M.Sc. (FINAL) EXAMINATION, 2017 CHEMISTRY

Paper : VIII(b) Group - B (Heterocyclies and Natural Products)

Allowed: Three Hours

Max. Marks: 100

UNIT-I

Describe principles of heterocyclic synthesis with reference to synthesis and reactions aziridines and oxiranes.

Write notes on:

- (a) Ring current and chemical shifts in H NMR-Spectra.
- (b) Conformation of six membered heterocycles in reference to molecular geometry and barrier to ring inversion.

UNIT-II

Write synthesis reactions and medicinal applications of benzopyrroles and benzothiophenes.

- Write synthesis of :
 - (i) Diazepines
 - (ii) Diazocines
- (ii) Write reactions of:
 - (i) Azodines
 - (ii) Thiazipine

UNIT-III

Determine the structure of α -terpeneol. Confirm the structure by giving an unambiguous synthesis of it.

Write notes on:

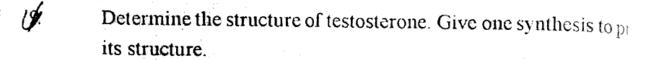
- (a) Classification and nomen clature of terpenoids
- (b) Biosynthesis of citral

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UNIT-IV

- 7. (a) What do you understand by Hoffman Exhaustive Methylation? is it useful in structure determination of alkaloids?
 - (b) Give structures and one synthesis of morphine.
- 8. Write notes on :
 - (a) Role of alkaloids in Plants
 - (b) Synthesis of haemoglobin

UNIT-V



- 10. Write short notes on :
 - (i) Isolation and synthesis of myrectin
 - (ii) Size of ring A in cholestrol.