

Competishun

52/6, Opposite Metro Mas Hospital, Shipra Path, Mansarovar

Date: 12/12/2024

Time: 3 hours

Max. Marks: 30

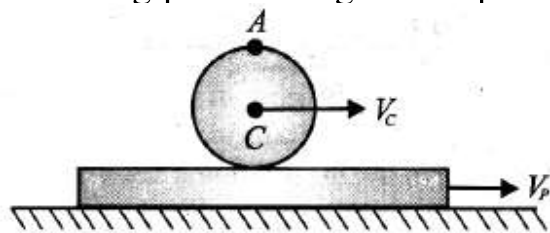
UTS-1_MT-9 (24-25)

Physics

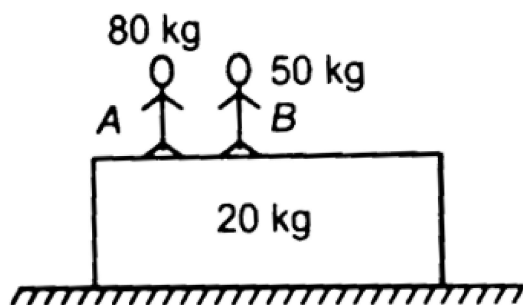
Single Choice Question

- Q1** A photodetector is made of a semiconductor having a forbidden energy gap $E_g = 0.7$ eV. What is the maximum wavelength detected by it?
- a) 1768 \AA b) $1768 \text{ }\mu\text{m}$ c) 1768 nm d) 7000 \AA
- Q2** The magnetic susceptibility of a diamagnetic substance
- a) Increases with temperature b) Decreases with temperature
- c) Does not vary with temperature d) First decreases and then increases
- Q3** Twenty-two grams of CO_2 at 27°C is mixed with 16 g of O_2 at 37°C . The temperature of the mixture is
- a) 32°C b) 27°C c) 37°C d) 30.5°C
- Q4** The energy that should be added to an electron, to reduce its de-Broglie wavelengths from 10^{-10} m to $0.5 \times 10^{-10} \text{ m}$, will be
- a) four times the initial energy b) thrice the initial energy
- c) equal to the initial energy d) twice the initial energy

- Q5** In the following figure, the velocities are in ground frame and the cylinder is performing pure rolling on the plank, velocity of point 'A' would be

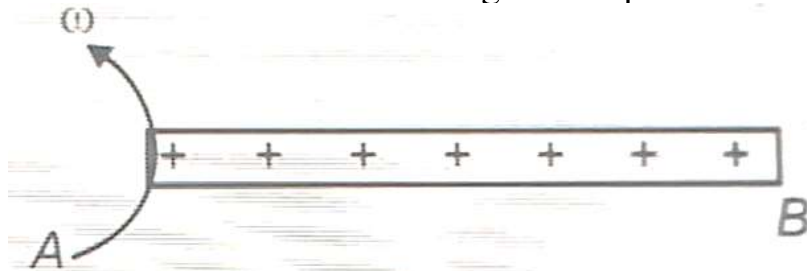


- a) $2V_C$ b) $2V_C + V_P$ c) $2V_C - V_P$ d) $2(V_C - V_P)$
- Q6** Two persons, A of mass 80 kg and B of mass 50 kg are standing on a horizontal platform of mass 20 kg. The platform is on horizontal frictionless surface and is initially at rest



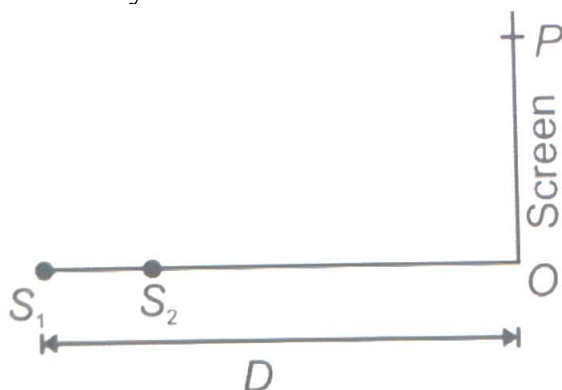
If both A and B jump (horizontally) from platform simultaneously and in same direction with 2 m/s each, what would be the velocity of centre of mass of the system of persons and platform?

- a) 1.4 m/s b) 3.2 m/s c) 2.8 m/s d) Zero
- Q7** A non-uniformly charged conducting rod is being rotated about an end A with angular speed ω . Linear charge density of the rod is given by $\lambda = kx^2$; where k is a constant and x is distance from A. Magnetic dipole moment of this arrangement is

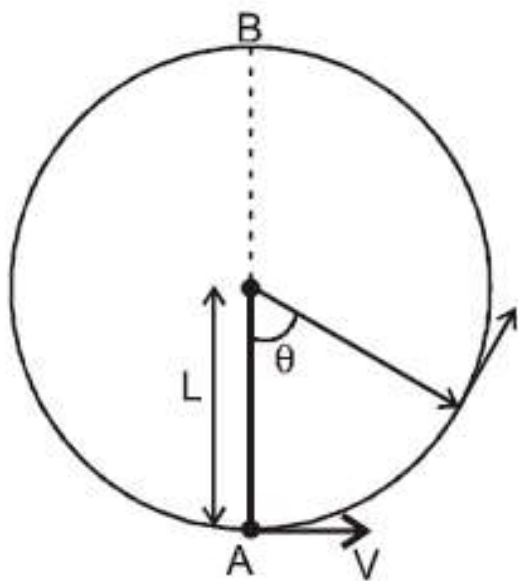


- a) $\frac{k\omega L^5}{10}$ b) $\frac{k\omega L^2}{3}$ c) $\frac{k\omega L^4}{4}$ d) Zero

- Q8** Two coherent sources S_1 and S_2 , vibrating in phase, emit light of wavelength λ . The separation between them is $\sqrt{2}\lambda$. The light is collected on screen placed at a distance $D(>> \lambda)$ from the slit S_1 . Find the position of point P on the screen from point O if the intensity at P is maximum



- a) D b) $\frac{D}{3}$ c) $\sqrt{3}D$ d) $\frac{D}{2}$
- Q9** A bob of mass M is suspended by a massless string of length L . The horizontal velocity V at position A is just sufficient to make it reach the point B. The angle θ at which the speed of the bob is half of that at A, satisfies Figure :



- a) $\theta = \frac{\pi}{4}$ b) $\frac{\pi}{4} < \theta < \frac{\pi}{2}$ c) $\frac{\pi}{2} < \theta < \frac{3\pi}{4}$ d) $\frac{3\pi}{4} < \theta < \pi$

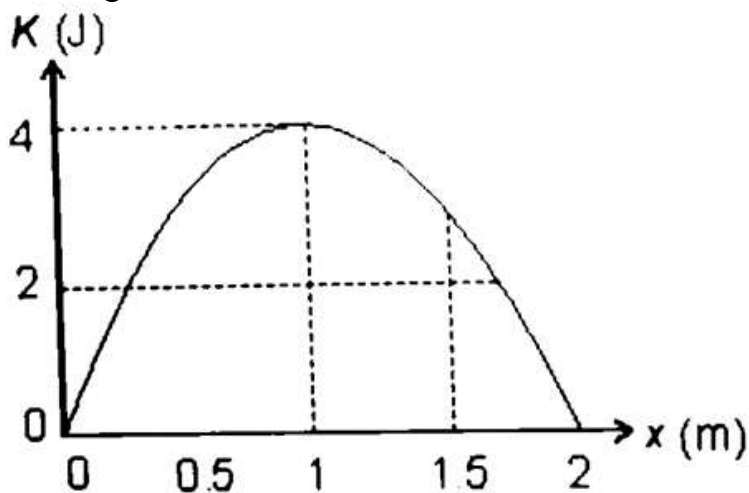
Q10 Two wires of the same material and radii r and $2r$ respectively are welded together end to end. The combination is used as a sonometer wire and kept under tension T . The welded point is midway between the two bridges. When stationary waves are set up in the composite wire, the joint is a node. Then the ratio of the number of loops formed in the thinner to thicker wire is

- a) 2 : 3 b) 1 : 2 c) 2 : 1 d) 5 : 4

Q11 If coefficient of mutual induction of primary and secondary coil of transformer is 5 H and current in primary coil is given as $I = 10\sin 4000\pi t$ in SI units. Then peak value of emf induced in secondary coil is

- a) 5×10^4 volt b) $\pi \times 10^5$ volt c) $2\pi \times 10^5$ volt d) 5×10^6 volt

Q12 A block of mass m lies on a horizontal frictionless surface and is attached to one end of a horizontal spring (with spring constant k) whose other end is fixed. The block is initially at rest at the position where the spring is unstretched ($x = 0$) when a constant horizontal force \vec{F} in the positive direction of the x -axis is applied to it. A plot of the resulting kinetic energy of the block versus its position x is shown in figure. What is the magnitude of \vec{F} ?



- a) 2 N b) 4 N c) 8 N d) 16 N

Q13 Capacitors C_1 and C_2 ($C_1 > C_2$) are connected to a battery, first individually, then in series. If q_1 , q_2 and q_3 are the charges stored on them, then

- a) $q_1 = q_2 = q_3$ b) $q_1 = q_2 < q_3$ c) $q_1 > q_2 = q_3$ d) $q_1 > q_2 > q_3$

Q14 The minimum and maximum distances of a satellite revolving around earth are $2R$ and $6R$ respectively, where R is radius of earth. The maximum velocity of satellite is

- a) $\sqrt{\frac{GM}{R}}$ b) $\sqrt{\frac{3GM}{R}}$ c) $\sqrt{\frac{3GM}{2R}}$ d) $\frac{1}{2}\sqrt{\frac{3GM}{R}}$

Q15 A block of mass $m = 1\text{ kg}$, performs oscillations across its mean position, along x-axis under the influence of force $F(x) = 2 - 3x \text{ N}$ where x is the position. Motion is starting from rest from origin. Select incorrect option

a) The particle performs oscillations about $x = \frac{2}{3}m$

b) The time period of motion is $\frac{2\pi}{\sqrt{3}} \text{ sec}$.

c) Maximum velocity is $\frac{2}{\sqrt{3}} \text{ ms}^{-1}$

d) Velocity at $x = 1 \text{ meter}$ is 0.5 ms^{-1}

Q16 The velocity of a particle moving along y-axis is given by $v = \frac{2}{3}t^{3/2} \text{ ms}^{-1}$ where 't' is in seconds. Then acceleration of the particle is

a) $\left(\frac{3}{2}v\right)^{\frac{1}{3}}$

b) $\left(\frac{2}{3}v\right)^{\frac{1}{3}}$

c) $\left(\frac{3}{2}v\right)^{\frac{2}{3}}$

d) $\left(\frac{2}{3}v\right)^{\frac{2}{3}}$

Q17 A stationary swimmer S inside a liquid of refractive index μ_1 is at a distance d from a fixed point P inside a liquid. A rectangular block of width t and refractive index μ_2 ($\mu_2 < \mu_1$) is now placed between S and P. Now S will observe P to be at a distance

a) $d - t \left[\frac{\mu_1}{\mu_2} - 1 \right]$

b) $d - t \left[1 - \frac{\mu_2}{\mu_1} \right]$

c) $d + t \left[1 - \frac{\mu_2}{\mu_1} \right]$

d) $d + t \left[\frac{\mu_1}{\mu_2} - 1 \right]$

Q18 A force produces an acceleration of 10 m/s^2 in mass m_1 and an acceleration of 5 m/s^2 in mass m_2 . Find the acceleration produced if the same force is applied to an object whose mass is $\frac{m_1 m_2}{m_1 + m_2}$.

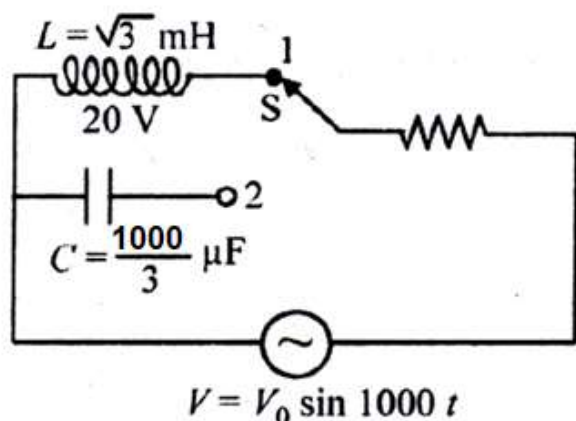
a) 10 m/s^2

b) 5 m/s^2

c) 20 m/s^2

d) 15 m/s^2

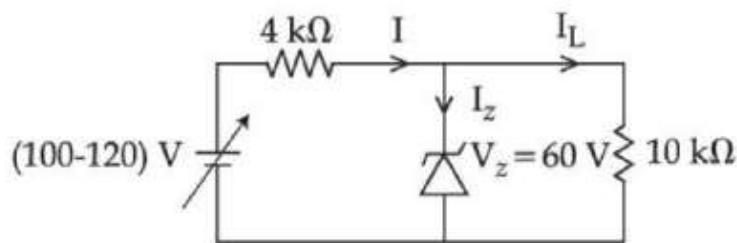
- Q19** In the given AC circuit, when switch S is at position 1, the source emf leads currents by $\pi/6$. Now, if the switch is at position 2, then



- a) current leads source emf by $\pi/4$ b) current leads source emf by $\pi/3$
 c) source emf leads current by $\pi/4$ d) source emf leads current by $\pi/3$
- Q20** A resistance R carries a current i . The power lost to the surroundings is $\lambda(\theta - \theta_0)$. Here λ is a constant, θ is temperature of the resistance and θ_0 is the temperature of the atmosphere. If the thermal coefficient of resistance is α , then the ratio of change in resistance to the original value of the resistance in final condition is
- a) $\frac{\alpha}{\lambda} i^2 R$
 b) $\alpha \lambda i R$
 c) $\frac{\alpha i^2 R}{2\lambda}$
 d) Proportional to the length of the resistance wire

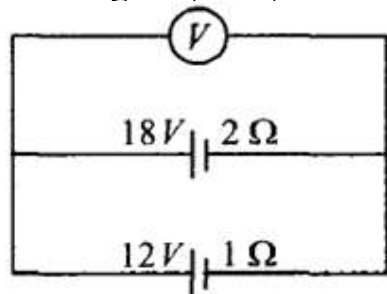
Numerical

- Q21** In the circuit shown below, maximum zener diode current will be ____ mA



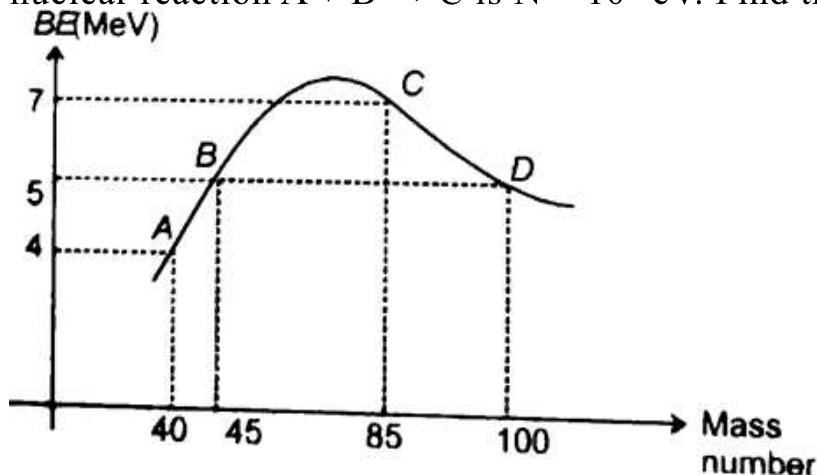
- Q22** Two small spheres each of mass 10 mg are suspended from a point by threads 0.5 m long. They are equally charged and repel each other to a distance of 0.20 m. The charge on each of the sphere is $\frac{a}{21} \times 10^{-8} \text{ C}$. The value of 'a' will be _____. [Given $g = 10 \text{ ms}^{-2}$]

- Q23** The batteries, one of emf 18 volt and internal resistance 2Ω and other of emf 12 volt and internal resistance 1Ω , are connected as shown. The voltmeter V will record a reading of (in V)



- Q24** The surface of water in a water tank of cross section area 750 cm^2 on the top of a house is $h(\text{m})$. above the tap level. The speed of water coming out through the tap of cross section area 500 mm^2 is 30 cm/s . At that instant, $\frac{dh}{dt}$ is $x \times 10^{-3} \text{ m/s}$. The value of x will be _____.

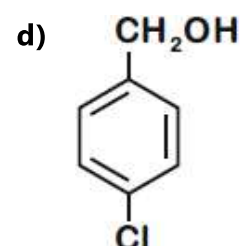
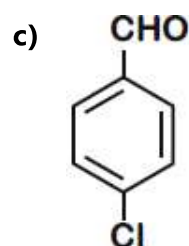
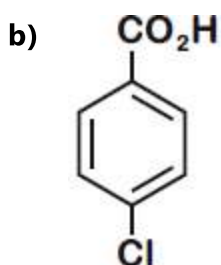
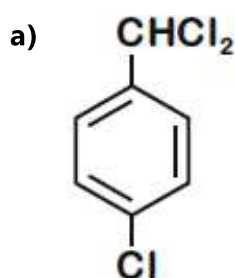
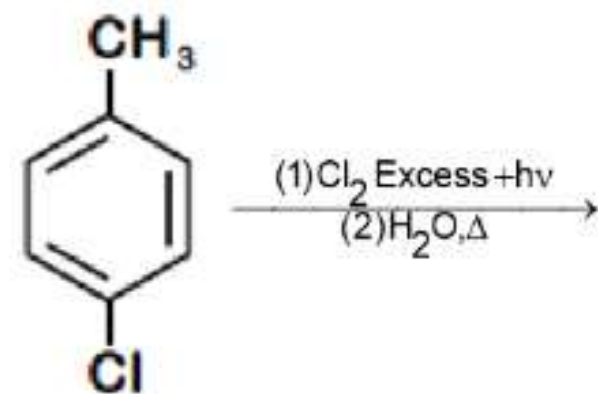
- Q25** Binding energy per nucleon versus mass number curve for nuclei is shown in figure. A, B, C and D are four nuclei indicated on the curve. The Q value of following nuclear reaction $A + B \rightarrow C$ is $N \times 10^7 \text{ eV}$. Find the value of N.



Chemistry

Single Choice Question

Q26 The major product of the following reaction is:



Q27 A saturated solution of XCl_3 has a vapour pressure 17.20 mm Hg at 20°C , while pure water vapour pressure is 17.25 mm Hg. Solubility product (K_{sp}) of XCl_3 at 20°C is:

- a) 9.8×10^{-2} b) 10^{-5} c) 2.56×10^{-6} d) 7×10^{-5}

Q28 For a complex reaction $A \xrightarrow{k} \text{products}$

$$E_{a_1} = 180 \text{ kJ/mol}; E_{a_2} = 80 \text{ kJ/mol}; E_{a_3} = 50 \text{ kJ/mol}$$

Overall rate constant k is related to individual rate constant by the equation

$$k = \left(\frac{k_1 \cdot k_2}{k_3} \right)^{2/3} . \text{ Activation energy (kJ/mol) for the overall reaction is:}$$

- a) 100 b) 43.44 c) 150 d) 140

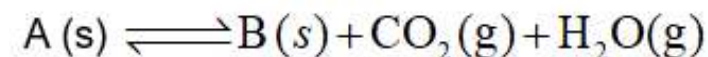
Q29 One mole of a non-ideal gas undergoes a change of state from (1.0 atm, 3.0 L, 200 K) to (4.0 atm, 5.0 L, 250 K) with a change in internal energy (ΔU) = 40 L-atm. The change in enthalpy of the process in L-atm :

- a) 43 b) 57 c) 42 d) None of these

Q30 In the neutralization process of H_3PO_4 and NaOH, the number of buffers formed will be

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

Q31 Solid A decomposes as



If the total pressure is 0.2 bar at 420 K, what is the standard free energy change for the given reaction ($\Delta_r G^\circ$)?

- a) 840 kJ/mol b) 3.86 kJ/mol c) 6.98 kJ/mol d) 16.083 kJ/mol

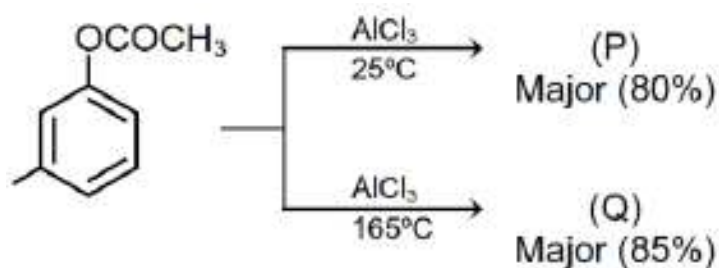
Q32 The complex that can show fac-and mer isomers is

- a) $[\text{CoCl}_2(\text{en})_2]$ b) $[\text{Co}(\text{NH}_3)_3(\text{NO}_2)_3]$
c) $[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$ d) $[\text{Co}(\text{NH}_3)_4\text{Cl}_2]^+$

Q33 The de Broglie wavelength of an electron in the 4th Bohr orbit is

- a) $4\pi a_0$ b) $6\pi a_0$ c) $8\pi a_0$ d) $2\pi a_0$

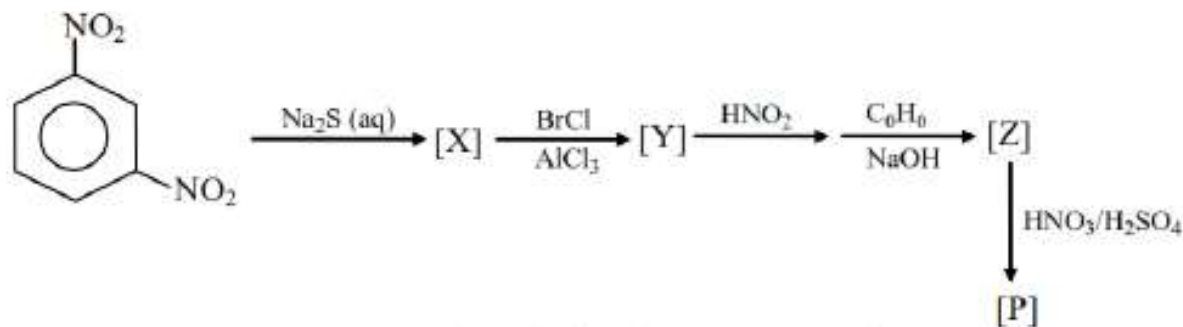
Q34



P and Q are respectively –

- a) $\text{P} = \text{3-methoxyphenol}$, $\text{Q} = \text{4-methoxyphenol}$
- b) $\text{P} = \text{4-methoxyphenol}$, $\text{Q} = \text{3-methoxyphenol}$
- c) $\text{P} = \text{3-methoxyphenol}$, $\text{Q} = \text{4-methoxyphenol}$
- d) $\text{P} = \text{4-methoxyphenol}$, $\text{Q} = \text{3-methoxyphenol}$

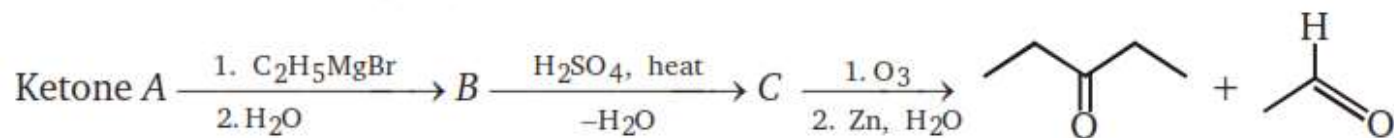
Q35



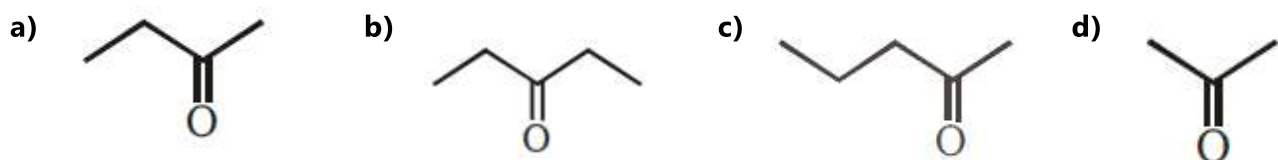
The correct statement is :

- a) $\text{Y} = \text{3-amino-4-chloronitrobenzene}$
- b) $\text{Z} = \text{3-bromo-4-nitrophenylbenzene}$
- c) $\text{P} = \text{3-bromo-4-nitrophenylbenzene}$
- d) $\text{X} = \text{3-aminoaniline}$

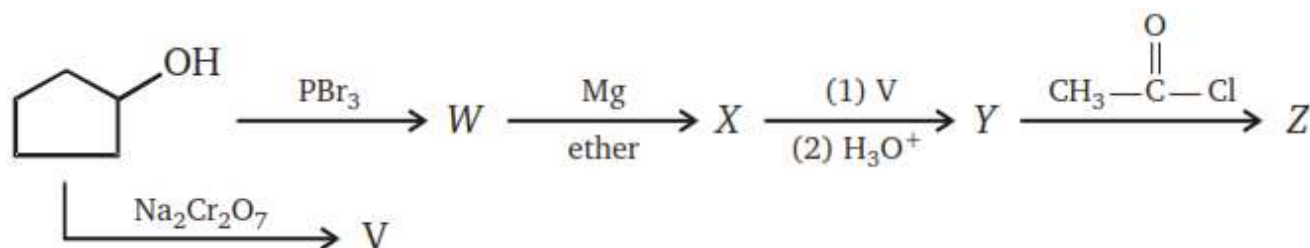
Q36 Consider the following sequence of reactions.



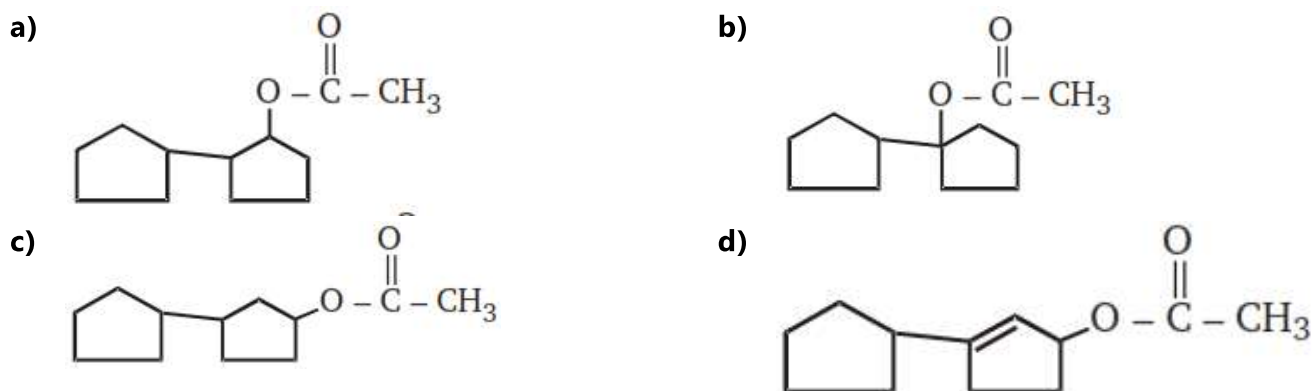
The ketone (A) is :



Q37



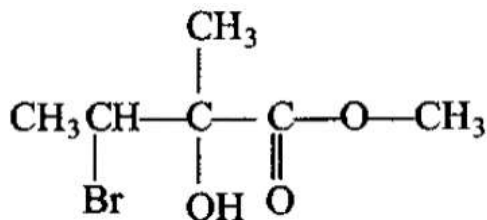
Product Z of above reaction is



Q38 A nucleoside is :

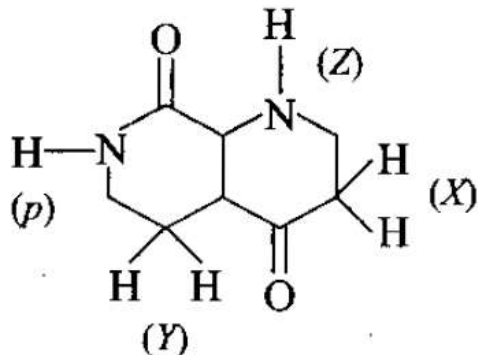
- a) base + sugar
b) base + phosphate
c) sugar + phosphate
d) base + sugar + phosphate

Q39 Correct IUPAC name of the compound



- a) Methyl-3-bromo-2-hydroxy-2-methylbutanoate
- b) Methyl-2-bromo-3-hydroxy-3-methylbutanoate
- c) Methyl-2-bromo-1-hydroxybutanoate
- d) Methyl-3-bromo-2-hydroxy-2-methylbutylester

Q40 Which of the indicated H in the following is most acidic?



- a) X
- b) Y
- c) Z
- d) p

Q41 Which of the following statement is correct.

- a) Nucleophiles have an unshared electron pair and can make use of this to react with an electron rich species.
- b) AgNO_3 increases the rate of solvolysis in S_{N}^1 reaction of alkyl halide.
- c) Inversion of configuration occurs at the carbon undergoing S_{N}^1 reaction.
- d) Aryl halides are more reactive towards nucleophilic substitution reaction as compared to alkyl halide.

Q42 Aluminium is usually found in +3 oxidation state. In contrast, thallium exists in +1 and +3 oxidation states. This is due to

- a) Lattice effect
- b) Lanthanoid contraction
- c) Diagonal relationship
- d) Inert pair effect

Q43 The standard electrode potential of a metal-metal ion ($\text{Ag} | \text{Ag}^+$) and metal-sparingly soluble salt anion ($\text{Ag} | \text{AgCl} | \text{Cl}^-$) are related as :

a)
$$E^\circ_{\text{Ag}^+|\text{Ag}} = E^\circ_{\text{Cl}^-|\text{AgCl}|\text{Ag}} + \frac{RT}{F} \ln K_{\text{sp}}$$

b)
$$E^\circ_{\text{Cl}^-|\text{AgCl}|\text{Ag}} = E^\circ_{\text{Ag}^+|\text{Ag}} + \frac{RT}{F} \ln K_{\text{sp}}$$

c)
$$E^\circ_{\text{Cl}^-|\text{AgCl}|\text{Ag}} = E^\circ_{\text{Ag}^+|\text{Ag}} - \frac{RT}{F} \ln \frac{[\text{Cl}^-]}{K_{\text{sp}}}$$

d)
$$E^\circ_{\text{Cl}^-|\text{AgCl}|\text{Ag}} = E^\circ_{\text{Ag}^+|\text{Ag}} - \frac{RT}{F} \ln \frac{K_{\text{sp}}}{[\text{Cl}^-]}$$

Q44 CrO_3 dissolves in aqueous NaOH to give :

- a) $\text{Cr}_2\text{O}_7^{2-}$ b) CrO_4^{2-} c) $\text{Cr}(\text{OH})_3$ d) $\text{Cr}(\text{OH})_2$

Q45 10 litre of a non linear polyatomic ideal gas at 127°C and 2 atm pressure is suddenly released to 1 atm pressure and the gas expanded adiabatically against constant external pressure, the final temperature and volume of the gas respectively are :

- a) $T = 350\text{K}$; $V = 17.5 \text{ L}$ b) $T = 300\text{K}$; $V = 15\text{L}$
c) $T = 250 \text{ K}$; $V = 12.5 \text{ L}$ d) None of these

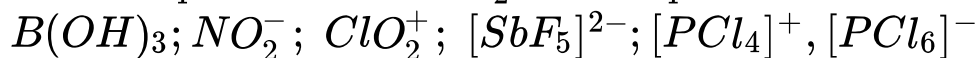
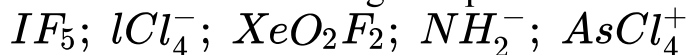
Numerical

Q46 In order to oxidise a mixture of one mole of each of FeC_2O_4 , $\text{Fe}_2(\text{C}_2\text{O}_4)_3$, FeSO_4 and $\text{Fe}_2(\text{SO}_4)_3$ in acidic medium, the number of moles of KMnO_4 required is

Q47 If the activation energy of a reaction is 80.9 kJ mol^{-1} , the fraction of molecules at 700 K , having enough energy to react to form products is e^{-x} . The value of x is _____.
(Rounded off to the nearest integer)
[Use $R = 8.31 \text{ J K}^{-1} \text{ mol}^{-1}$]

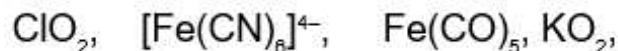
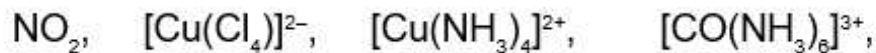
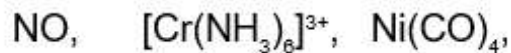
Q48 0.092g of a compound with molecular formula $\text{C}_3\text{H}_8\text{O}_3$ on reaction with an excess of CH_3MgI give 67.00 mL of CH_4 at STP. The number of active hydrogen atoms present in a molecule of the compound is :

Q49 Consider the following compounds



What is total number of compounds in (above compounds) which central atom used their all 3 p- orbitals in hybridisation.

Q50 How many of the following species are paramagnetic :



Mathematics

Single Choice Question

Q51 $\sin [2 \cos^{-1}(-3/5)]$ is equal to

- a) $\frac{6}{25}$ b) $\frac{24}{25}$ c) $\frac{4}{5}$ d) $\frac{-24}{25}$

Q52 The length of the perpendicular from the point $(2, -1, 4)$ on the straight line,

$$\frac{x+3}{10} = \frac{y-2}{-7} = \frac{z}{1}$$

- a) Greater than 3 but less than 4 b) Greater than 2 but less than 3
c) Greater than 4 d) Less than 2

Q53 α, β are roots of the equation $\lambda (x^2 - x) + x + 5 = 0$. If λ_1 and λ_2 are the two values of λ for which the roots α, β are connected by the relation $\frac{\alpha}{\beta} + \frac{\beta}{\alpha} = 4$, then the value of $\frac{\lambda_1}{\lambda_2} + \frac{\lambda_2}{\lambda_1}$ is -

- a) 150 b) 254 c) 180 d) 1022

Q54 The mean of five observations is 5 and their variance is 9.20. If three of the given five observations are 1, 3 and 8, then a ratio of other two observations is

- a) 4 : 9 b) 6 : 7 c) 10 : 3 d) 5 : 8

Q55 The number of real solutions of $x^7 + 5x^3 + 3x + 1 = 0$ is equal to _____.

- a) 0 b) 1 c) 3 d) 5

Q56 The number of four-digit numbers strictly greater than 4321 that can be formed using the digits 0, 1, 2, 3, 4, 5 (repetition of digits is allowed) is :

- a) 360 b) 306 c) 288 d) 310

Q57 If $\int_0^{4\pi} \ln |13 \sin x + 3\sqrt{3} \cos x| dx = 4\pi \ln k$, then the value of k is _____

- a) 4 b) 5 c) 6 d) 7

- Q58** For the two positive numbers a, b , if a, b and $\frac{1}{18}$ are in a geometric progression, while $\frac{1}{a}, 10$ and $\frac{1}{b}$ are in an arithmetic progression, then, $16a + 12b$ is equal to _____.
- a) 2 b) 3 c) 4 d) -3
- Q59** Axis of a parabola lies along x-axis. If its vertex and focus are at distances 2 and 4 respectively from the origin, on the positive x-axis then which of the following points does not lie on it?
- a) (4, -4) b) $(5, 2\sqrt{6})$ c) $(6, 4\sqrt{2})$ d) (8, 6)
- Q60** The sum of the co-efficients of all even degree terms in x in the expansion of $(x + \sqrt{x^3-1})^6 + (x - \sqrt{x^3-1})^6, (x > 1)$ is equal to :
- a) 24 b) 32 c) 26 d) 29
- Q61** The pair of lines joining origin to the intersection of the curve $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ by the line $\ell x + my + n = 0$ are coincident if -
- a) $a^2 \ell^2 + b^2 m^2 = n^2$ b) $\frac{a^2}{\ell^2} + \frac{b^2}{m^2} = \frac{1}{n^2}$
- c) $\frac{\ell^2}{a^2} + \frac{m^2}{b^2} = n^2$ d) None of these
- Q62** If S_1 and S_2 are respectively the sets of local minimum and local maximum points of the function, $f(x) = 9x^4 + 12x^3 - 36x^2 + 25, x \in R$, then :
- a) $S_1 = \{-2\}; S_2 = \{0, 1\}$ b) $S_1 = \{-2, 1\}; S_2 = \{0\}$
- c) $S_1 = \{-1\}; S_2 = \{0, 2\}$ d) $S_1 = \{-2, 0\}; S_2 = \{1\}$
- Q63** For some $\theta \in \left(0, \frac{\pi}{2}\right)$, if the eccentricity of the hyperbola, $x^2 - y^2 \sec^2 \theta = 10$ is $\sqrt{5}$ times the eccentricity of the ellipse, $x^2 \sec^2 \theta + y^2 = 5$, then the length of the latus rectum of the ellipse, is :
- a) $2\sqrt{6}$ b) $\frac{2\sqrt{5}}{3}$ c) $\frac{4\sqrt{5}}{3}$ d) $\sqrt{30}$

- Q64** Function $f(x) = f(x) = \begin{cases} x \sin x; & 0 \leq x < \frac{\pi}{2} \\ \frac{\pi}{2} \sin(\pi + x); & \frac{\pi}{2} \leq x < \pi \end{cases}$ then-
- a) $\lim_{x \rightarrow \frac{\pi}{2}} f(x)$ does not exist b) $\lim_{x \rightarrow \frac{\pi}{4}} f(x)$ does not exist
- c) Discontinuous at $x = \frac{\pi}{2}$ d) Both (1) & (3)
- Q65** If $I = \int (\sqrt{\tan x} + \sqrt{\cot x}) dx$, then I equals:
- a) $\sqrt{2} \sin^{-1}(\sin x + \cos x) + C$ b) $\sqrt{2} \cos^{-1}(\sin x - \cos x) + C$
- c) $\sqrt{2} \sin^{-1}(\sin x - \cos x) + C$ d) $\sqrt{2} \cos^{-1}(\sin x + \cos x) + C$
- Q66** Area of the region bounded by the curves $y = x^2 + 2$, $y = -x$, $x = 0$ and $x = 1$ is -
- a) $\frac{17}{6}$ b) $\frac{5}{16}$ c) $\frac{3}{16}$ d) None of these
- Q67** The curve amongst the family of curves represented by the differential equation, $(x^2 - y^2) dx + 2xy dy = 0$ which passes through (1, 1) is
- a) A hyperbola with transverse axis along the x-axis.
- b) A circle with centre on the y-axis.
- c) An ellipse with major axis along the y-axis.
- d) A circle with centre on the x-axis.
- Q68** If $|z^2 - 1| = |z|^2 + 1$ then z lies on a -
- a) circle b) parabola c) ellipse d) None of these
- Q69** If for two events A, B ; $P(A \cup B) = \frac{6}{7}$, $P(\bar{A}) = \frac{5}{7}$, $P(B) = \frac{4}{7}$, then A, B are
- a) independent events b) mutually exclusive
- c) equally likely d) forming an exhaustive system
- Q70** If A satisfies the equation $x^3 - 5x^2 + 4x + k = 0$, then A^{-1} exists if -
- a) $k \neq 1$ b) $k \neq 3$ c) $k \neq -1$ d) None

Numerical

- Q71** Two newspapers A and B are published in a city. It is known that 25% of the city population reads A and 20% reads B while 8% reads both A and B. Further, 30% of those who read A but not B look into advertisements and 40% of those who read B but not A also look into advertisements, while 50% of those who read both A and B look into advertisements. Then the percentage of the population who look into advertisements is p then what is the value of 10p?
- Q72** If $f : \mathbb{R} \rightarrow \mathbb{R}$ satisfying $f(0) = 1$, $f(1) = 2$ and $f(x+2) = 2f(x) + f(x+1)$ then $f(6)$ is
- Q73** Let the unit vectors \vec{a} , \vec{b} , \vec{c} be the position vectors of the vertices of a triangle ABC. If \vec{F} is the position vector of the mid point of the line segment joining its orthocentre and centroid then $(\vec{a} - \vec{F})^2 + (\vec{b} - \vec{F})^2 + (\vec{c} - \vec{F})^2 =$
- Q74** $\lim_{\theta \rightarrow 0} \frac{1 - \cos \theta}{\sin^2 2\theta} = \frac{1}{k}$ then k is
- Q75** Value of $y = \left[(0.36)^{\log_{0.25} \left(\frac{1}{3} + \frac{1}{3^2} + \frac{1}{3^3} + \dots \text{upto } \infty \right)} \right]$ is- (where $[\cdot]$ is greatest integral function)

Answer Key

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	C	C	A	B	C	D	A	A	D	B
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	C	C	D	D	D	A	D	D	A	A
Que.	21	22	23	24	25	26	27	28	29	30
Ans.	9	20	14	2	21	B	D	D	B	A
Que.	31	32	33	34	35	36	37	38	39	40
Ans.	D	B	C	D	B	B	B	A	A	D
Que.	41	42	43	44	45	46	47	48	49	50
Ans.	B	D	B	B	A	2	14	3	8	7
Que.	51	52	53	54	55	56	57	58	59	60
Ans.	D	A	D	A	B	D	D	B	D	A
Que.	61	62	63	64	65	66	67	68	69	70
Ans.	A	B	C	D	C	A	D	D	B	D
Que.	71	72	73	74	75					
Ans.	139	64	3	8	0					