

The Assam Royal Global University, Guwahati

Royal School of Medical and Allied Sciences

BPT 1st Semester

Semester End Examination, February 2022

Course Title: Biochemistry

Course Code: PHT242C104

Time: 3 Hours

Maximum Marks: 70

Note: Attempt all questions as per instructions given.

The figures in the right-hand margin indicate marks.

Section – A

1. Attempt all questions. (Maximum word limit 50) 2 x 8
- a. What are carbohydrates?
 - b. What are essential and non-essential amino acids?
 - c. What is denaturation of DNA?
 - d. What are lipids?
 - e. Define enzymes.
 - f. What are fat soluble vitamins?
 - g. What is the fate of pyruvate in anaerobic conditions?
 - h. What is TCA cycle?

Section – B

2. Attempt any two of the following: 6 x 2
- a. What are peptide bonds? Write their characteristics.
 - b. Discuss briefly the level of organizations of proteins.
 - c. What are carbohydrates? Classify carbohydrates with examples.
3. Attempt any two of the following: 7 x 2
- a. Discuss the detailed structure of DNA.
 - b. Discuss the different forms of DNA.
 - c. What are fatty acids? Classify fatty acids with example.
4. Attempt any two of the following: 7 x 2
- a. What is enzyme specificity? What are the different types of enzyme specificity?
 - b. Write about the factors affecting enzyme activity.
 - c. What are vitamins? Write about the characteristics and common functions of vitamins.
5. Attempt any two of the following: 7 x 2
- a. Briefly discuss glycolysis and its significance. Discuss about the net ATP synthesized in glycolysis pathway.
 - b. Discuss β -oxidation of fatty acids in detail.
 - c. Discuss the detailed process of synthesis and degradation of glycogen.