

- Q.27 What is Sand, Coal and Activated Carbon filters?  
Why they are used?
- Q.28 Write short note on microbiology of waste.
- Q.29 Write a short note on Sedimentation?
- Q.30 Explain biological Oxidation process for waste treatments?
- Q.31 Explain the concept of vermi-Composting with neat and clean diagram?
- Q.32 What is the effect of temperature on waste?
- Q.33 Write a note on recycling and reuse?
- Q.34 Briefly explain different types of waste and magnitude of waste generated by food processing industries.
- Q.35 What are the different forms of phosphorus and sulphur in waste waters?

#### SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Describe in detail the different methods of preliminary waste water treatment of food industries.
- Q.37 Describe the working of trickling filters with the help of diagram?
- Q.38 Write a note on By-products utilization from various food industries.

No. of Printed Pages : 4

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Roll No. ....

**6th Sem / Food Tech.**

**Subject:-Waste Management in Food Industry**

Time : 3Hrs.

M.M. : 100

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 How is chemical Oxygen Demand (COD) calculated?
- Waste water is oxidized chemically using strontium in acid solutions
  - Waste water is oxidized chemically using bromine in acid solutions
  - Waste water is oxidized chemically using dichromate in acid solutions
  - Waste water is oxidized chemically using sodium in acid solutions
- Q.2 Which of the below is not an idea behind solid waste management?
- Control of waste generation
  - Storage and collection
  - Disposal
  - Stop waste generation
- Q.3 \_\_\_\_\_ is determined by measuring the dissolved oxygen used by microorganisms during the

biochemical oxidation of organic matter in 5 days at 20°C.

- a) BOD5                      b) COD  
c) TOC                        d) ThOD
- Q.4 Detention period adopted for oxidation pond is  
a) 24-36 hrs                b) 2-4 days  
c) 1-2 week                d) 2-6 week
- Q.5 Which gas produced in open dumps from the decomposition of biodegradable waste?  
a) Ethane                    b) Methane  
c) Propene                  d) Ethene
- Q.6 Activated Sludge Process is a example of  
a) Aerobic                    b) Anaerobic  
c) A & B                      d) None of above
- Q.7 What is biogas composed of?  
a) O<sub>2</sub> and CO<sub>2</sub>              b) CO<sub>2</sub> and NO<sub>2</sub>  
c) CH<sub>4</sub> and O<sub>2</sub>              d) CH<sub>4</sub> and CO<sub>2</sub>
- Q.8 How many types of landfills are there?  
a) 3                            b) 2  
c) 5                            d) 4
- Q.9 Which of the following is not removed by activated carbon?  
a) Odor                        b) TSS  
c) Microbes                  d) Micro-pollutants
- Q.10 Which of the following is the most commonly used coagulant?  
a) Ferric sulphate            b) Coal  
c) Alum                        d) Limestone

(2) 181163/121163/031163

## SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Name two by products of fruit and vegetable processing industry.
- Q.12 Write various types of waste.
- Q.13 Define recycling.
- Q.14 Full form of BOD.
- Q.15 TSS stands for \_\_\_\_\_.
- Q.16 Define bio-gas?
- Q.17 Give any two examples of micro-organism present in waste.
- Q.18 Sedimentation separates the particles on the basis of \_\_\_\_\_.
- Q.19 What is full form of EPA?
- Q.20 Define effluent?

## SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Write a short note on EPA?
- Q.22 Explain activated sludge process?
- Q.23 Explain maintenance of effluent treatment?
- Q.24 Describe the process of flocculation and floatation process in pre-treatment of waste?
- Q.25 Difference between pesticides and fungicides residues?
- Q.26 Write short note on microbiology of waste.

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