QPC: RN22PHD376 Reg. No | | | | | | | | | | |

GIET UNIVERSITY, GUNUPUR – 765022

Ph.D. (Second Semester) Examinations, November – 2023

WPPECV2018 - Waste Processing Technologies

(Civil)

Time: 3 hrs Maximum: 70 Marks

The figures in the right hand margin indicate marks.

Answer ANY FIVE Questions **(14 x 5 = 70 Marks)**

		Marks
1.a.	What are waste treatment technologies? What are the appropriate technologies for solid waste management?	7
b.	Explain the broad provisions of the Construction and Demolition Waste Management Rules 2016.	7
2.a.	What are the methods of material recovery and the MBT process?	7
b.	What is recovery and recycling method of MRF?	7
3.a.	What is biomethanation of solid waste process? What are the steps of biomethanation process?	7
b.	Discuss the hydrogen and biohydrogen and their differences.	7
4.a.	What is mechanical as a process of waste treatment and what are the types of biological processes for wastewater treatment?	7
b.	What are the advantages and disadvantages of the process of Incineration of waste treatment?	7
5.a.	What is the solid recovered fuel and what is the composition of SRF fuel?	7
b.	Discuss the emerging Smart Waste Collection technologies being used in waste collection.	7
6.a.	What are the applications of smart dustbin? What is the methodology of smart garbage monitoring system using IoT?	7
b.	How can robotics help waste management and how is AI used in waste management in India?	7
7 a.	What is industrial waste and examples? What is the main cause of industrial waste?	7
b.	Discuss the Design of Waste Material Recovery Facilities.	7
8 a.	What is the main purpose of pyrolysis? Is pyrolysis better than combustion?	7
b.	Explain the primary sources of solid waste. Give examples.	7

---End of Paper---