QP CODE: 25024479

25024479

Reg No : .....

Name : .....

M.Sc DEGREE (CSS) EXAMINATION, APRIL 2025

Fourth Semester

M Sc FOOD TECHNOLOGY AND QUALITY ASSURANCE

ELECTIVE - FQ820403 - BYPRODUCT UTILIZATION AND WASTE MANAGEMENT

2019 ADMISSION ONWARDS

02521AB1

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. What are food residuals and non-food residuals?
2. What do you mean by the term waste management?
3. What are the three different characteristics of waste water?
4. What do you mean by TOD? State the correlation between BOD, COD and TOD
5. What are the different screens used for screening of effluents?
6. What do you mean by the term floc?
7. What are dried distiller's grain?
8. Write a note on bone meal.
9. What is feather meal? How is it prepared?
10. What do you mean by the term fish guano?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Water is needed for various operations in food processing industry and is responsible for the generation of large amount of waste-Substantiate
12. Elaborate the method used to measure total kjheldahl nitrogen (TKN) in waste.
13. Describe the standard method used to determine COD in waste samples.
14. Write a note on sedimentation process in ETP.

15. Give a brief account on biodegradation of organic matter of sludge in anaerobic digestion.

16. Describe the germicidal action of chlorine and its compounds in chlorination.

17. Define whey. Make a detailed note on by products from whey and its applications.

18. Describe the process of blood meal preparation.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Write in detail the methods for determining BOD and COD in waste water.

20. With a neat diagram, discuss the waste water treatment process of a food processing industry.

21. Give a detailed account of preliminary and primary treatment methods used in waste water treatment.

22. Make a detailed note on the various by-products of fish industry and its utilisation.

(2×5=10 weightage)