

UKA TARSADIA UNIVERSITY

B.Pharm. (3rd Semester)

Subject :030020303-Organic Chemistry II

Time : 10:00 am to 1:00 pm

Duration : 3 Hours

Date : 31/12/2013

Max. Marks : 70.

Instructions:

1. Attempt all questions.
2. Write each section in a separate answer book.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks allocated to that question.
5. Draw diagrams/figures whenever necessary.

SECTION - 1

Q-1 (A) Do as directed.

[07]

- I) Give the structure and IUPAC name of Acroline.
- II) Popoff's rule
- III) Preparation of phenolphthalein
- IV) Convert salicylic acid to aspirin.
- V) What is haloform reaction.
- VI) What is organometallic reagent.
- VII) Enumerate the name of electrophilic substitution reaction in benzene.

Q-1 (B) Answer the following in brief. (Any 4)

[08]

- I) The Huckel's rule
- II) What is tautomerism?
- III) Preparation of cumene from benzene.
- IV) Diazotization reaction
- V) Limitation of Friedel-Crafts alkylation.
- VI) Cannizzaro reaction

Q-2 Answer the following.

[10]

- A) Explain features of aldol condensation with reaction and its mechanism. Give any two reactions of crossed aldol condensation and intramolecular aldol condensation.

OR

- A) What is nucleophilic aromatic substitution reaction? Explain SN1 & SN2 reaction with mechanism of action and effect of electron withdrawing group on its reactivity.

- B) What are arenes? Discuss the method of preparation and reactions of alkyl benzene.

OR

- B) Give the method of preparation and reactions of phenol.

Q-3 Answer the following in detail. (Any 2)

[10]

- A) Give the reaction and mechanism of chlorination of benzene in the presence of sunlight and FeCl₃.
- B) What is polynuclear aromatic compound? Give the Haworth synthesis for naphthalene.
- C) Define lipids and discuss its chemical properties.

SECTION - 2

Q-4 (A) Do as directed.

[07]

- I) Chichibabin reaction in pyridine.
- II) What is scavenger resin.
- III) Enlist the components used in solid phase technique.
- IV) Disadvantage of solution phase method.
- V) Give the name & structure of any one Disaccharides.
- VI) Give the uses of starch and its derivatives.
- VII) Define : heterocyclic compound

Q-4 (B) Answer the following in brief. (Any 4)

[08]

- I) Electrophilic substitution reaction in furan occurs at 2nd and 5th position. Why?
- II) Killani-fischer synthesis
- III) Give the difference between glucose and fructose.
- IV) Impurity of thiophene in benzene can be removed by cold sulfuric acid. Why?
- V) Advantage of solid phase synthesis.
- VI) Type of carbohydrate.

Q-5 Answer the following.

[10]

- A) Write principle for solid phase synthesis. Enumerate components for solid phase technique and discuss on linkers.

OR

- A) Write note on diel alder reaction and sigmatropic reaction.
- B) Give the chemical reaction with mechanism of Skraup synthesis and Paul-knorr synthesis.

OR

- B) What are the protiens? How are they classified and give preparation of amino acid.

Q-6 Answer the following in detail. (Any 2)

[10]

- A) Ruff -degradation
- B) Write note on basicity of pyridine
- C) Give the application of combinatorial chemistry in drug design.