

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

THIRD SEMESTER B.TECH DEGREE EXAMINATION (S), FEBRUARY 2023**FOOD TECHNOLOGY****(2020 SCHEME)****Course Code : 20FTT205****Course Name: Food Chemistry****Max. Marks : 100****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. List the five food groups with examples
2. Recall the structure of water
3. What are the sources of carbohydrates in food?
4. Define sugar alcohols and give its significance
5. Distinguish essential and nonessential amino acid
6. Mention the functions of proteins
7. Define smoke point and fire point of fat
8. Differentiate fat and oil
9. Identify any three functions of Vitamin C
10. Record the role of iodine in human health and nutrition

PART B***(Answer one full question from each module, each question carries 14 marks)*****MODULE I**

11. a) Define water activity and explain the relationship between water activity and food quality. (10)
- b) Enumerate any one method for measuring water activity of food. (4)

OR

12. a) Explain the different forms of water found in food and mention its significance (6)
- b) Describe any two direct methods of determination of moisture content of food? (8)

MODULE II

13. a) What is meant by gelatinization of starch ? (10)
Discuss the factors affecting gelatinization of starch.
- b) Define resistant starch and its significance (4)

OR

14. a) Discuss the chemical changes occurring in following process
i) Caramelization (6)
ii) Non enzymatic browning reaction
b) Classify monosaccharides with examples (8)

MODULE III

15. a) Give a detailed account on protein classification (10)
b) Define texturized protein with example (4)

OR

16. a) What is meant by denaturation of protein? Give an account of factors affecting denaturation of proteins (10)
b) Mention any four applications of enzyme in food processing (4)

MODULE IV

17. a) Give an account of functions of lipids (7)
b) Classify lipids with example (7)

OR

18. a) Discuss the role of fat replacers in food processing with example (6)
b) Explain in detail different types of rancidity. List any four methods for preventing rancidity of oil. (8)

MODULE V

19. a) Describe the functions of Vitamin A and Vitamin D with its food sources. (7)
b) Give an account of role of iron in human health and give examples of iron rich foods. (7)

OR

20. a) Explain the principle and working of Bomb Calorimeter with the help of a neat diagram (10)
b) Define Basal Metabolic Rate (BMR)? What are factors affecting BMR (4)
