

(i) Printed Pages : 3

Roll No. ....

(ii) Questions : 9

Sub. Code : 

1	1	7	5	3
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Exam. Code : 

5	0	1	2
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**Bachelor of Science (FYUP) 2<sup>nd</sup> Semester**

**(2056)**

**BIO-CHEMISTRY**

**Paper : Biomolecules-II**

**(Common with B.Sc. Bio-Technology 2<sup>nd</sup> Sem. FYUP)**

**Time Allowed : Three Hours] [Maximum Marks : 60**

**Note :-** Attempt any **five** questions; at least **one** question is compulsory from each section, Question no. 1 is compulsory.

1. Give the answer of the following questions in very brief:

(I) What is the peptide bond?

(II) Write the names of two aromatic amino acids.

(III) Write the names of two peptides and their functions.

(IV) Write the names of two nucleic acids.

(V) What is the Ribozyme?

(VI) Write the function of bile acids and salts.

6×2=12

## SECTION-I

2. (a) What are the non-standard amino acids? Write the names of four non-standard amino acids.
- (b) Write the five chemical reactions of amino acids. 6, 6
3. (a) Write the biological roles of five active peptides.
- (b) Write the physico-chemical properties of amino acids. 6, 6

## SECTION-II

4. (a) What is the primary structure of proteins? Also write characteristics of the primary structure of proteins.
- (b) Write short notes on the Ramachandran plot. 6, 6
5. (a) Write about the  $\alpha$ -helix present in proteins.
- (b) What is the conjugation of proteins? Write the names of various conjugated proteins. 6, 6

## SECTION-III

6. (a) What are the roles of nucleotides?
- (b) Describe the types of nucleotides present in DNA. 6, 6
7. (a) Differentiate between DNA and RNA.
- (b) Write the structure of the double helical structure of DNA. 6, 6

## SECTION-IV

8. (a) Explain the roles of porphyrins in the human body.
- (b) Describe the significance of bile salts and acids. 6, 6
9. (a) Write a short note on the porphyrin ring.
- (b) What is the spectrophotometric method of estimation of porphyrin? 6, 6