

Total number of printed pages-3

53 (FPT 501) FIWM

2018

**FOOD INDUSTRY WASTE
MANAGEMENT**

Paper : FPT 501

Full Marks : 100

Time : Three hours

***The figures in the margin indicate
full marks for the questions.***

Answer any five questions.

1. (a) What is waste ? What are the different types of wastes ? 2+8=10
- (b) What is assimilative capacity of the stream of water ? Explain the profile of dissolved oxygen content in an oxygen-sag curve. 1+5=6
- (c) What are the practices for Waste minimization in agro-based industries recommended by Central Pollution Control Board ? 4

Contd.

2. (a) Explain Waste Management. Discuss the various steps or operations involved in Waste Management of Food Processing Industry. 2+10=12
 (b) Discuss Anaerobic Wastewater treatment and the stages involved in organic matter degradation process under anaerobic condition. 2+4=6
 (c) What is Screening? 2
3. Describe the Secondary Wastewater treatment with examples of different processes involved. 20
4. (a) What are the major important by-products from dairy processing industry? Discuss the utilization of those by-products. 12
 (b) What is Molasses? What are the different fermentation products produced from molasses? 1+5=6
 (c) What is Single Cell Protein (SCP)? 2
5. Write short notes on : 5×4=20
 (i) Incineration
 (ii) Pyrolysis

- (iii) Vermicomposting
 - (iv) Sludge thickening.
 6. (a) What are the different types of earthworms used for vermicomposting? Elaborate. 6
 (b) Define Gasification. Describe the process of gasification and different types of gasifiers used for Solid Waste Management. 1+5+6=12
 (c) Define Solid Waste Management. 2
 7. (a) What is tertiary treatment of wastewater? Why is it needed? 1+5=6
 (b) Describe the processes involved in tertiary wastewater treatment. 14
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