

Assignment II
CHE-301
Sem V 2017
Unit Test II

Unit-I

Long Questions:

- (1) Write optical isomerism in di-phenyl.
- (2) Write optical isomerism in Alenes.
- (3) Write optical isomerism in spiro component
- (4) Find out the chiral carbon in 2-3 pentadiol OR 2-3 dibromo pentane, if Chiral –‘C’ is present then write its enantiomers and diastereomers.

Unit-II (A)

Long Questions:

Give use of reagent and application with mechanism of the following Compounds

- (i) Al-isopropoxide
- (ii) Lithium Aluminium hydride
- (iii) Selenium Dioxide
- (iv) Lead tetra acetate
- (v) OsO₄

Short Questions:

Give any two use of this reagent Osmium Dioxide.

Unit-II (B)

Long Questions:

Discuss Mechanism and synthetic application of the following:

- (i) Wolf Rearrangement
- (ii) Hoffmann Rearrangement
- (iii) Birch Rearrangement
- (iv) Diels-Alder Rearrangement

Short Questions:

- (1) Give the principle of Fries rearrangement.
- (2) Give the principle of Wolf rearrangement.
- (3) Write Diels-Alder reaction scheme for reaction.
- (4) Write application of Birch reduction.
- (5) Give the principle of Diels-Alder rearrangement.

Unit-III (B)

Long Questions:

- 1) Discuss mechanism of aromatic nucleophilic substitution reaction.
- 2) Discuss Benzyne mechanism.
- 3) Discuss important reactions of Benzyne.
- 4) When "2:4 dinitrochloro benzene reacts with NaNH_2 at 270°C temperature to give 2:4 dinitro aniline " Write mechanism and resonating structures of this reaction.

Short Questions:

- 1) Which product is obtain when 2 moles of benzyne molecule are condensed ?
- 2) Which product is obtain when benzyne reacts with hot furan ?

Unit: IV(B) Purines and Pyrimidines

Long Questions:

[A] Give synthesis of the following.

- (1) Adenine
- (2) Guanine
- (3) Thiamine
- (4) Uralic
- (5) Cytosine

[B] Short Questions:

Answer the following in short.

- (1) Which Hetero atom present in Pyrimidine?
- (2) A Purine is fused ring of?