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Model Question Paper: Final Semester Examination

**B.Sc. Semester-VI, DSE-4 (Organic Synthesis)**

Section- VI Reduction Reaction

**MCQ (2- Marks)**

1. Braking one of these: C-O, C-N, C-X and increasing electron density on carbon atom is called an/a:  
a) Oxidation reaction b) Reduction reaction c) Both a and b d) None
2. NaH or LiH are called:  
a) Complex hydrides b) Simple hydride c) both a and b d) none
3. Sodium borohydride and Lithiumaluminum hydride are called:  
a) Complex hydrides b) Simple hydride c) both a and b d) none
4. When a Group-1A metal dissolves in liquid ammonia, metal atoms lose:  
a) Protons b) Neutrons c) Electrons d) All
5. Cyclic dienes can be prepared by:  
a) Clemmensen Reduction b) Birch reduction c) Wolff-Kishner reduction d) all
6. Which of the following reaction produces a radical anion :  
a) Clemmensen Reduction b) Birch reduction c) Wolff-Kishner reduction d) None

**Short Answer type Questions (5-Marks)**

**Q-1.** Write short notes on:

- a) Reduction of Alkenes
- b) Hydrogen sources and its production

**Q-2.** Discuss the mechanism hydride reduction of a carbonyl group.

**Q-3.** Discuss the mechanism of Catalytic Hydrogenation olefins.

**Q-4.** Write a short notes on homogeneous and heterogeneous hydrogenation.

**Long answer type questions (12.5)**

**Q-1.** Discuss the mechanism of Birch Reduction.

**Q-2.** Describe Meerwein–Ponndorf–Verley Reduction reaction. What it says about Oppenauer oxidation reaction.