

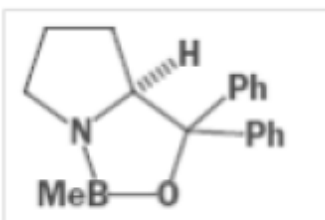
JVM's Mehta College

Mission Exam 2020

M.Sc. sem-IV Paper -1 Theoretical organic Chemistry

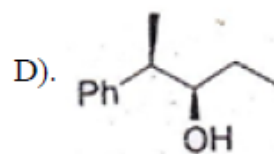
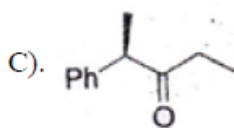
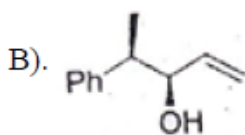
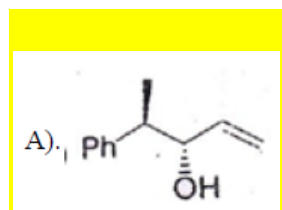
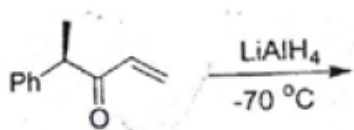
MOCK TEST

1. Identify the correct name of the following catalyst?



- A).Evan's oxazolidinone
- B).Davrvon's alcohol
- C).CBS catalyst
- D).(.DHQ)2PHAL

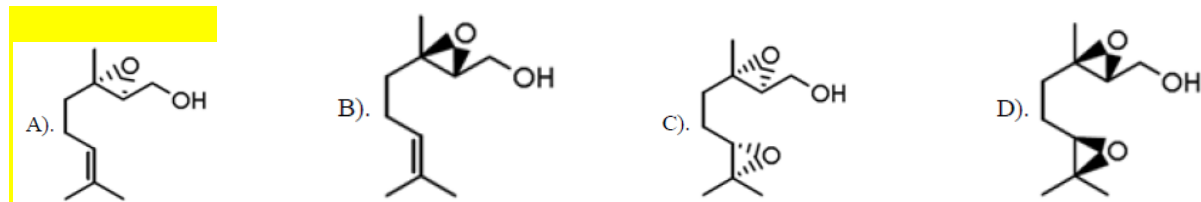
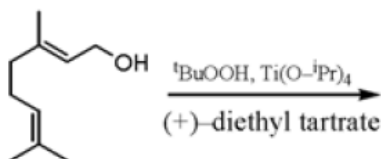
2. The major product formed in the following reaction is



3. We have 80:20 mixture of enantiomers consists of major 'R' enantiomer. The enantiomeric excess of 'R' enantiomer over the 'S' enantiomer is -----.

- A).60%
- B).70%
- C).80%
- D).75%

4. The major product formed in the reaction



5. The Cotton effect appears approximately at the absorption maximum in ----- region.

- A). UV/visible
- B). IR
- C). microwave
- D). radiowave

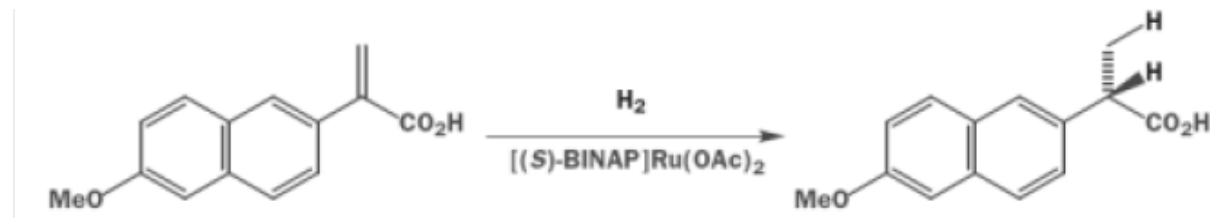
6. If the test sample is treated with an appropriate enzyme and no reaction occurs as indicated by the absence of any change in optical rotation, the sample is ----.

- A). enantiomerically pure
- B). racemic mixture
- C). mixture of enantiomers in unknown proportions
- D). diastereomer mixture

7. Conversion of an enantiomerically pure compound into optically inactive mixture of enantiomers is called ----.

- A). resolution
- B). racemization
- C). retention
- D). inversion

8. Identify the type of asymmetric induction in the following synthesis:



- A). Substrate controlled asymmetric induction

- B).Catalyst controlled asymmetric induction
- C).Reagent controlled asymmetric induction
- D).Chiral auxiliary induced asymmetric synthesis

9. Following the structure is an example of _____



- A).Crown ether
- B).Cryptand
- C).Cyclophane
- D).Calixarene

10. If a prochiral ketone was converted enantioselectively to a chiral alcohol with a Grignard reagent under asymmetric conditions, which of the following statements would be false?

- A).The prochiral ketone has different groups linked to the carbonyl group
- B).A chiral product would be obtained regardless of which Grignard reagent is used
- C).The reaction centre is an sp^2 hybridised carbon
- D).Nucleophilic attack by the Grignard reagent will be selective for one enantiotopic face over the other