

Register No.: ..... Name: .....

## SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

**FIFTH SEMESTER B.TECH DEGREE EXAMINATION (S), FEBRUARY 2023**

**FOOD TECHNOLOGY**

**(2020 SCHEME)**

**Course Code : 20FTT305**

**Course Name: Food Analysis**

**Max. Marks : 100**

**Duration: 3 Hours**

### PART A

*(Answer all questions. Each question carries 3 marks)*

1. Expand the following with main function: AOAC, FSSAI, NABL.
2. How will you perform sampling as per FSSA 2006?
3. What are the advantages of wet ashing?
4. What is the importance of measuring pH of a food sample?
5. Elucidate AAS and AES.
6. Enlist the advantages of UV Visible spectroscopy?
7. Recall the principles of Supercritical fluid chromatography?
8. Explain the working procedure of Column chromatography.
9. Describe the difference between Rocket Electrophoresis and Gel electrophoresis.
10. Explain the disadvantages of AGE.

### PART B

*(Answer one full question from each module, each question carries 14 marks)*

#### MODULE I

11. a) Describe the main regulations of FSSA 2006. (7)  
b) Give an account Procedure for the application of NABL accreditation. (7)

**OR**

12. a) Discuss the functions of CAC. (7)  
b) Give details of role of AOAC in food analysis. (7)

#### MODULE II

13. a) Differentiate continuous and semi continuous solvent extraction methods for determining lipids? (7)  
b) How will you determine ash contents by dry and wet method? (7)

## OR

14. a) How will you determine the fat content of a given sample by Soxhlet method? (7)  
b) Explain a technique for protein estimation? (7)

## MODULE III

15. a) What is Beer-Lambert's Law? Derive its equation? (7)  
b) Explain the principle of UV-Visible spectrophotometer with neat sketch? (7)

## OR

16. a) Illustrate the principle and working of Fluorescence Spectroscopy? (7)  
b) Write the difference between AAS and AES? (7)

## MODULE IV

17. Explain the principle, working and instrumentation of High performance liquid chromatography. (14)

## OR

18. a) Elucidate the principles of thin layer chromatography? (7)  
b) Write the working principles of Gel filtration Chromatography? (7)

## MODULE V

19. a) Explain the working principle of capillary electrophoresis? (7)  
b) Give details of common applications of reagent strips? (7)

## OR

20. a) What is SDS PAGE and write the applications of SDS PAGE? (7)  
b) Explain the principle of Radio Immunoassay? (7)

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