

**JEE Main 17 March 2021 Shift 1 Memory-Based Questions – CollegeDekho, Vedantu,
Grade Up**

The kinetic energy and potential energy of a particle executing SHM will be equal when displacement (amplitude = A) is

A. $A\sqrt{\frac{2}{3}}$

B. $\frac{A}{2}$

C. $\frac{A}{\sqrt{2}}$

D. $A\sqrt{2}$

Ans. C

A particle moving with α (acc.) and then deceleration with β to come at rest. If total time lapse 't' then what is the distance covered in terms of t, α and β .

A. $\frac{2\alpha\beta}{\alpha + \beta} t^2$

B. $\frac{\alpha\beta}{2(\alpha + \beta)} t^2$

C. $\frac{4\alpha\beta}{\alpha + \beta} t^2$

D. $\frac{\alpha\beta}{4(\alpha + \beta)} t^2$

Ans. B

2021 Question Paper Solutions (17th March Shift 1) | JEE 2021 Question Paper | Vedantu S...

Two non reacting gases CH_4 of mass 6.4 g and CO_2 of mass 8.8 gm is mixed in a vessel of volume 10 litre at 27°C . The pressure in KPa is ?

Two identical rods with conductivity k_1 , k_2 joined in series. What is the equivalent conductivity.

Ans. $\frac{2k_1k_2}{k_1 + k_2}$

An electron of mass m and a photon have same energy E .
The ratio of de Broglie wavelength associated with then is

A. $\frac{1}{c} \left(\frac{E}{2m} \right)^{1/2}$

B. $\left(\frac{E}{2m} \right)^{1/2}$

C. $2(2mE)^{1/2}$

D. $\frac{1}{c} \left(\frac{2m}{E} \right)^{1/2}$

Ans. A

Two gases of degree of freedom f_1, f_2 temp. T_1 and T_2 moles n_1, n_2 . What is temperature on mixing

Ans.
$$\frac{f_1 n_1 T_1 + n_2 f_2 T_2}{n_1 f_1 + n_2 f_2} = T$$

The colloid in which gas is the dispersed phase and solid is the dispersion medium :

- ☐ A Gel
- ☒ B Solid phase
- ☐ C Aerosol
- ☐ D Foam

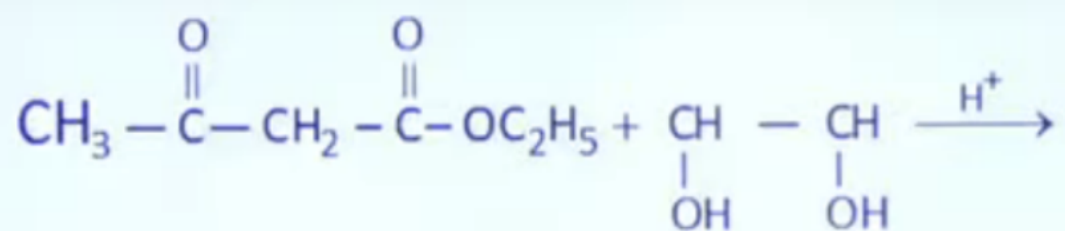
Benzene chloride with NaOH give phenoxide ion. What is the temperature and pressure of this reaction.

OK Temperature : 623 K
Pressure : 300 atm

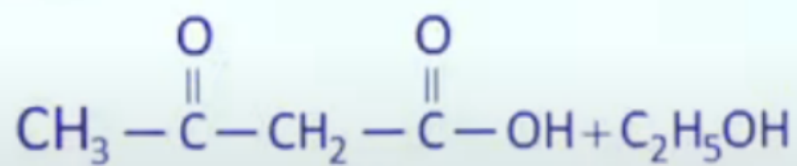
A divalent cation having atomic no. 25. Calculate the spin only magnetic moment.

Ans. 5.91 B.M.

≈ 6 B.M.



Ans.



Colloidal of gas in solid

A. Aerosol

B. Emulsion

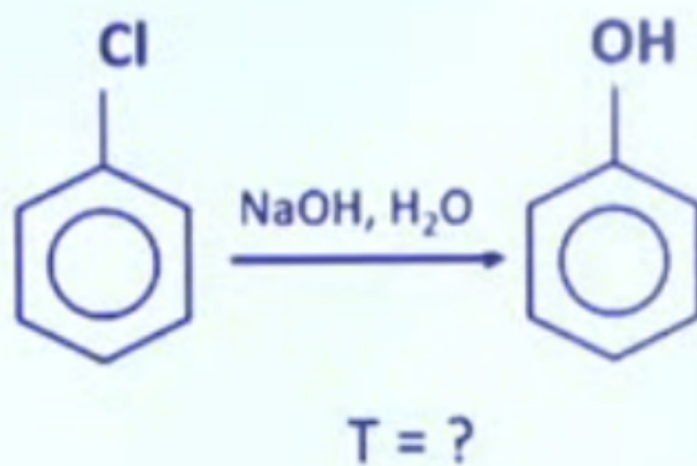
C. Solid foam

D. None of the above

Find solubility of a particular gas where

$k_H = 8 \times 10^{-4}$ and $p = 20 \text{ kpa}$

Ans. 2.5×10^7



Ans. $T = 350^{\circ}\text{C}$

For a first order reaction, 32% reaction left after 570 sec. Find k in $[k \times 10^{-3}]$

Ans. 2

Order of conductivity of Li^+ , Na^+ , K^+ , Rb^+ , Cs^+ in aqueous medium

Ans. $\text{Cs}^+ > \text{Rb}^+ > \text{K}^+ > \text{Na}^+ > \text{Li}^+$

Atom having 3 single bond and 2 lone-pair

Ans. T-shape

If an electron is moving in n th orbit of H-atom, then it's velocity is-

A. $V \propto \frac{1}{n^2}$

B. $V \propto \frac{1}{n}$

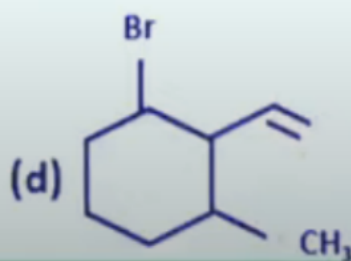
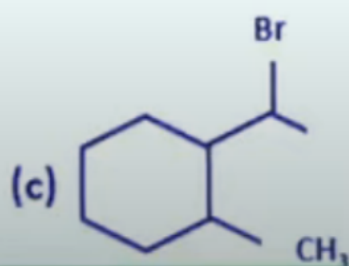
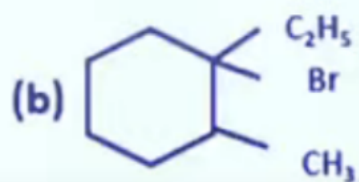
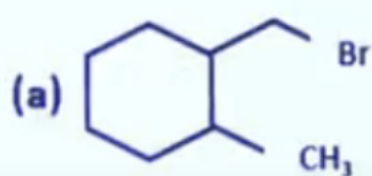
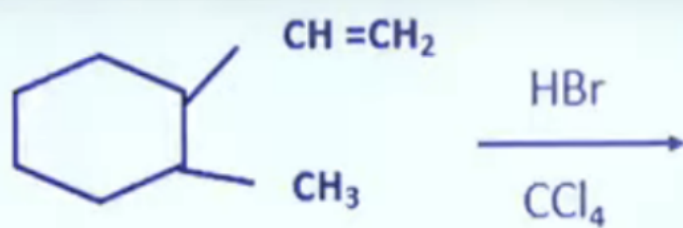
C. $V \propto n$

D. $V \propto n^2$

Ans. B

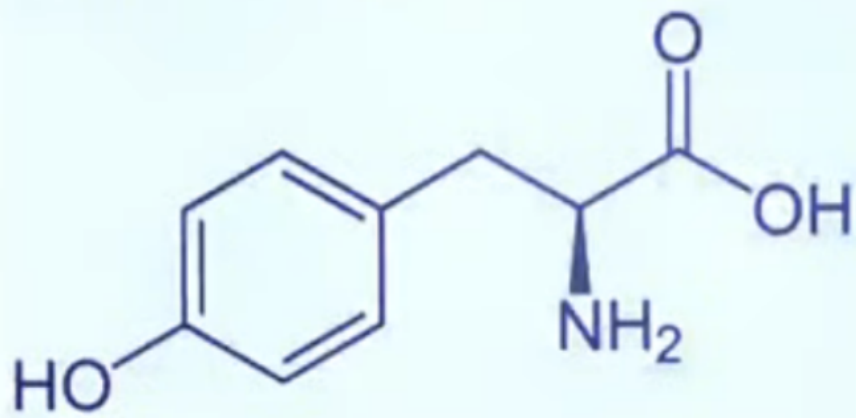
IUPAC name of mesityl oxide

Ans. 4-methyl pent-3-en-2-one



Ans. C

structure of tyrosine



Which of the following is not a Lewis base

A. NF_3

B. PCl_5

C. SF_4

D. ClF_3

Answer: C

More Questions to be Added Shortly – Keep Checking Below Link

JEE Main 2021 Question Papers	JEE Main 2021 Paper 1 (B.Tech) Answer Key	JEE Main March 2021 Question Paper PDF
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Also Check

JEE Main 2021 Chemistry Question Paper & Answer Key	JEE Main 2021 Physics Question Paper & Answer Key	JEE Main 2021 Maths Question Paper & Answer Key
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