



QP CODE: 21000784



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Reg No :

Name :

M Sc DEGREE (CSS) EXAMINATION, JULY 2021

Fourth Semester

Faculty of Science

M Sc FOOD TECHNOLOGY AND QUALITY ASSURANCE

Elective - FQ820403 - BYPRODUCT UTILIZATION AND WASTE MANAGEMENT

2019 Admission Onwards

776CCE1C

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

Answer any **eight** questions.

Weight **1** each.

1. What are avoidable and unavoidable food waste?
2. Chalk out the comparison between by-products and waste.
3. What are the limitations of BOD test?
4. What are indicator organisms?
5. What is flow equalization? State its significance in ETP
6. What is the importance of filter media in trickling filter?
7. What are the byproducts of sugar industry?
8. What are uses of blood meal?
9. What is fish flour? Mention its uses.
10. What is gelatin? Give its uses.

(8×1=8 weightage)

Part B (Short Essay/Problems)

Answer any **six** questions.

Weight **2** each.

11. What are the different waste disposal methods used in food processing industry?





12. Describe the method used to determine total solids in waste.
13. Discuss the method used to analyse oil and grease content in waste water.
14. Discuss the different preliminary treatment methods used in an ETP
15. Discuss the removal of suspended and dissolved solids during the tertiary treatment of waste water.
16. Write in detail on flocculation.
17. Describe the characterisation and utilisation of by products from poultry dressing plant
18. Discuss the extraction process of fish body oil.

(6×2=12 weightage)

Part C (Essay Type Questions)

Answer any **two** questions.

Weight **5** each.

19. Define waste water. Make a detailed note of the physical and chemical quality parameters assessed in waste water analysis.
20. With the help of diagrams, give a detailed account of oxidation ponds and its types. List its advantages and disadvantages.
21. Describe in detail the characteristics of Industrial waste water.
22. What is a dairy by product? Describe in detail the characterisation and utilisation of by products from dairy industry.

(2×5=10 weightage)

