

JEE Main 2024 Question Paper April 8 Shift 2 (B.E./B.Tech)

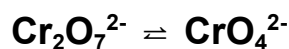
JEE Main Chemistry Questions

Ques 1. Molecular orbital σ^* represents:

- A. $\psi_A + \psi_B$
- B. $\psi_A - \psi_B$
- C. $\psi_A - 2\psi_B$
- D. $\psi_A + 2\psi_B$

Ans. B

Ques 2. Consider the given reaction:



Above reaction shifts in forward direction in

- A. Acidic Medium
- B. Basic Medium
- C. Neutral Medium
- D. Slightly acidic medium

Ans. B

Ques 3. If de- Broglie wavelength of electron is equal to de- Broglie wavelength of proton, then what is the relation between their kinetic energy

- A. $KE_e > KE_p$
- B. $KE_p > KE_e$
- C. $KE_p = KE_e$
- D. $2KE_e = KE_p$

Ans. A

Ques 4. Select the correct options:

Statement 1: Benzene sulphonyl chloride reacts with 1° , 2° and 3° amines.

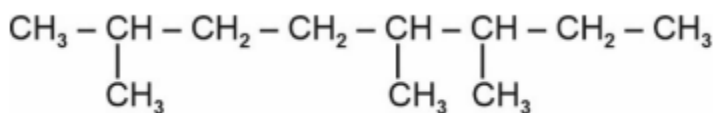
Statement 2: All products of the reaction above are soluble in NaOH.

- A. Statement 1 is true and statement 2 is false.
- B. Statement 1 is false and statement 2 is true.
- C. Statement 1 and statement 2, both are true.
- D. Statement 1 and statement 2, both are false.

Ans. D

Ques 5. Consider the following compound:

What is the IUPAC nomenclature of the compound?



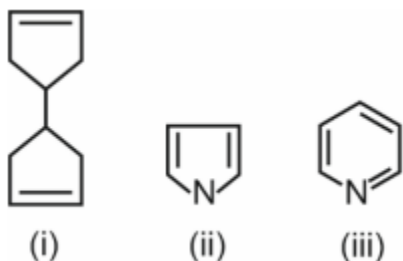
- A. 2,5,6-trimethyl octane
- B. 3,4,7-trimethyl octane
- C. 2,4-ethyl, 3-methyl octane
- D. Isopropyl hexane

Ans. A

Ques 6. The total number of compounds having Bond order 2 among the following are: F_2 , N_2 , Ne_2 , O_2 , Li_2 , Be_2 , C_2

Ans. 2

Ques 7. Which of the following are aromatic compounds?



- A. Only (i) and (ii)
- B. Only (ii) and (iii)
- C. Only (i) and (iii)
- D. All are aromatic

Ans. B

Ques 8. Which of the following is correct?

- A. Non-metals are generally more electronegative than metals
- B. Non-metallic oxides are generally basic
- C. Metallic oxides are generally acidic or neutral
- D. Non-metallic have always lower ionisation enthalpy than metals

Ans. A

Ques 9.

Assertion: Kjeldahl method is not used for pyridine.

Reason: Nitrogen of pyridine does not change to ammonium sulphate under these conditions.

- A. Both Assertion and Reason are true and Reason is a correct explanation for assertion**
- B. Both Assertion and reason are true but Reason is not a correct explanation for assertion**
- C. Assertion is true but Reason is false**
- D. Assertion is false but Reason is true**

Ans. A

Ques 10.

S-I: Blood is a buffer solution, whose pH is maintained at 7.4 by an acidic buffer.

S-II: pH is maintained by HCO_3^- and H_2CO_3

- A. S-I and S-II both are correct**
- B. S-I and S-II both in correct**
- C. S-I is correct and S-II are incorrect**
- D. S-I is incorrect and S-II is correct**

Ans. A

Ques 11. In the test for phosphorus using ammonium molybdate, yellow precipitate of compound (X) is obtained. What is the oxidation state of molybdenum in (X)?

Ans. 6

Ques 12. How many carbon atoms are there in a molecule of tyrosine?

Ans. 9