

**MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR**  
**SEMESTER END THEORY EXAMINATION, B.Tech. (D.T.)**

Semester	: VI (V Dean)	Academic Year	: 2021-2022
Course No.	: DC-607	Course Title	: Food Chemistry
Credits	: 2+1=3	Total Marks	: 50
Day & Date	: Friday, 06/05/2022	Time	: 02:30 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) Enzyme responsible for browning in freshly cut vegetable is .....
  - a) Proteinase
  - b) Carboxylase
  - c) Hydroxylase
  - d) Polyphenyl oxidase
- ii) Carotenoids are the precursors of.....
  - a) Vitamin C
  - b) Vitamin D
  - c) Vitamin A
  - d) Vitamin B
- iii) Amino acid containing sweetener is.....
  - a) Sucralose
  - b) Alitame
  - c) Cyclamate
  - d) Saccharin
- iv) Monosodium glutamate is used as.....
  - a) Antioxidant
  - b) Chelating agent
  - c) Flavour enhancer
  - d) Sweetener
- v) The best quality proteins having a biological value of 100 is.....
  - a) Egg proteins
  - b) Animal proteins
  - c) Wheat proteins
  - d) None of these

B) Define the following. (05)

- i) Starch
- ii) Odour threshold value
- iii) Jam and jelly
- iv) Preservation
- v) Food additives

Q.2 A) Do as directed. (05)

- i) Why milk protein is not a complete protein?
- ii) State any two examples of plant sterol.
- iii) Give the examples of acidic amino acid.
- iv) Why meat tenderization is required?
- v) State the precursor of vitamin-D.

B) State whether True or False. If false, rewrite the statement after making necessary corrections to underlined word. (05)

- i) Protease is responsible for lipolysis.
- ii) Compound responsible for taste are generally volatile at room temperature.
- iii) Lycopene is responsible for red colour of tomato.
- iv) Animal protein is deficient in lysine, methionine and tryptophan.
- v) Pectin is a complex polysaccharide consisting mainly of mannuronic acid.

(P.T.O.)

## SECTION - 'B'

- Q.3 A) Define and classify food carbohydrates. Discuss the use of non-nutritional sweeteners in foods. (05)  
B) Explain the role of various hydrolases in food industry. (05)
- Q.4 A) Describe the classification of food proteins based on composition. (05)  
B) What is GRAS? Give the classification of food additives and write its significance in food. (05)
- Q.5 A) Explain the chemical reaction in oil during deep fat frying. (03)  
B) Explain the physico-chemical changes in fruits and vegetables after harvesting. (03)  
C) What is texturised protein and how it can be prepared? (04)
- Q.6 A) Discuss in brief unsaponifiable matter present in food lipid. (03)  
B) Discuss the role of pectin in jam and jelly preparation. (03)  
C) Differentiate between amylose and amylopectin. (04)
- Q.7 Describe the sorption isotherm and various types of water present in food. Add a note on structure of water. Narrate the effect of water activity on the various rate of reaction occurring in food. (10)

\*\*\*\*\*