Q: Which among the following is an example of a solid solution?

Q: Auminium chloride exists as a dimer, Al_2Cl_6 in the solid state as well as in the solution of a non-polar solvent such as benzene. When dissolved in water, it gives?

Q: Find the structure of the product formed when propanone is reacted with methylmagnesium bromide followed by hydrolysis-

Q: Which of the following compounds is not coloured?

Q: What is the example of camphor in N_2 gas?

Q: Considering the basic strength of amines in aqueous solution, which one has the smallest pKb value?

Q: Why is there an income in the atomic radius of transition elements at the end of the period?

Q: Which of the following gives a positive Fehling solution test?

Q: H₂N-CH₂-CH₂-NH₂ serves as

Q: Find the chemical structure of 3-oxo-pentanal

Q: A solution of Ni(NO₃)₂ is electrolysed between platinum electrodes using 0.1 feraday

electricity. How many moles of Ni will be deposited at the cathode?

Q: What is the correct geometry of [NiCl₄]²⁻ complex?

Q: Most common types of secondary structures of proteins are?

Q: When a light of wavelength λ strikes a photosensitive surface, the kinetic energy of the

ejected electron is E. If the kinetic energy is to be changed to 2E the the wavelength changes to

- $\lambda'.$ What will be the relation between λ and $\lambda'?$
- Q: Before using the tangent galvanometer, its coil is set in?
- Q: The dimensional representation of magnetic flux is?
- Q: What factor doesn't depend on the resistance of a conductor?

Q: In the photoelectric effect what determines the maximum velocity of the electron created with the collector?

Q: Js is the unit of?

Q: What is the total work done on moving a test charge on an equipotential surface?

Q: Which is the following forms a virtual and erect image for all positions of the object?

Q: If a positively charged sphere is taken close to another unchanged sphere then which of the following statements is true?

Q: What would be the angle of incidence for a light ray having zero reflection angle?

Q: Gravitational force is _____?

Q: What does the de Broglie equation state?

Q: The time varying electric and magnetic fields and space

Q: As the doping to a pure semiconductor increases, the bulk resistance of the semiconductor

Q: The nuclear radius is of the order?

Q: What is the geometric shape of the wavefront that originates when a plane wave passes through a convex lens?

Q: Which law is used to analyse circuits?

Q: Two beams of red and violet colour are made to pass separately through a prism (the angle of the prism is 60°). In the position of the minimum deviation, the angle of refraction will be?

Q: Calculate the de Broglie wavelength associated with the electron which has a kinetic energy of 5 eV

Q: The deflection θ is related to the electric current I in the galvanometer by the relation

Q: The reversed biased pn junction has _

Q: a cell has an emf of 6 v, internal resistance of 1 ohm and a current of 0.5 A passing through

it. Candidates were asked to find the resistance of the circuit.

Q: Yukawa proposed that the cause of nuclear force between two nucleons is?

Q: An integral was given and its value was asked.

Q: Let A = {1,2,3}, B = {1,3,5}. If relation R from A to B is given by {(1,3), (2,5), (3,3)} the R^{-1} is?

Q: Suppose α , β , γ are the roots of some equation given the value of another equation was asked.

Q: What is the median of samples 5, 5, 11, 9, 8, 5, 8?

Q: Two matrices were given and the value of X was asked.

Q: Two vector equations were given, and the values of a, b, and c were asked such that the two vector equations become equal to each other.

Q: Two vectors were given and the angle between then was asked.

Q: The value to $tan^2\theta - sin^2\theta$ is

Q: Given roots as α =1, β =2, γ =3 then the cubic equation is

Q: The slope of the curve y^2 -xy-3x=1 at the point (0, -1) is

Q: The area between the axis and one arc of the curve $y = \sin x$ is

Q: The number of solutions to the equation $(1-i)^x = 2^x$ is

Q: The roots of the quadratic equation $3x^2-10x+3=0$ are

Q: The triangular field PQR, MN is parallel to the side QR. If PM = 56m, PQ = 70 mand MN = 30m, then find QR.

Q: The coordinate of the centre of the triangle whose vertices are (0,6), (8,12) and (8,0) is

Q: The numerator of a fraction is increased by 20% and the denominator is decreased by 20%, then the value of the original fraction is.

Q: Vectors a, b, c are inclined on each other at an angle of 60° and |a| = |b| = 2 and |c| = 2, then (2a+3b-c)-(4a-6b+10c) =

Q: The area of a triangle with vertices (-3, 0), (3, 0), and (k, 0)is 9 sq. units. the value of k will be?

Q: The coordinates of the centroid a triangle whose vertices are (0, 6), (8, 12), and (8, 0) is

Q: Let U = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}, P = {1, 2, 5}, Q = {6, 7}, Then P \cap Q' is?

Q: If the distribution is moderately asymmetrical, the mean, median, and mode obey the empirical relationship by Karl Pearson as?

Q: If x=1+i, then the value of the expression x2-4x3+7x2-6x+3 is

