Reg. No.										
----------	--	--	--	--	--	--	--	--	--	--



MANIPAL INSTITUTE OF TECHNOLOGY MANIPAL

(A constituent institution of MAHE, Manipal)

VI SEMESTER B.TECH. (CIVIL ENGINEERING) END SEMESTER EXAMINATIONS, APRIL/MAY 2018 SUBJECT: SOLID WASTE MANAGEMENT [CIE 4025] REVISED CREDIT SYSTEM (26/ 04/ 2018)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

✤ Answer ALL the questions.

✤ Missing data may be suitably assumed.

Q.No	Question statement		
1A.	I. Draw a neat sketch for stationary and hauled container system II. For a hauled container system, Estimate the time required per week as a function of round trip haul distance and the number of trips per, week if the quantity of solid waste generated is 230 m ³ / week container size is 6.11 m^3 and container utilization factor is 0.67. Average pick up time is 0.133 h/trip, at site time is 0.053 h/trip, haul time constants are a = 0.022 h/trip, b =0.022 h/km. Assume travel times t ₁ and t ₂ is included in the off-route factor 0.15 and time required per day is 8 hour	5 (2+3)	CO1
1B.	Explain the various methods of residential collection service of Municipal authority.	5	CO1
2A.	. Comment on types of radioactive waste and any two conditioning process		CO2
2B.	B. Explain the various sources of waste deposited in ocean		CO2
3A.	With a neat sketch explain the types of composting and its requisites.	6	CO3
3B.	. With a neat sketch explain mass burning incinerator system.		CO3
4A.	Briefly explain the various methods of leachate treatment	6	CO4
4B.	Explain the microbial activity in landfill with a neat sketch.	4	CO4
5A.	Explain the various steps in glass recycling process.	5	CO5
5B.	Describe on the various steps in a municipal recycling programme	5	CO5