

JEE Main 2024 Question Paper Jan 29 Shift 1 (B.E./B.Tech)

JEE Main Physics Questions

Ques 1. The voltage applied across the resistance R is 200 ± 5 and current in resistance is 20 ± 0.2 then find % error in resistance.

- A. 3.5 %
- B. 5 %
- C. 7 %
- D. 3 %

Ans. A

JEE Main Chemistry Questions

Ques 1. Which of the following pairs will be formed by the decomposition of KMnO_4 ?

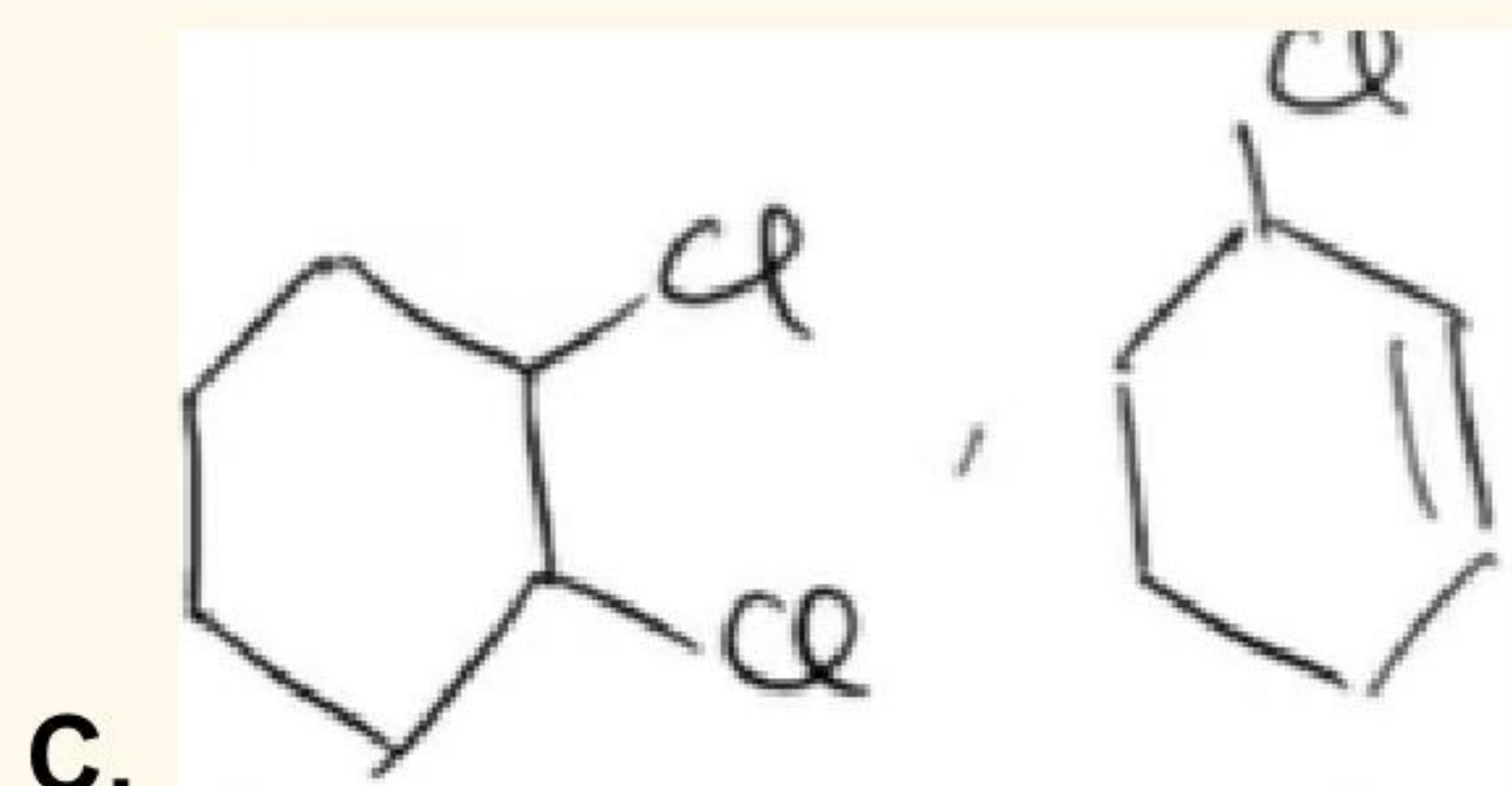
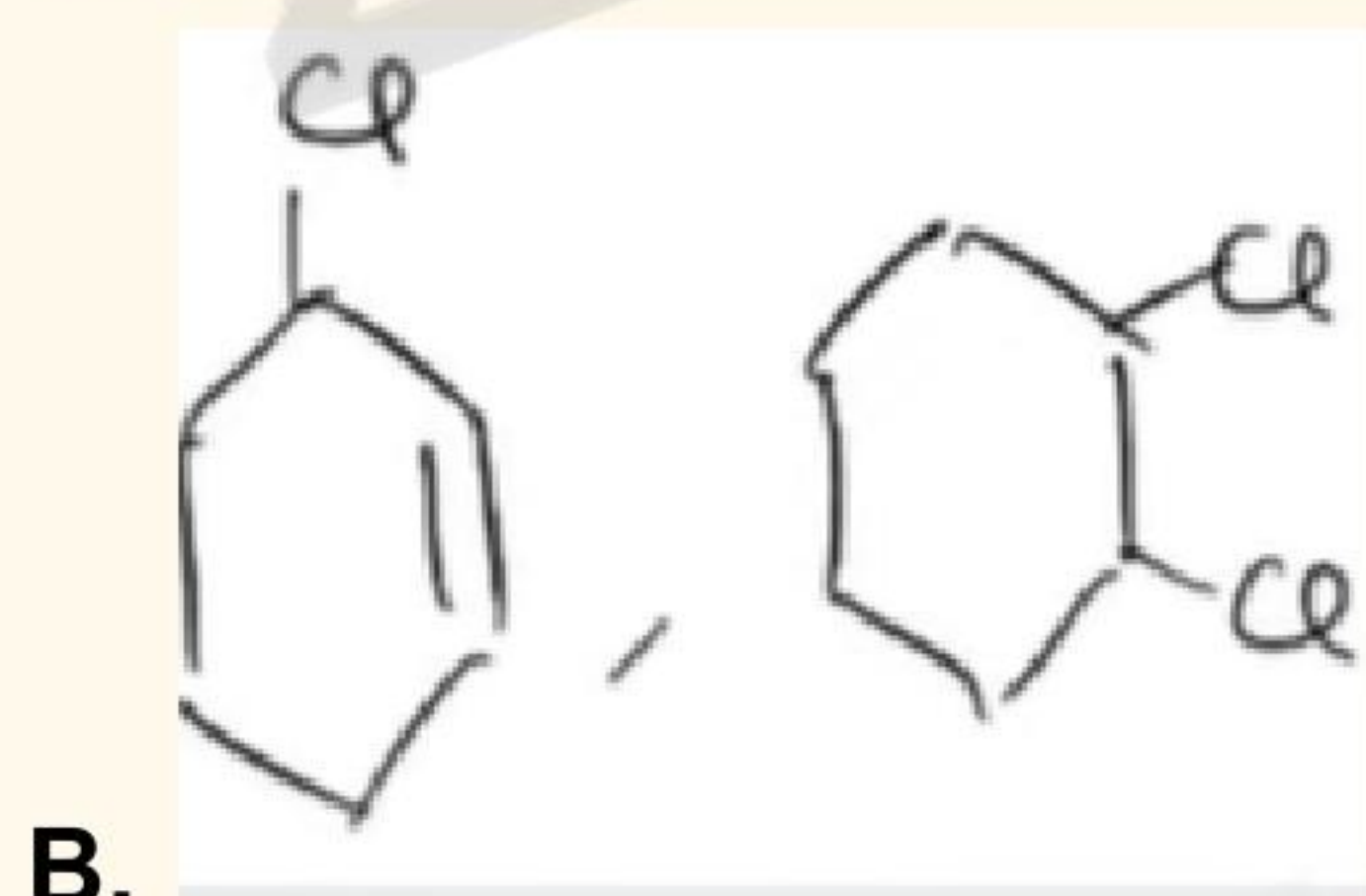
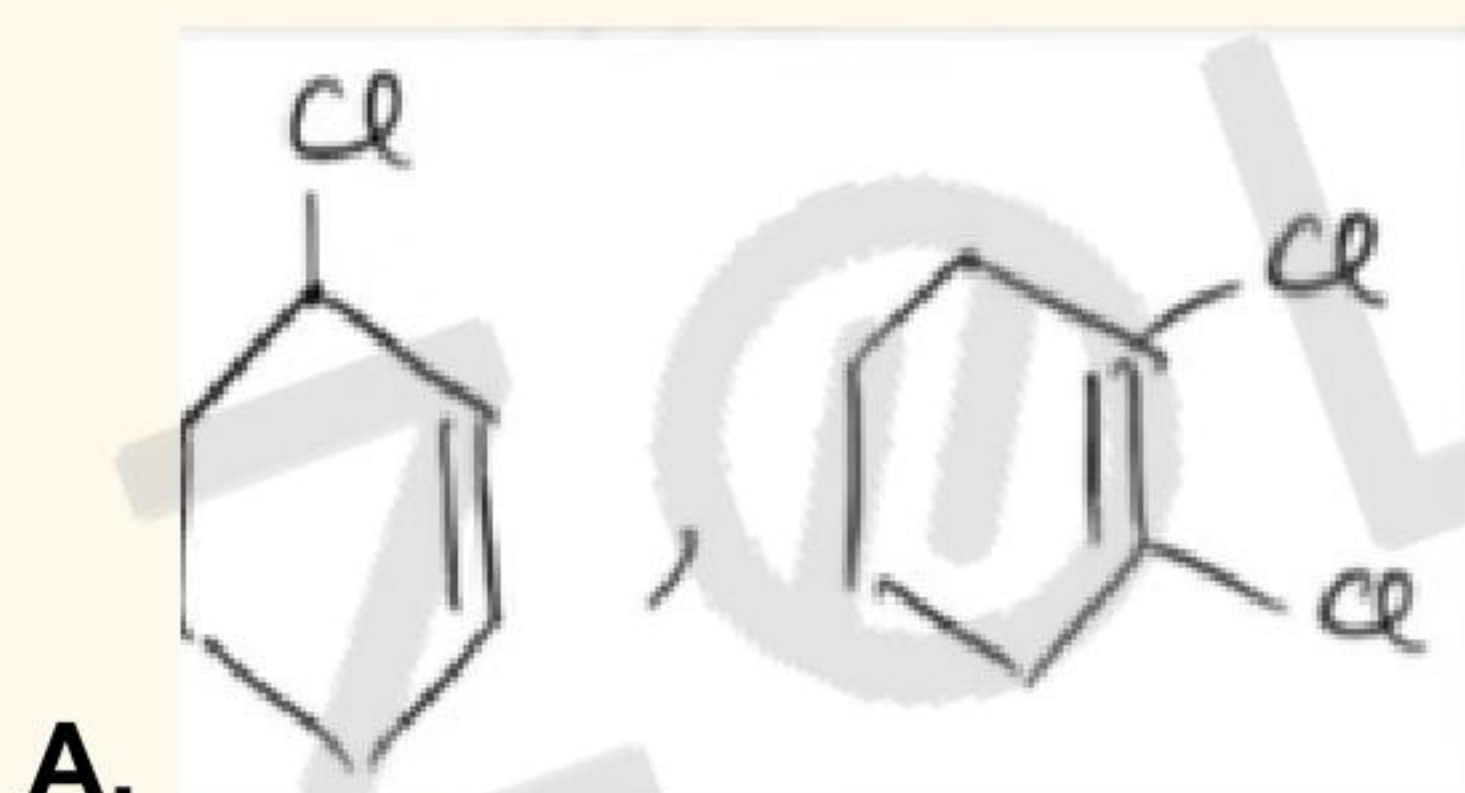
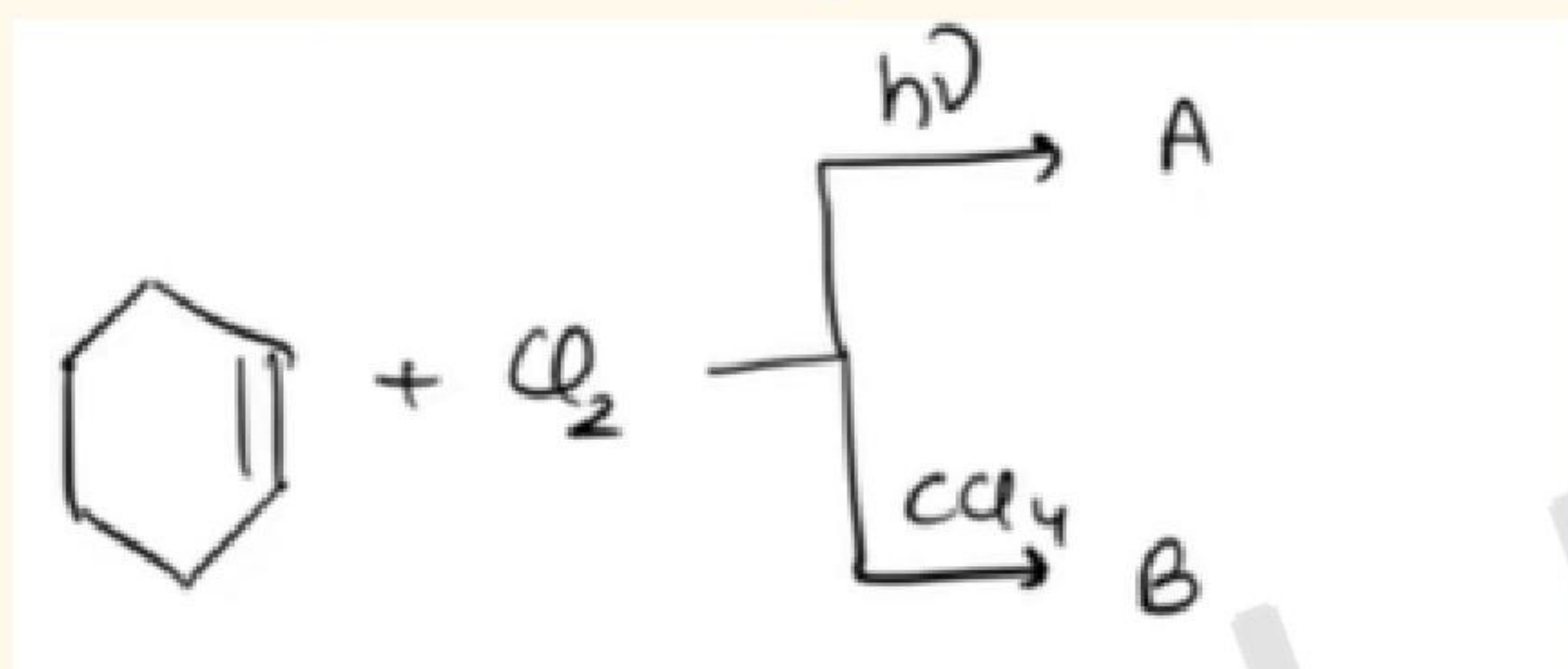
- A. MnO_4^- , MnO_2
- B. K_2MnO_4 , MnO_2
- C. KMnO_4 , MnO_2
- D. MnO_2 , H_2O

Ans. B

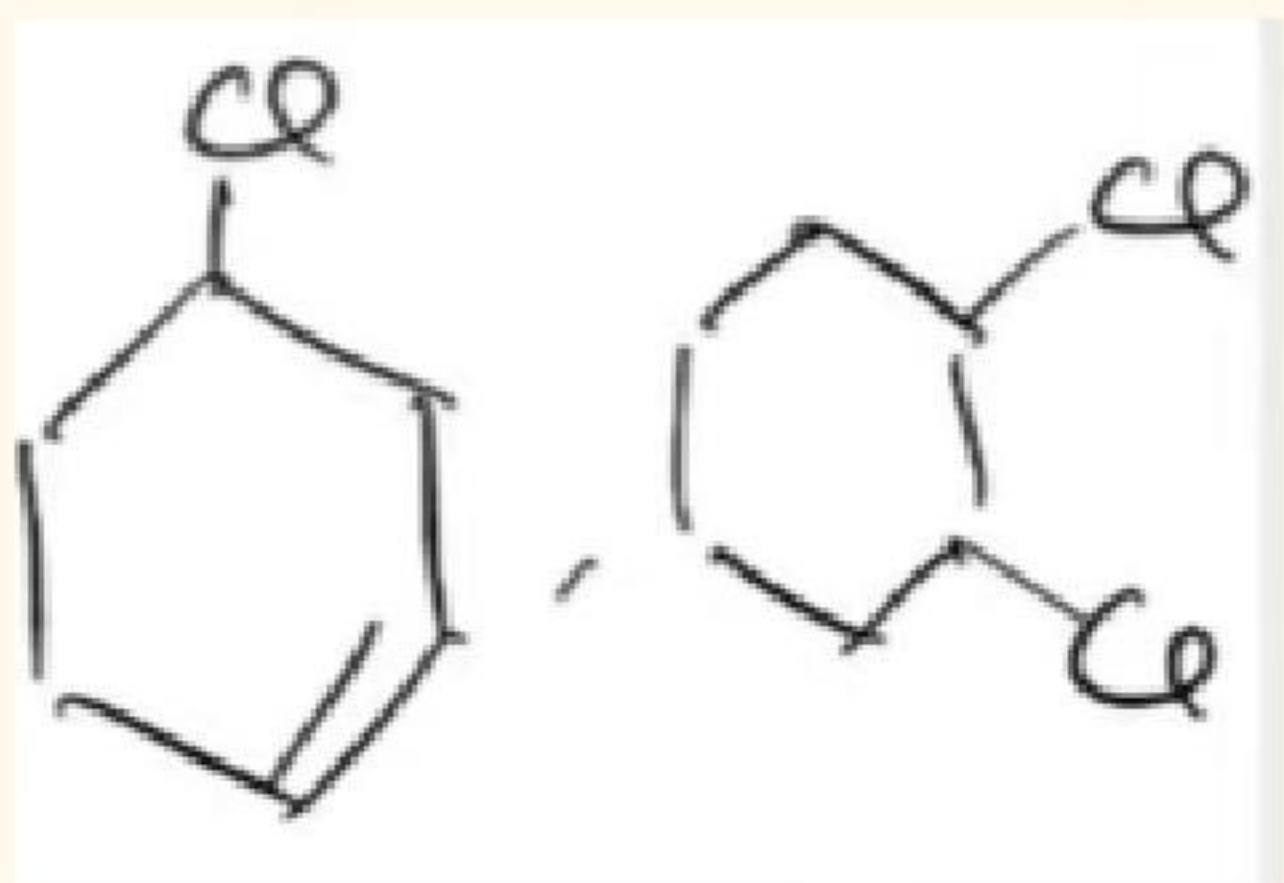
Ques 2. Calculate the Molarity of a Solution having density = 1.25 g/ml. %(w/w) of Solute is 36% and Molecular weight of Solute is 36 g/mol

Ans. 12.5 M

Ques 3. In the following reactions, find the product A and B



D.



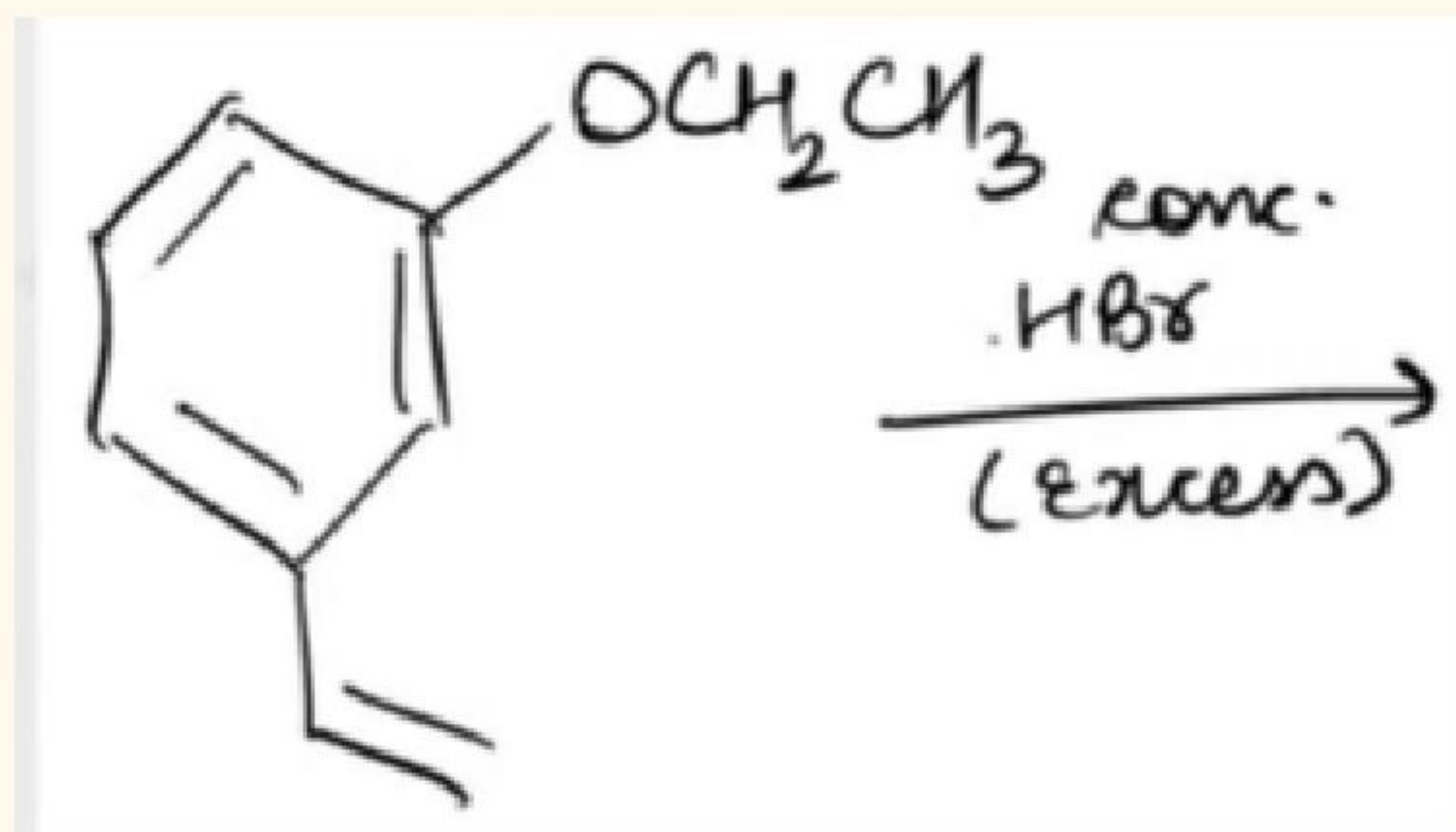
Ans. B

Ques 4. Appearance of Red color on treatment with Na fusion extract of an organic compound with FeSO_4 in presence of Conc. H_2SO_4 indicate element

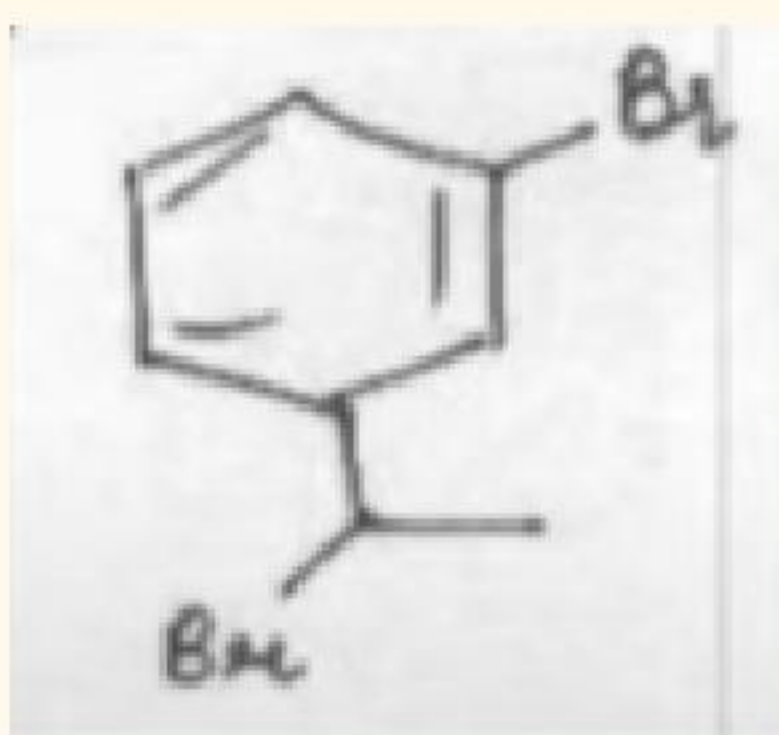
- A. N
- B. Br
- C. S
- D. N & S

Ans. D

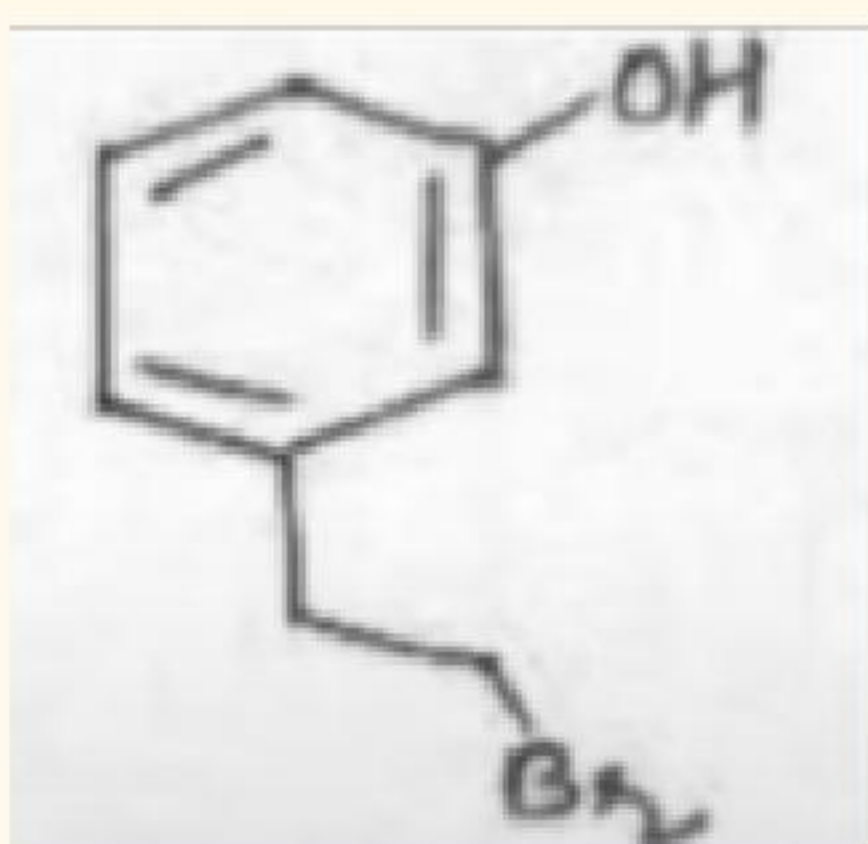
Ques 5. The major product formed in the following reaction is-



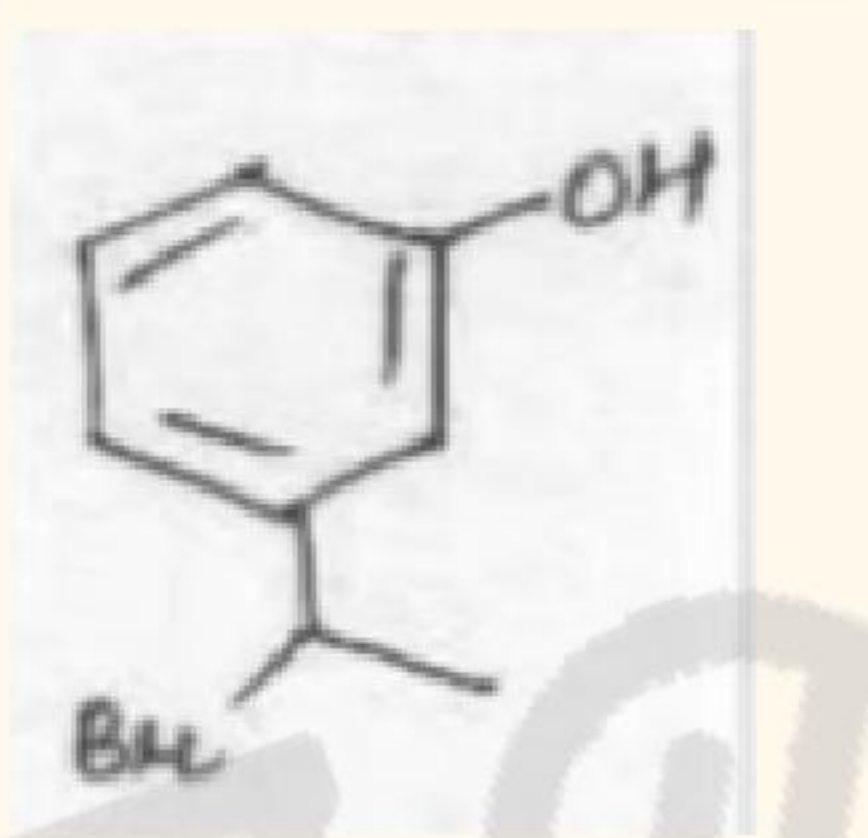
A.



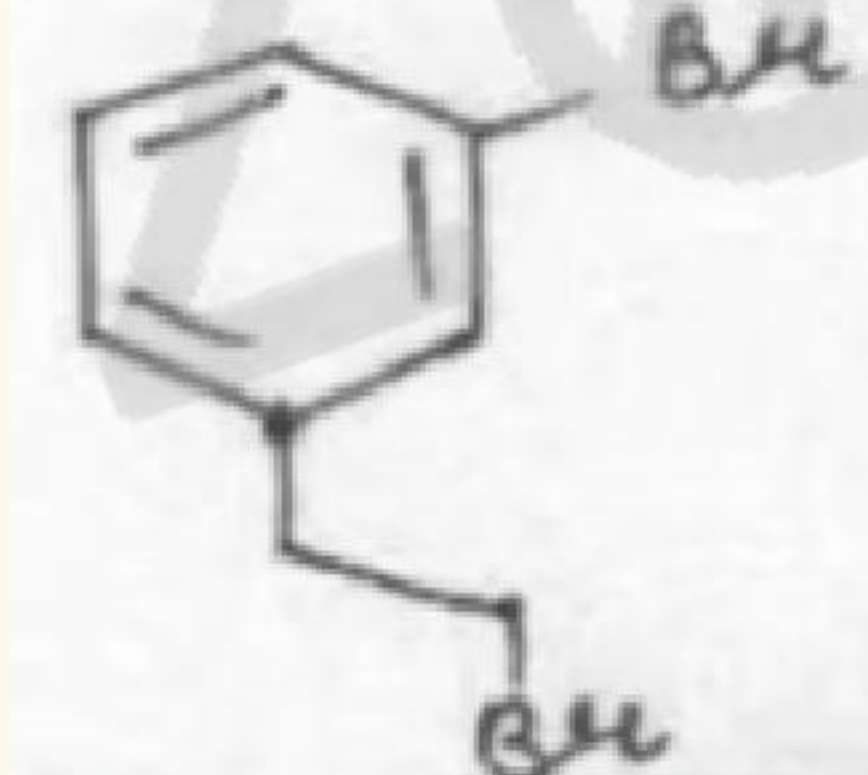
B.



C.



D.



Ans. C

Ques 6. Energy difference between actual structure and its most stable resonating structure having least energy is called

- A. Electromeric effect**
- B. Resonance Energy**
- C. Inductive effect**
- D. Hyperconjugation**

Ans. B

Ques 7. Interaction b/w π bond & Lone pair of e-s on adjacent atoms

- A. Resonance
- B. Hyperconjugation
- C. Inducting Effect
- D. Electronic & effect

Ans. B

JEE Main Mathematics Questions

Ques 1. Let a die rolled till 2 is obtained. The probability that 2 obtained on even numbered toss is equal to:

- A. 5/11
- B. $\frac{5}{6}$
- C. 1/11
- D. 6/11

Ans. A

Evaluate: $\lim_{x \rightarrow \frac{\pi}{2}^-} \frac{\int_{x^3}^{\left(\frac{\pi}{2}\right)^3} \cos t^{\frac{1}{3}} dt}{\left(x - \frac{\pi}{2}\right)^2}$

Ques 2.

A.

Ans.

Ques 3. $\frac{C_1^{11}}{2} + \frac{C_2^{11}}{3} + \dots + \frac{C_9^{11}}{10} = \frac{m}{n}$. Then m+n is

Ans. 2041

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