

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

Semester	: VII (New Syllabus)	Academic Year	: 2016-2017
Course No.	: DC-706	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) The major organic acid present in lemon
 - a) Tartaric acid
 - b) Citric acid
 - c) Acetic acid
 - d) Lactic acid
- ii) Proteins used for spin process of texturization should have a molecular weight in the range of KD
 - a) 5-10
 - b) 50-100
 - c) 1-5
 - d) 10-50
- iii) The predominant sterol found in plants
 - a) Mycosterol
 - b) Cholesterol
 - c) Ergosterol
 - d) Stigma sterol
- iv) The long chain di-unsaturated fatty acid
 - a) Oleic acid
 - b) Capric acid
 - c) Linoleic acid
 - d) Lauric acid
- v) In roasted cocoa bean the bitter taste is derived from
 - a) Pyrimidines
 - b) Pyrazone
 - c) Purines
 - d) Phenols

B) Define the terms: (05)

- i) Salting out phenomenon
- ii) Auto-oxidation of lipids
- iii) Pectin
- iv) Food additives
- v) Odor threshold

Q. 2 A) Give the full form for the following. (05)

- i) PUFA
- ii) NPU
- iii) DHA
- iv) GRAS
- v) ERH

(P.T.O.)

- B) State "True or False", If False, rewrite the statement after making necessary corrections. (05)
- i) BHA prevents protein denaturation in food.
 - ii) Protease is responsible for hydrolysis of lipid.
 - iii) Osmotic dehydration is a method of food preservation.
 - iv) Boiling of soybean is done to destroy pathogens on it.
 - v) Feed causes flavor defect in milk.

SECTION – 'B'

- Q. 3 Define the term beverage. Give their classification. Explain the changes during processing of tea. (06)
- Q. 4 Define food proteins. Give detailed classification of food proteins with an example. (06)
Describe the important changes/reactions in proteins during processing of foods.
- Q. 5 Give detail classification of fruits and vegetables. Explain the major physicochemical changes taking place during ripening of fruits and their impact on qualities of fruits. (06)
- Q. 6
- a) What do you mean by anti nutritional factors? Explain. (02)
 - b) Give the brief account of minerals in foods. (02)
 - c) Define and explain the term water activity. (02)
- Q. 7
- a) Define food preservatives. Discuss the various methods of chemical preservation (03)
 - b) Give the detailed classification of polysaccharides and discuss in brief the uses of polysaccharides. (03)
- Q. 8
- a) Describe the significance of enzymes in food processing. (02)
 - b) Discuss in brief the physico-chemical changes during baking of breads. (02)
 - c) Write an explanatory note on aroma compounds in foods. (02)
- Q. 9
- a) Explain the various functions of food. (02)
 - b) Describe the major change that occurs in oils during deep-frying of fat. (04)
