Examinations B. Sc. Semester VI

Subject:- Chemistry (Non-CBCS)

Time Allowed: 3 hrs M. Marks: 80

Note: Attempt five questions in all selecting one question from each unit.

UNIT – I

1. a) Explain the following with suitable examples:-
   i) Bathochromic shift ii) Hypsochromic shift
   b) Write short notes on
   i) Finger print region ii) Hooke's law (8+8)

2. a) Describe the types of protons and their multiplicity in acetophenone and ethyl acetate
   b) Explain the following
   i) Principle of Nuclear Magnetic Resonance
   ii) Shielding and deshielding of protons (8+8)

UNIT – II

3. a) Write two methods of formation and two chemical reactions of organolithium compounds.
   b) Give two chemical reactions of each of the following
   i) Thioalcohol ii) Sulphonic acid

4. Write notes on
   i) Claisen condensation
   ii) Acylation of enamines
   iii) Condensation polymerization with two examples (5+5+6)

UNIT – III

5. a) How will you prepare the following from aniline
   i) Sulphanilic acid ii) 2,4,6 tribromoanilive iii) p-bcomoaniline
   b) Write down
   i) Gabrial phthalimide reaction ii) Hofmann bromamide reaction (6+10)

6. a) Discuss the chemical reactivity of halonitroarenes

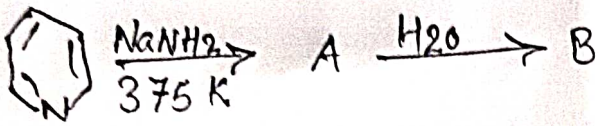
b) Draw the various conformations of n-butane and discuss their stability order

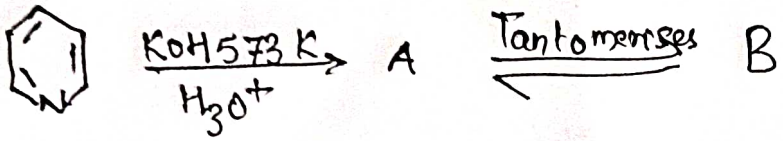
c) Write short note on coupling reaction (4+6+6)

UNIT-IV

7. a) Discuss skraup synthesis of quindine giving its mechanism.

b) Complete the following reactions

i) 

ii) 

c) Explain aromaticity of Furan, thiophene and pynole. (6+4+6)

8. (a) Discuss briefly molecular orbital theory of colour and constitution

(b) Discuss (i) Paal- Knorr synthesis of pyrrole derivatives and (ii) synthesis of indigo.

UNIT-V

9. a) Discuss Edman's and enzymatic methods for end group analysis of proteins

b) Give at least four points of difference between RNA and DNA (10+6)

10. a) Discuss the mechanisms of osazone formation

b) Give a brief account of all the evidences which led to the cyclic structure of D-(+)-glucose (8,8)