

JEE Main July 20 Shift 1 Chemistry Questions & Answers

A: Glass corners turns smooth when heated below melting point
R: Viscosity of glass is decreases with temperature

Ans. A - True
B - False

How many mole of CH_3MgBr are required to convert ethoxyethanoate to 2-methyl propan-2-ol?

Ans. 2

Concentrated nitric acid + P_4O_{10} gives an oxide which is

Ans. Acidic

The number of lone pair on the central atom of I_3^-

Ans. 3

~~orlon~~
~~Aldol~~ has which monomeric unit from the following

Ans. Acrylonitrile

Find ~~second~~ ^{second} excitation energy of Li^{+2} ion

Ans +13.6

The Azimuthal quantum number of valence electron of Ga^{+1}

Ans. Zero

Green chemistry used in day to day life

- A. Cleaning cloth with water
- B. Using liquid H_2O_2 in drying cloths**
- C. Using tetrachloroethane in laundries
- D. Using Chlorine in bleaching paper

Which of the following metal is purified by distillation process

Ans. Zinc

The hybridisation of xenon in XeOF_4 is

Ans. sp^3d^2

Different properties are seen in which pair

Ans. $\text{B}(\text{OH})_3$; $\text{Al}(\text{OH})_3$

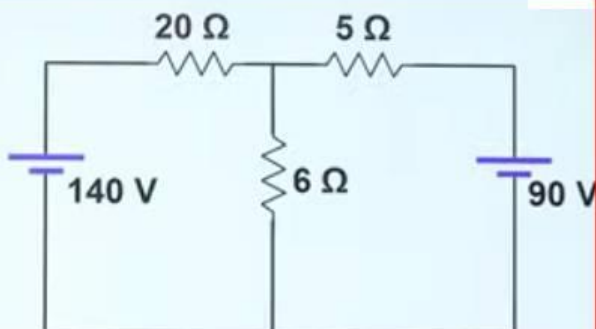
The vapour pressure of benzene and methylbenzene are 70 and 20 respectively. Find the mole fraction of benzene in vapour phase, if equimolar mixture was present **Ans. $35/45$**

s-Block element having formula of oxide MO_2 , which is yellow and paramagnetic, is **Ans. Potassium (K)**

JEE Main July 20 Shift 1 Physics Questions and Answers

Find the current through 6 ohm ?

Ans. 10 amp



Deuteron and alpha particle having same K.E. in magnetic field ratio of radius of Deuteron and alpha ? **Ans. (under root 2) : 1**

Body = 800 kg; Banked at 30° ; Moving at max speed; $\mu_s = 0.2$; $\cos 30^\circ = 0.87$; Find the Normal Reaction ? **Ans. 1600 g**

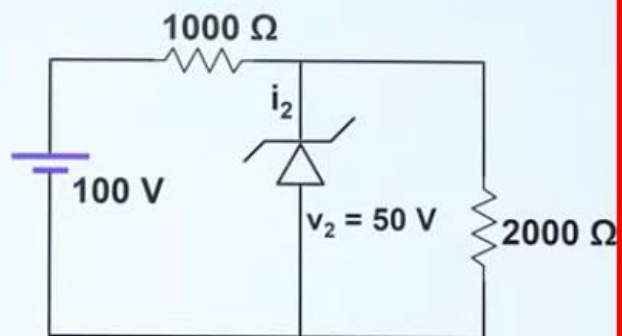
If $A \cdot B = A \times B$; Find $|A - B|$

A. $\sqrt{A^2 + B^2} - \sqrt{2AB}$

B. $\sqrt{A^2 + B^2} + \sqrt{2AB}$

Find i_2 ?

- A. 5 mA
- B. 1 mA
- C. 15 mA
- D. 25 mA



A rod moving from 0 to $2b$ magnetic field 0 to b , 3 graphs given identify them. Electric flux, Power dissipated, emf ?

Simultaneous Reaction, Half life 1400, 700. Find time t when it becomes $n/3$. **Ans. $1400/3 \ln 3$**

Tension T_1 to T_2 , length l_1 to l_2 . Find Original length. [MCQ]

A charge Q is divided into q and $Q - q$. Find the relation between q and Q such that repulsion between them is maximum.

Bird is flying in northeast direction with $v = 4t^2$ wind from north to south with 1 m/s. Find displacement of bird in 3 sec? **Ans. 15 m**

A graph was given for weight vs distance, when object moves from earth to moon, $g_{\text{earth}} = 10 \text{ m/s}^2$, $g_{\text{moon}} = 4 \text{ m/s}^2$, mass = 10, Choose the correct graph ?

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JEE Main July 20 Shift 1 Maths Questions and Answers

1 All possible words with or without meaning were formed using all the letters of the word 'EXAMINATION'. The probability that 'M' appears at fourth position is :

(1) $\frac{2}{11}$

(2) $\frac{1}{11}$

(3) $\frac{4}{11}$

(4) $\frac{8}{11}$

Ans. (2)

2 If a cricket team consist of 15 players have 6 batsmen , 7 Ballers and 2 wicket keepers then the number of ways in which cricket team formed with atleast 4 batsmen, 5 ballers and 1 wicket keeper

(1) 567

(2) 525

(3) 462

(4) 777

Ans. (4)

3 Tangent drawn at a point P(2,2) to parabola $y^2 = 2x$ cuts x-axis at point Q and normal drawn at point P(2,2) to parabola cut parabola again at point R then area of ΔPQR is

(1) 25

(2) $\frac{25}{2}$

(3) $\frac{15}{2}$

(4) 50

Ans. (2)

4. Coefficient of x^{256} in the expansion of $(1 - x)^{101}(x^2 + x + 1)^{100}$ is

(1) ${}^{100}C_{86}$

(2) ${}^{100}C_{85}$

(3) ${}^{100}C_{84}$

(4) ${}^{100}C_{83}$

Ans. (2)

5. The value of $\lim_{x \rightarrow 0} (2 - \cos x \sqrt{\cos 2x})^{\frac{x^2+2}{x}}$ is

Ans. 1

6. If the focal chord $y = mx + c$ of parabola $y^2 = -64x$ is also the tangent to the circle $(x+10)^2 + y^2 = 4$ then absolute value of $4\sqrt{2}(m + c)$ is

Ans. 34