(b) Structure and function of Retinol

(c) Structure determination of Thiamine

(d) Reactions and importance of addition and condensation polymers

(e) Chemical names, major physiological actions and deficiency diseases of water soluble vitamins.

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BOP-231

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 150318

Roll No.

B.Pharma. (Semester-III)

SPL. THEORY EXAMINATION, 2014-15

PHARMACEUTICAL CHEMISTRY-III

(HETEROCYCLIC & BIOORGANIC CHEMISTRY)

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

Note. Attempt all questions. All questions carry equal marks.

Q.1. Answer any two questions: (7x2=14)

(a) Describe methods of synthesis and chemical properties of Indole OR Furan.

(b) Note down structure and IUPAC name of five membered heterocyclic compounds with two heteroatoms. Discuss methods of preparation and properties of Thiazole.

(c) Write short notes on any two of the following :

i. Electrophilic vs. nucleophilic substitution reactions of pyridine

ii. Rules for nomenclature of heterocyclic compounds.

iii. Synthetic importance of heterocyclic compounds.

Q.2. Answer any two questions: (7x2=14)

(a) Explain about epimers and epimerization. Give chemical evidences in favor of open chain and ring structure of D-Fructose.

(b) How you will differentiate between sugars and non-sugars, reducing and non-reducing sugars? Discuss structure determination of a non-reducing disaccharide.

(c) Write notes on any two :

i. Conversion of an aldohexose into aldopentose.

ii. Identification tests of carbohydrates.

iii. Stereochemistry of carbohydrates.

Q.3. Answer any two questions: (7x2=14)

(a) Explain isoelectric point and discuss in detail about determination of N-terminal residues and C-terminal residues of a polypeptide chain.

(b) Give detailed classification of amino acids with structures and describe the reactions of amino groups and carboxylic groups of amino acids.

(c) What are various components of solid phase synthesis? Discuss solid phase peptide synthesis with suitable example and mention its advantages over solution phase synthesis.

Q.4. Answer any four of the following : (3.5x4=14)

(a) Genetic codes

(b) Drying of oils

(c) Iodine value

(d) Structure and functions of DNA

(e) Explain why oils are liquid and fats are solid in nature.

Q.5. Write short notes on any four of the following : (3.5x4=14

(a) Classification of polymers