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Internal Assessment Test - I – March 2019

Sub:	SOLID WASTE MANAGEMENT	Sub Code:	15CV651	Branch:	CIVIL		
Date:	07/ 03 / 2019	Duration:	90 min's	Max Marks:	50		
		Sem / Sec:	VI		OBE		
<u>Answer any FIVE FULL Questions</u>					MARKS	CO	RBT
1	Explain transfer stations. Explain the factors to be considered in the design of transfer station.				[10]	CO2	L2
2	Discuss the factors affecting aerobic composting				[10]	CO4	L2
3	Briefly discuss the various methods used to estimate waste quantities.				[10]	CO1	L2
4	Explain hauled container system and stationary container system with neat sketches				[10]	CO2	L2
5	Estimate the unit solid waste generation rate for a residential area having 800 dwellings. The observation made at local transfer station for a week time revealed that the waste was carried in self-compacting trucks and flatbed trucks, whose volume is 15m ³ and 1.25m ³ and the density of waste is 295 kg/m ³ and 110kg/m ³ respectively. Assume 10 self-compacting truck and 20 flatbed truck loads per week. Assume 6 persons per house.				[10]	CO1	L2

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- 6 Estimate the moisture content, density and energy content (on dry basis and on ash free basis) of the solid waste sample using the data given below. Assume ash content as 5%.

Component	% by mass	Moisture content,%	Density, kg/m ³	Energy, kJ/kg
Food waste	12	70	290	4000
Paper	40	06	85	16000
Card board	08	05	50	16000
Plastics	04	02	65	32000
Grass trimmings	15	60	105	6500
Wood	05	20	240	18000
Tin cans	16	03	90	700

*Based on 1000 kg waste sample

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