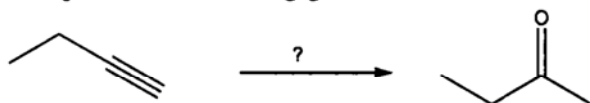




Q.1. Answer the following Short Questions:

(15x2=30)

- i. Cyclo-octatetraene prevents resonance.
- ii. Acetic acid is ten times less acidic than formic acid and 100 times less acidic than chloroacetic acid.
- iii. N, N-dimethylaniline is less basic than 2,6,N,N-tetramethylaniline.
- iv. O-nitrophenol is less soluble in water as compared to p-nitrophenol.
- v. Differentiate b/w nucleophilicity and basicity with examples.
- vi. Pyrrole is a weaker base than pyridine?
- vii. Acetoacetic ester gives ferric chloride test which is typical test for phenol.
- viii. Phenanthrene is more stable than Anthracene.
- ix. Differentiate between negative and positive resonance effect.
- x. Complete the following given reaction.



- xi. Differentiate between Jones reagent and PCC?
- xii. Nitration of phenol is 10^3 times faster than benzene?
- xiii. Explain bromine water test with mechanism?
- xiv. How can you distinguish between ethanol, isopropanol and tertiary butanol.
- xv. 2,4,6 trinitrophenol is decomposed by sodium bicarbonate while simple phenol not.

Answer the following questions.

(3x10=30)

Q.2 (a) Explain the reactivity order of different alcohol for preparation of different alkenes.

(b) What is Simon Smith reaction?

Q.3 (a) Differentiate between Hoffmann and Saytzeff rule with examples?

(b) Differentiate between inter molecular and intra molecular hydrogen bonding.

Which type of hydrogen bonding will exist in the following compound.

Name them as inter or intra H₂ bonding and show them via structure?

P-hydroxybenzaldehyde O-hydroxybenzoic acid Acetic acid O-nitrophenol

Q.4 Complete the following reaction with mechanisms? (2.5x4)

