

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

*Time: 3 Hours**Total Marks: 70***Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt *all* questions in brief. 2 x 7 = 14**
- (a) Define enzyme.
 - (b) Comment on enzyme specificity.
 - (c) Give the function of Bile in human digestion
 - (d) Define senescence.
 - (e) What do you understand rigor mortis?
 - (f) Define Climacteric fruits with example.
 - (g) Differentiate between catabolism and anabolism.

SECTION B

- 2. Attempt any *three* of the following: 7 x 3 = 21**
- a. Describe effect of substrate concentration on enzyme activity.
 - b. Discuss membrane transport system and explain Na⁺ and K⁺ transport.
 - c. Explain how Palmitic acid is broken down by β- oxidation.
 - d. Discuss the role of pectinase and amylase in food industry.
 - e. Discuss the effect of postmortem changes on the quality attributes of meat.

SECTION C

- 3. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) What do understand by Inhibition in enzymes? Discuss the different types of inhibitions in detail.
 - (b) What do you understand by regulation of enzyme activity and discuss its types.
- 4. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) Discuss energy yielding reactions in the complete oxidation of a glucose molecule to H₂O & CO₂.
 - (b) Discuss the metabolism of amino acids, explain de-carboxylation and de-amination reactions.
- 5. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) Explain digestion and absorption of protein in digestive system.
 - (b) Discuss the function of various organs present in Gastro Intestinal Tract.
- 6. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) Discuss the various changes which take place during ripening of fruits.
 - (b) Explain the effect of post harvest changes on the quality of fruits and vegetables.
- 7. Attempt any *one* part of the following: 7 x 1 = 7**
- (a) Discuss role of amylase in bakery and brewing industry.
 - (b) What do you understand by endogenous enzymes? Discuss their significance in food processing.