

JEE Main 2024 Chemistry Question Paper

April 4 Shift 2

(B.E./B.Tech)

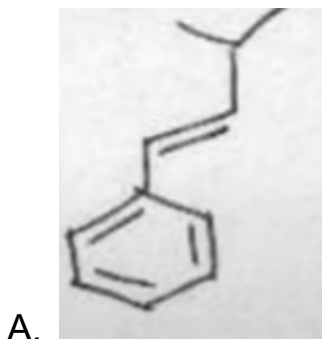
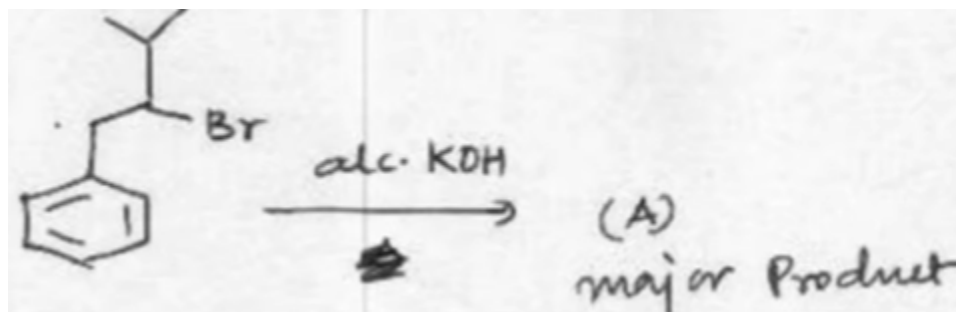
JEE Main Chemistry Questions

Ques 1. Which of the following have a pyramidal shape ?

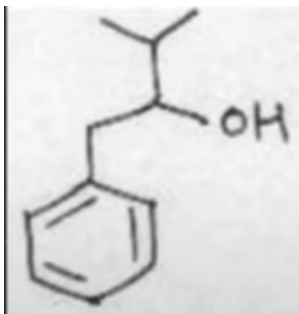
- A. a) $\text{S}_2\text{O}_3^{2-}$
- B. SO_4^{2-}
- C. SO_3^{2-}
- D. $\text{S}_2\text{O}_7^{2-}$

Ans. D

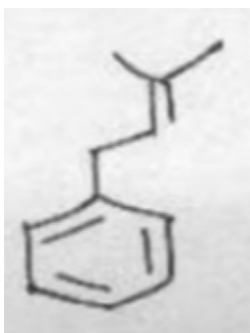
Ques 2. Major product A is



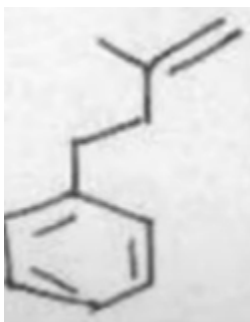
B.



C.



D.



Ans. A

Ques 3. IUPAC name of Catechol is-

- A. Benzene, 1,2-diol**
- B. Benzene-1,3-diol**
- C. Benzene -1,4-diol**
- D. 3-Hydroxyphenol**

Ans. A

Ques 4. The correct order of ionisation enthalpy for Li, Na, Cl, F is:

- A. $\text{Na} < \text{Li} < \text{Cl} < \text{F}$
- B. $\text{Li} < \text{Na} < \text{Cl} < \text{F}$
- C. $\text{Na} < \text{Li} < \text{F} < \text{Cl}$
- D. $\text{F} < \text{Cl} < \text{Li} < \text{Na}$

Ans. A

Ques 5. What is the sum of number of α and π bonds present in 2-oxo-hex-4-yne-oic acid ?

Ans. 18

Ques 6. Consider the following statements:

Statement I: The number of emitted photoelectrons Increases with increase in frequency of incident light.

Statement II: Kinetic energy of emitted photoelectrons increases with increase in frequency of incident light

- A. Statement I is true but statement II is false
- B. Statement I is false but statement II is true
- C. Both Statement I and statement II are true
- D. Both Statement I and statement II are false

Ans. B

Ques 7. Which of the following is used as adsorbent in adsorption chromatography?

- A. Silica Gel
- B. Alumina
- C. Benzene
- D. Both A and B

Ans. D

Ques 8. What is the maximum amount of acetanilide formed when acetic anhydride in excess is treated with 18 gm of aniline. (nearest integer)

Ans. 26

Ques 9. Maximum number of orbitals possible when $n = 4$ and $m = 0$?

Ans. 4

Ques 10. How many of the given statements are true for fuel cell?

- A. It is a type of Galvanic cell**
- B. It is used for providing electrical power in space programmes.**
- C. Hydrogen and oxygen are bubbled through porous carbon electrodes into concentrated NaOH solution**
- D. It produces electricity with an efficiency of 40%**
- E. It is pollution free cell**

Ans. 4

Ques 11. An element of d-block (Z) of 4th period has spin only magnetic moment of its Z^{3+} form is 3.9 BM, then find minimum atomic number of element (Z).

Ans. 24

Ques 12. Which one of the following has the most negative (highest –ve) electron gain enthalpy?

- A. Li**
- B. Na**
- C. F**
- D. Cl**

Ans. D

Ques 13. Find out number of unpaired electrons in d-subshell for $[\text{Co}(\text{H}_2\text{O})_6]^{3+}$.

- A. 3
- B. 4
- C. 0
- D. 2

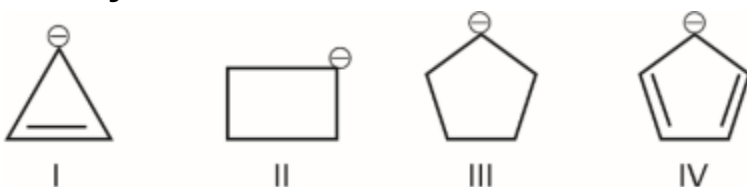
Ans. C

Ques 14. 9. Which of the following statement is INCORRECT

- A. In homogeneous mixture, Composition is uniform
- B. Compounds are formed when atoms of different elements combine together in any ratio
- C. Atoms of same element have identical atomic mass and properties
- D. In heterogeneous mixture, Composition is not uniform

Ans. B

Ques 15. Arrange the following anions in the decreasing order of their stability.



- A. $\text{I} > \text{II} > \text{III} > \text{IV}$
- B. $\text{IV} > \text{III} > \text{II} > \text{I}$
- C. $\text{III} > \text{II} > \text{I} > \text{IV}$
- D. $\text{II} > \text{IV} > \text{III} > \text{I}$

Ans. B