

**MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR**  
**SEMEISTER END THEORY EXAMINATION, B.TECH. (D.T.) Degree Course 2016-17**

Semester	: VII (New Pattern)	Academic Year	: 2016-2017
Course No.	: DC-417	Course Title	: Food Chemistry
Credits	: 2+1=3	Total Marks	: 50
Day & Date	: Friday, 06/01/2017	Time	: 11.00 to 13.00 Hrs.

- Note :**
- 1) All questions from **Section 'A'** are compulsory.
  - 2) Solve **Any Five** questions from **Section 'B'**.
  - 3) Draw neat and well labelled diagram wherever necessary.

**SECTION - 'A'**

Q. 1 A) Choose the most appropriate answer from the options given below. (05)

- i) Enzyme responsible for browning in freshly cut vegetable is .....
  - a) Hydroxylase
  - b) Proteinase
  - c) Carboxylase
  - d) Polyphenyl oxidase
- ii) Potassium sorbet is used in food as a .....
  - a) Sweetener
  - b) Antimicrobial agent
  - c) Free flowing agent
  - d) Antioxidant
- iii) Amino acid based sweetener. ....
  - a) Alitame
  - b) Cyclamate
  - c) Sucralose
  - d) Saccharain
- iv) In roasted cocoa bean the bitter taste is derived from .....
  - a) Pyrimidines
  - b) Alkanals
  - c) Purines
  - d) Pyrazone
- v) Monosodium glutamate is used as a .....
  - a) Flavor enhancer
  - b) Chelating agent
  - c) Sweetener
  - d) Antioxidant

B) Define the terms (05)

- i) Gelatinization
- ii) Food additives
- iii) Beverage
- iv) Lipolysis
- v) Simple lipids

Q. 2 A) Give one example of following (05)

- i) Essential Amino acid
- ii) Hetropolysaccharide
- iii) Natural Antioxidant
- iv) Carrier protein
- v) Artificial sweetener

**(P.T.O.)**

- B) State "True or False", If False, rewrite the statement after making necessary (05) corrections.
- i) Glycerol is formed by auto-oxidation.
  - ii) Meat tenderization is done to destroy microorganisms on it.
  - iii) Arachidonic acid is short chain fatty acid.
  - iv) Xanthine oxidase is responsible for proteolysis of proteins.
  - v) Acrolin is responsible for pungent odour of fried food.

### SECTION – 'B'

- Q. 3 Define fruits and vegetable. Give the detail classification of fruits and vegetables. Explain (06) the major physico-chemical changes taking place during ripening of fruits.
- Q. 4 Give the classification of beverage. Discuss in brief physicochemical changes during (06) processing of tea.
- Q. 5 What is protein? Give its classification with examples. Discuss in brief physicochemical (06) properties of food proteins.
- Q. 6
- a) Discuss in brief the chemistry of frying. (02)
  - b) Write a short note on anti nutritional factors. (02)
  - c) Discuss about the enzymes required in food processing. (02)
- Q. 7
- a) Define food preservatives. Discuss the general principles of food preservation by (03) chemical means.
  - b) Discuss in brief the utilization of polysaccharides. (03)
- Q. 8
- a) Discuss in brief the physicochemical changes during bread making. (02)
  - b) Define odour threshold and detectable threshold. (02)
  - c) Write a short note on aroma compounds in foods. (02)
- Q. 9
- a) Describe the functions of carbohydrates and vitamins (02)
  - b) Define and explain the term water activity. Write an explanatory note on types of (04) water.

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