QPC: RN18001300 AR - 18 Reg. No. | | | | | | | | | | |

GIET MAIN CAMPUS AUTONOMOUS GUNUPUR – 765022

B. Tech Degree Examinations, November – 2021

(Seventh Semester)

BCVOE7030 – MUNCIPAL SOLID WASTE MANAGMENT

(Civil Engineering)

Time: 3 hrs Maximum: 100 Marks

Answer ALL Questions

The figures in the right hand margin indicate marks.

PART – A: (Multiple Choice Questions) (2 x 10 = 20 Marks)

Q.1. Answer *ALL* questions			[CO#]	[PO#]
a.	What is a Geo-net?		CO1	PO1
	i. A synthetic material used for drainage of liquids	ii. A synthetic material used for drainage of Gases		
	iii. A ceramic material used for drainage of liquids	iv. A fibrous material used for drainage of liquids		
b.	How do you remove leachate from the landfill?		CO1	PO1
	i. By Gravity	ii. By pumping from low points		
	iii. Both (i) and (ii)	iv. None of these		
c.	What are the methods in which energy can be recovered from Waste to energy		CO1	PO1
	i. By (1) and (2)	ii. By (2) and (3)		
	iii. By (1), (2) and (3)	iv. None of the above		
d.	What is the most expensive component of solid waste handling?		CO2	PO1
	i. Collection	ii. Storage		
	iii. Treatment	iv. Separation		
e.	What are the advantages of Waste to energy?		CO2	PO2
	i. It is economical	ii. Reduce volume of waste		
	iii. Recover waste	iv. High degree of sophistication is required		
f.	The process of burning of municipal solid waste at high temperature is called _____		CO3	PO1
	i. Incineration	ii. Composting		
	iii. Land filing	iv. Shredding		
g.	In which method of disposal of municipal solid waste, the waste is dumped in the soil?		CO3	PO2
	i. Incineration	ii. Composting		
	iii. Land filing	iv. Shredding		
h.	The process of decomposition of biodegradable solid waste by earthworms is called __.		CO4	PO1
	i. Land fills	ii. Shredding		
	iii. Vermi-composting	iv. Composting		
i.	Which of the following is not the land filling method?		CO4	PO2
	i. Bangalore method	ii. Area method		
	iii. Depression method	iv. Trench method		
j.	Which of the following is not the municipal solid waste?		CO4	PO1
	i. Radioactive substance	ii. Ashes		
	iii. Food waste	iv. Rubbish		

PART – B: (Short Answer Questions) **(2 x 10 = 20 Marks)**

Q.2. Answer ***ALL*** questions	[CO#]	[PO#]
a. Define the term Refuse	CO1	PO1
b. List out the MSWM principles	CO2	PO2
c. What are the methods of loading the solid waste on the vehicle?	CO1	PO1
d. What are the Routing system of collection?	CO1	PO2
e. What is called legislation	CO1	PO4
f. What is the Importance of on-site handling of solid waste?	CO2	PO2
g. What are the types of collection services	CO3	PO4
h. List the Factors that tend to make of transfer operation	CO3	PO1
i. Give the Five basic models of waste collectionvehicles	CO4	PO1
j. What are the Types of Composting?	CO4	PO1

PART – C: (Long Answer Questions) **(15 x 4 = 60 Marks)**

Answer ***ALL*** questions	Marks	[CO#]	[PO#]
3. a. The functional elements in solid waste management	15	CO1	PO1
(OR)			
b. Explain the Public health effects in MSWM	15	CO1	PO1
4. a. Explain Public health & Economic Aspects of On-Site Storage	8	CO2	PO2
b. List out the Storage containers size in MSWM.	7	CO2	PO2
(OR)			
c. Explain Resource Recovery	8	CO2	PO1
d. List out the levels of recycling	7	CO2	PO2
5. a. Explain landfill process	15	CO3	PO2
(OR)			
b. Explain the leachate collection and treatment.	15	CO3	PO2
6. a. Describe Anaerobic Digestion (AD)	8	CO4	PO1
b. Describe Incineration	7	CO4	PO1
(OR)			
c. Explain Resource Recovery /Energy Recovery from solid wastes	15	CO4	PO2

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