

MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR
SEMESTER END THEORY EXAMINATION, B. Tech. Dairy Technology 2018-19

Semester	: VI (V Dean)	Academic Year	: 2018-2019
Course No.	: DC-607	Course Title	: Food Chemistry
Credits	: 2+1=3	Total Marks	: 50
Day & Date	: Thursday, 20.06.2019	Time	: 11.00 to 13.00 Hrs.

- Note :** 1) All questions from **Section 'A'** are compulsory.
2) Solve **Any Three** 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 following is an example of phosphoprotein
 - a) Phospholipids
 - b) Haemoglobin
 - c) Casein
 - d) Mucin
- ii) Water activity of intermediate moisture foods falls in the range of
 - a) 0.95 - 1.0
 - b) 0.65 - 0.90
 - c) 0.3 - 0.5
 - d) 0.1 - 0.2
- iii) The following is an example of Class II type of preservative
 - a) Salt
 - b) Sugar
 - c) Acid
 - d) Sodium benzoate
- iv) is a trace element.
 - a) Calcium
 - b) Sodium
 - c) Cobalt
 - d) Magnesium
- v) is an example of climacteric fruits.
 - a) Wood apple
 - b) Custard apple
 - c) Apple
 - d) Mango

B) Define the following. (05)

- i) Water holding capacity
- ii) Isoelectric point of protein
- iii) Amylopectin
- iv) Pectin/pectic substances
- v) Trypsin inhibitors

Q. 2 A) Answer in one line. (05)

- i) What do you mean by sugar substitutes?
- ii) What is odour threshold value?
- iii) State the gluten content of maida.
- iv) State the meaning of Radionuclides.
- v) What is proenzyme or zymogen?

- B) State whether True or False. If false, rewrite the statement after making necessary corrections to the underlined word. (05)
- i) One water molecule can associate with as many as three water molecules via hydrogen bonds.
 - ii) Monosodium glutamate is an anticaking agent.
 - iii) Oxalates are known to interfere with calcium absorption by forming insoluble salts with calcium.
 - iv) Starch is the major constituent present in bran part of the cereals.
 - v) Amylase is an example of isomerase type of enzyme.

SECTION - 'B'

- Q. 3 A) Describe the structure of water with a neat sketch. (05)
B) Discuss in brief the physico-chemical changes during processing of coffee. (05)
- Q. 4 A) Define the term flavour and discuss aroma compounds in various foods. (05)
B) Write a note on fortification of vitamins and minerals in foods. (05)
- Q. 5 Write in short on the following.
- A) Uses of common polysaccharides. (03)
 - B) Physico-chemical changes during bread making. (03)
 - C) Preservation of foods. (04)
- Q. 6. Explain the following.
- A) Mechanism of gel formation in jam. (03)
 - B) Role of enzymes in food industry. (03)
 - C) Physico-chemical properties of food proteins. (04)
- Q. 7 Define and classify food lipids. Write on unsaponifiable matter contents in various fats and oils. (10)
