

B.TECH

Regular Theory Examination (Odd Sem- III) 2016-17  
**BIO CHEMISTRY**

*Time : 3 Hours*

*Max. Marks : 100*

**SECTION-A**

1. Attempt All the following: **(10×2=20)**

- a) Write the reaction of fatty acid activation and list the enzyme that involve in this reaction ?
- b) What is hydrophobic effect?
- c) Write structure and unusual properties of water?
- d) What are Zwitter ions?
- e) Which was the first protein whose structure was determined by X - ray. crystallography?
- f) Write the important function of protein
- g) What is salvage pathway?
- h) Write the name of the some peptide hormones.

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(1)

[P.T.O.]

i) What are non covalent interactions? NBT-303

j) What is the difference between essential and non-essential amino acids?

#### SECTION - B

Note: Attempt any Three questions with Answer in 100-200 words. (3×10=30)

1. Write the reactions of glycolysis and list of the enzymes that catalyze the reaction?
2. Write the brief description of disorders of purines and pyrimidines metabolism?
3. Describe the biosynthesis of fatty acids in details?
4. Write the structure and properties of purines and pyrimidines?
5. Explain urea cycle in detail ? Discuss its importance.

#### SECTION - C

Note: Attempt all questions with answer in 300-500 words (5×10=50)

1. What are carbohydrates ? Describe classification of carbohydrates?
2. Explain TCA cycle in detail with the reaction that is involved in TCA cycle?
3. Explain the biosynthesis and biodegradation of amino acids?

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4. Describe the classification and structure of proteins with suitable examples.
5. Write short notes on any two.
  - a) Gluconeogenesis
  - b) Electron transport chain
  - c) Disorders of lipid metabolism.