

2022

Food Industry Waste Management

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 management. What are the 3R's of Waste Management?	2+3
	b)	What is Composting? Explain.	5
	c)	Discuss about various types of Composting.	10
2.	a)	What is vermicomposting? Describe the various steps involve in vermicomposting technique.	10
	b)	Write the advantages and disadvantages of vermicomposting technique?	5
	c)	Why it is necessary to treat wastewater before disposal?	5
3.		Write short notes on the followings	5x4
	a)	Gasification	5
	b)	Greenhouse gases	5
	c)	Incineration	5
	d)	Pyrolysis	5

4.	a)	Define BOD and COD? Derive the equation for BOD ₅ .	5+5
	b)	The 5 days BOD at 200°C of a wastewater is 300 g/L. What will be the ultimate BOD? What will be the 10 days demand? If the bottle had been incubated at 300°C, what would be the 5 days BOD?	10
5.	a)	Describe the rotating biological contactor (RBC) process and discuss how it works.	10
	b)	Describe the working principle of trickle filter (TF) technique for treatment of wastewater.	10
6.	Distinguish between the followings		
	a)	Rubbish and Garbage	5
	b)	Hazardous wastes and Non-hazardous waste	5
	c)	Windrow composting and In-vessel composting	10
7.		Discuss with principle the landfill bioreactor. Write the various steps involved in landfill process. What do you understand by Landfill gas?	5+10 +5

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Central Institute of Technology Kottayam