

UKA TARSADIA UNIVERSITY

B.Pharm. (3rd Semester)

Subject :030020303-Organic Chemistry II

Time : 2.30 pm to 5.30 pm

Duration : 3 Hours

Date : 22/05/2014

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 structure and IUPAC name of lindane.
- II) What is MPV reduction?
- III) What is tautomerism?
- IV) What is TNT? Write its uses.
- V) Define : resonance
- VI) Give the structure and IUPAC name of DDT.
- VII) What is Bakelite?

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

[08]

- I) Write reaction of chlorination of alkyl benzene in presence of UV and FeCl_3 .
- II) What is the role of Grignard reagent in organic synthesis. How it is prepared?
- III) Write reaction of Fries rearrangement.
- IV) Write short note on acidity of phenol.
- V) What is the role of Triglycerides?
- VI) Write note on Reimer-Tiemann reaction.

Q-2 Answer the following.

[10]

- A) Explain nucleophilic substitution reaction for acid derivatives along with reaction mechanism and give the reaction for acid chloride and acid anhydride.

OR

- A) What is aromaticity? Explain electrophilic aromatic substitution reaction mechanism and discuss its orientation and reactivity.
- B) Discuss the importance of diazonium salts in organic synthesis and give different reaction of it. Write in detail about Sandmeyer's reaction mechanism with example.

OR

- B) Give methods of preparation for polynuclear aromatic compound.

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

[10]

- A) Explain; o-nitro phenol shows less boiling point than p-nitrophenol. Which one is more acidic in nature?
- B) Give any five methods of preparation for carboxylic acid.
- C) What are arenes? Write note on Friedel-Crafts alkylation reaction and its limitation.

SECTION - 2

Q-4 (A) Do as directed.

[07]

- I) Give name and structure of any one linker used in solid phase synthesis.
- II) Give advantages of solution phase synthesis.
- III) Give name & structure of acidic amino acid.
- IV) Write methods of preparation for imidazole.
- V) Enlist the names of essential amino acids.
- VI) Give one lab preparation for glycine.
- VII) Define the term: protein

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

[08]

- I) Give the structure & uses of cellulose.
- II) Pyridine is stronger base than aniline. Give reasons.
- III) Give the general properties of proteins.
- IV) How will you distinguish between glucose and sucrose?
- V) Furan is less aromatic than thiophene. Give reasons.
- VI) Write importance of proteins.

Q-5 Answer the following.

[10]

- A) Write note on electrocyclic reaction and sigmatropic reaction.

OR

- A) Write note on combinatorial chemistry and its pharmaceutical application in drug design.
- B) Define the term heterocyclic compound. Give methods of preparation for pyrrole and pyridine.

OR

- B) Define carbohydrates. Give classification of carbohydrates. Give chemical reaction of D-glucose.

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

[10]

- A) Write note on Diel Alder reaction.
- B) Explain Bischler-Napieralski reaction for isoquinoline with reaction mechanism.
- C) Discuss the cyclic structure of D-fructose.