boards

CORPORATE OFFICE
"Motion Education" 394, Rajeev Gandhi Nagar, Kota 324005 (Raj.)
Toll Free : 18002121799 | www.motion.ac.in | Mail : info@motion.ac.in

MOTION LEARNING APP

Scan Code for Demo Class