QP CODE: 22000346

22000346

Reg No : .....

Name : .....

MSc DEGREE (CSS) EXAMINATION , JANUARY 2022

Second Semester

M Sc FOOD TECHNOLOGY AND QUALITY ASSURANCE

CORE - FQ010202 - FOOD ANALYSIS AND INSTRUMENTATION

2019 Admission Onwards

8C7F7139

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. Define Monochromator.
2. Determine the steps followed in gravimetric analysis.
3. Explain reducing and non-reducing sugars.
4. Explain the principle of Munson and Walker method.
5. Discuss about Ultrasonic method for lipid analysis.
6. Identify the use of convection oven in moisture analysis.
7. Explain the principle of Biuret method.
8. Explain the principle of Bradford method.
9. Explain the procedure of microbiological asssay method in vitamin analysis.
10. Discuss about the titrimetric method of vitamin C analysis.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. List the problems in sampling.
12. Discuss about adsorption chromatography.
13. Explain D-glucose/D-fructose/D-Sorbitol method for the analysis of carbohydrates.
14. Discuss about various methods which are employed for Specific gravity measurements.
15. Define Lipids and discover the importance of Lipid analysis.

16. Discuss about principles behind hydrometry and refractrometry methods involved in moisture analysis.

17. Explain Ninhydrin method with applictions, advantages & disadvantages.

18. Calcium can be quantitated by gravimetric analysis,EDTA complexometric titration and redox titration. Differentiate these techniques with regards to principles involved.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Explain how the molecular weight of proteins is determined by gel electrophoresis.

20. Compare & contrast the AOAC method, the Englyst-Cummings method & the Theander-Marlett method for determination of total dietary fiber. Consider the principles, procedures, applications & advantages & disadvantages.

21. Discuss about the solvent extraction methods in fat analysis.

22. Discuss about the application of different ashing techniques.

(2×5=10 weightage)