

Printed Pages : 2



NFT-402

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 182406**

Roll No.

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**B. Tech.**

(SEM. IV) THEORY EXAMINATION, 2014-15  
**FOOD BIOCHEMISTRY**

Time : 3 Hours]

[Total Marks : 100

Note: (1) Attempt all questions.

(2) All questions carry equal marks

- 1 Attempt any four of the following (5×4=20)
- (a) Differentiate between biological catalyst & chemical catalysts.
  - (b) What is Line-weaver Burk plot? Why it is preferred over Michaelis-Menton plot for Determination of Km.
  - (c) Discuss Enzyme inhibition.
  - (d) How enzyme activity is affected by temperature & pH.
  - (e) Define enzyme co-factors and discuss its types.
  - (f) Discuss the enzyme classification with examples.

- 2 Write short notes on any four of the following. (5×4=20)
- (a) Digestive enzymes & their role.
  - (b) Na<sup>+</sup> and K<sup>+</sup> transport.
  - (c) Fluid Mosaic Model of membrane.
  - (d) Digestion and absorption of protein.
  - (e) Absorption of fat from intestines.
  - (f) Regulation of proteolytic enzymes.
- 3 Attempt any two of the following. (10×2=20)
- (a) Discuss how starch is converted into pyruvic acid.
  - (b) Discuss β-oxidation of fat and outline major steps of palmitic acid breakdown.
  - (c) Explain with reactions how and where ATP molecules are generated TCA cycle.
- 4 Attempt any two of the following. (10×2=20)
- (a) Explain the term Growth, Maturation, Ripening & senescence with respect to fruits and vegetables.
  - (b) Enlist & discuss five important changes that occur during ripening of fleshy fruits.
  - (c) Explain Rigor mortis & discuss the effect of postmortem changes on the quality attributes of meat.
- 5 Attempt any two of the following. (10×2=20)
- (a) Discuss the role of endogenous enzymes in food processing.
  - (b) Discuss the advantages of enzyme application in food processing.
  - (c) How enzymes are useful in brewing & bakery industry.