

VITEEE 2021 Memory Based Questions and Answers for 29 May Slot 3

Ques. Bakelite is a thermosetting resin. It is formed by the condensation of

Ans. phenol and formaldehyde

Ques. Which one of the following has zero dipole moment?

Ques. The intermediate obtained in Reimer Tiemann reaction is

Ans. Carbene

Ques. Proton and electron are heated at 25⁰C and then cooled in the process of cooling

Ques. The rest mass of photon is

Ans. Zero

Ques. A cylindrical wire is stretched to increase its length by 10%. Percentage increase in its resistance is:

Ans. 21%

Ques. If you place 0°C ice into 0°C water in an insulated container, what will the net result be? Will there be less ice and more liquid water, or more ice and less liquid water, or will the amounts stay the same?

Ans. The amount of water and ice will remain the same

Ques. 1 atomic mass unit is

Ans. 1.67377×10^{-27} kilogram

Ques. Two identical metal block with charges +2Q and -Q are separated by some distance, and exert a force F on each other. The force between them then will be.

Ques. A 12V battery, a 12 Ω resistor and a 4 Ω resistor are connected. The voltage across 12 Ω resistor is_ that across

Ques. A straight section PQ of a circuit lies along the x-axis from $x = -a/2$ to $x = +a/2$ and carries a steady current i. The magnetic field due to the section PQ at a point $x = +a$ will be

Ans. Equal to zero

Ques. If p is the hole concentration, n is the electron concentration and n_i is the intrinsic concentration then at thermal equilibrium, then the mass action in semiconductors states that

Ques. Area of the greatest rectangle that can be inscribed in the ellipse $x^2/a^2 + y^2/b^2 = 1$ is

Ans. $2ab$

Ques. The number integral values in the range of the function $f(x) = \sin^{-1} x - \cot^{-1} x + x^2 + 2x + 6$ is

Ans. 8

Ques. If $|a + b| < |a - b|$, then the angle between a and b can lie in interval

Ans. $(\pi/2, 3\pi/2)$

Ques. Perpendicular distance of the point P (3,5,6) from Y-axis is

Ans. $3\sqrt{2}$ sq unit

Ques. The solution of the differential equation $dy/dx = e^{x-y} = 1$ is

Ans. $e^{-x+y} = x+c$

Ques. The equation of the curve passing through (3, 9) satisfies $dy/dx = x + 1/x^2$

Ans. $6xy = 3x^3 + 29x - 6$

Ques. The largest positive form of the harmonic progression whose first two terms are $2/5$ and $12/23$

Ans. 6