Examrace

National Standard Examination in Chemistry (NSEC) Solved Paper 2016 Part-1

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Q: 1. For a gaseous reaction, $A + B \rightarrow$ products, the energy of activation was found to be 2.27 kJ mol⁻¹ at 273 K. The ratio of the rate constant (k) to the frequency factor (A) at 273 K is

(A) 0.368

(B) 3.68

(C) 4.34

(D) 0.434

Answer: (A)

Q: 2. In the case of dibromo derivatives of the following compound, the derivative having highest energy has the bromo substituents in positions



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(A) 1,2

(B) 2,3

(C) 4,5

(D) 1,10

Answer: (D)

Q: 3. The ionization energy of a certain element is 412 kJ mol⁻¹. When the atoms of this element are in the first excited state, however, the ionization energy is only 126 kJ mol⁻¹. The region of the electromagnetic spectrum in which the wavelength of light emitted in a transition from the first excited state to the ground state is

(A) Visible

(B) UV

(C) IR

(D) X-ray

Answer: (A)

Q: 4. The reaction of an olefin with HBr can proceed by ionic as well as radical mechanism. The reaction in the presence of light takes place by radical mechanism, as

(A) The free energy of the reaction in radical mechanism in higher than in ionic mechanism

(B) Ionic mechanism requires a catalyst while radical mechanism does not

(C) In the presence of light the activation energy of the reaction is lower than that for ionic mechanism

(D) A radical reaction has very low activation energy as compared to that for the corresponding ionic reaction

Answer: (C or D) [Language of C and D is nearly similar]

For detailed explanations and answers visit - NSEC Answers with detailed explanations

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