Sub Code:RPH301

Paper Id: 150311 Roll No:

**B. PHARM**

**(SEM-III) THEORY EXAMINATION 2019-20**

**PHARMACEUTICAL CHEMISTRY-IV(HETEROCYCLIC & BIOORGANIC CHEMISTRY)**

***Time: 3 Hours*** ***Total Marks: 70***

**Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**1. Attempt *all* questions in brief. 2 x 7 = 14**

a. Draw the structure of glucopyranose and fructofuranose.

b. Why benzimidazoles have higher melting point and boiling points than pyrazoles?

c. What do you mean by Zwitterion? Write its example.

d. Define genetic code. Give its examples.

e. Define Reichert-Meissl value.

f. Draw the structure of Thiamine and Niacin with its uses.

g. Give the reaction of condensation polymerization.

**SECTION B**

**2. Attempt any *three* of the following: 7 x 3 = 21**

a. Give the methods of preparation, chemical properties and pharmaceutical uses of Pyridine.

b. Write a detail note on end group analysis of proteins.

c. Give the methods of Preparations and chemical reactions of indole.

d. Write a detail note on genetic code.

e. What are polymers? Give its pharmaceutical application.

**SECTION C**

**3. Attempt any *one* part of the following: 7 x 1 = 7**

(a) Give the methods of preparation, chemical reactions and pharmaceutical importance of Phenothiazines.

(b) Explain electrophilic substitution reaction in Imidazole with its mechanism.

**4. Attempt any *one* part of the following: 7 x 1 = 7**

(a) What are amino acids? Explain methods of preparations of amino acids.

(b) Write a note on: i) Iodine value ii) Saponification value

**5. Attempt any *one* part of the following: 7 x 1 = 7**

(a) What is polysaccharide? Write about the structural elucidation of starch.

(b) What are disaccharides? Explain the structure of sucrose.

**6. Attempt any *one* part of the following: 7 x 1 = 7**

(a) Explain in detail about the structure elucidation of Retinol.

(b) What are fats, oils and waxes? Write about the chemical properties of fats, oils and waxes.

**7. Attempt any *one* part of the following: 7 x 1 = 7**

(a) Write about the various components of DNA.

(b) What are nucleic acids? Explain in detail about the structure of RNA.

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