

BTECH
(SEM IV) THEORY EXAMINATION 2018-19
FOOD BIOCHEMISTRY

Time: 3 Hours**Total Marks: 100****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a. Define enzyme specificity and enlist its types.
 - b. Define co-factors.
 - c. What do you understand by pro-enzymes?
 - d. What do you mean by the regulation of enzyme?
 - e. Define the term Senescence.
 - f. Differentiate between catabolism and anabolism.
 - g. Define Climacteric fruits with example.
 - h. What do you mean by β -oxidation of fat?
 - i. What do you understand by the term Rigor Mortis?
 - j. Describe Aging in meat.

SECTION B

- 2. Attempt any three of the following: 10x3=30**
- a. Discuss different classes of enzyme with example and explain the effect of temperature on enzyme activity.
 - b. Explain the Transport of nutrients in humans.
 - c. Discuss how Starch is converted into Pyruvic acid.
 - d. Explain how enzymes useful in bakery and brewery industry.
 - e. With the help of neat diagram explain the entry of various amino acids into TCA cycle.

SECTION C

- 3. Attempt any one part of the following:**
- a. What do understand by Inhibition in enzymes? Discuss the different types of inhibitions in detail.
 - b. Derive Michaelis Menton Equation and also discuss the role of endogenous enzyme in food processing.
- 4. Attempt any one part of the following:**
- a. Discuss β - oxidation of fat and outline major steps involved in breakdown of palmitic acid.
 - b. Discuss energy yielding reactions in the complete oxidation of a glucose molecule to H_2O & CO_2 .
- 5. Attempt any one part of the following:**
- a. Explain the Fluid Mosaic Model of membrane.
 - b. Discuss enzymatic routes for initial degradation of fats and its absorption.
- 6. Attempt any one part of the following:**
- a. Discuss the postharvest changes in fruits and vegetables and its impact on the quality attributes of fruits and vegetables.
 - b. Explain Rigor mortis & discuss its effect on the quality attributes of meat.
- 7. Attempt any one part of the following:**
- a. Discuss role of endogenous enzymes in food processing with examples.
 - b. Discuss the advantages of using enzyme in food processing and Comment on role of pectinase in food industry.