



QP CODE: 24018185



Reg No :

Name :

M Sc DEGREE (CSS) EXAMINATION, APRIL 2024

Fourth Semester

M Sc FOOD TECHNOLOGY AND QUALITY ASSURANCE

Elective - FQ820403 - BYPRODUCT UTILIZATION AND WASTE MANAGEMENT

2019 ADMISSION ONWARDS

D78E5292

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Define food waste.
2. What do you mean by the term waste management?
3. State the importance of nitrogen content in food industrial waste before biological waste treatment.
4. Write a short note on membrane filter technique used for the detection of coliforms.
5. What do you mean by primary treatment of an effluent?
6. What do you mean by the term sludge? List different types of sludge's in waste water treatment process?
7. What are common feed by products of corn wet milling process?
8. Write the nutrient composition of blood meal.
9. What is fish body oil? Mention its uses.
10. What do you mean by rendering?

(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 determination of dissolved matter in waste water.
13. Narrate the principle and procedure of a 5 day BOD test.
14. What are anaerobic ponds? How does anaerobic condition occurs in these ponds?
15. Give an account of the different chlorine compounds used in chlorination process?
16. What is floatation? What are the different types of floatation?
17. Discuss the extraction process of fish body oil.
18. Give an account of characterisation of by products from meat industry.

(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. What is a dairy by product? Describe in detail the characterisation and utilisation of by products from dairy industry.

(2×5=10 weightage)

