

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086**  
(For candidates admitted during the academic year 2016-17& thereafter)

**SUBJECT CODE: 16VF/VM/WM66**

**B.Voc. DEGREE EXAMINATION, SEPTEMBER 2020**  
**FOOD PROCESSING AND QUALITY CONTROL.**

**COURSE : MAJOR CORE**  
**PAPER : WASTE MANAGEMENT IN FOOD INDUSTRY**  
**TIME : 90 MINUTES** **MAX. MARKS: 50 MARKS**

**SECTION – A**

**(20 X 1 = 20)**

**ANSWER ALL QUESTIONS:**

**I Choose the Correct answer:**

1. The simplest and the most preferable practice in food waste management is \_\_\_\_\_.  
a. Effective management of resources    b. Prevention of waste at the source.  
c. Planned processes of handling wastes.    d. Having larges spaces for disposal
2. Waste waters released from food industries are high in.  
a) Soluble impurities only.    b) BOD levels    c) Obnoxious odors  
d) Nitrogenous compounds.
3. ISO 140001 is \_\_\_\_\_ series of standards.  
a) Food safety    b) Quality control    c) Environmental management system  
d) Process control.
4. The setup of an ETP food processing unit is essential \_\_\_\_\_  
a) To increase popularity    b) To gain profits    c) Alternative to manage wastes.  
d) To minimize environmental damage.
5. The most suitable option to treat food industrial waste waters of high strength organic effluents is \_\_\_\_\_.  
a. Sedimentation    b. Filtration    c. Anaerobic Digestion.    d. Aeration.

**II Fill in the blanks:**

6. A waste water treatment process consisting of fixed bed of rocks, gravel and coke is known as \_\_\_\_\_.
7. The byproduct generated from meat processing units having wide applications in food processing \_\_\_\_\_.
8. A parameter estimated in waste waters and measured in NTU is called \_\_\_\_\_.
9. One parameter analyzed for evaluation of performance of Effluent Treatment Plant is \_\_\_\_\_.
10. The process of \_\_\_\_\_ facilitates the rising of particles lighter in density during the treatment.

**III State whether True or False:**

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11. In the process of biological oxidation, the coagulated suspended particulates are allowed to settle, and the participated suspended solids are removed as sludge.
12. The waste waters released from dairy processing industries are rich in nitrogen.
13. Generation of wastes for a food processing unit starts only after the process.
14. Incineration is an ideal technique to dispose organic wastes.
15. The process of converting food wastes to manure using vectors is called fermentation.

**IV Answer in a sentence:**

16. Aerated lagoons.
17. Fish oils.
18. Sludge.
19. Landfills.
20. Coagulation.

**SECTION - B**

**ANSWER ANY SIX QUESTIONS:**

**(6×3 = 18)**

21. Differentiate between BOD and COD
22. Write a note on process to estimate sulphates in waste water.
23. Explain the impact on water bodies when untreated waste water is directly released into it.
24. Explain with figure the waste management hierarchy?
25. Write about the environment protection act and its importance for processing units.
26. Explain the kinds of wastes generated in food processing units along with their characteristics.
27. Why there is necessity for food waste utilization.
28. Write about any three by products of fruit and vegetable processing.
29. Define Waste? Write about physical characteristics about waste water.
30. Define DO, principle and method of estimation.

**SECTION – C**

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**ANSWER ANY TWO QUESTIONS:**

**(2×6 =12)**

31. Explain Microbiology of waste waters.
32. What is vermicomposting and how beneficial is this method in treating food industrial wastes.
33. Explain in detail the secondary treatment methods of waste water released from food industries.
34. Write in detail about the by products generated from dairy processing units and meat processing industries?