

JK LAKSHMIPAT UNIVERSITY, JAIPUR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination, Nov.-Dec. 2015
B. Tech in CIVIL Engineering, Semester-VII

Roll No.....

COURSE CODE: (CE-724); Solid Waste Management

Time: 3 hours

Max. Marks: 100

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.

Q.1A	Objective type multiple choice questions (10 questions @ 1 mark)	10
i.	Food chain of ecosystem directly depend on ; (a) consumer (b) decomposer (c) producer (d) None	
ii.	Disposal of hospital solid waste which technique is effective for it a) incineration b) dumping it in open area c) landfilling d) all of the above	
iii.	Leachate is composition of a) organic and inorganic waste liquids b) toxic chemical liquids and gases c) water with toxic gases d) none	
iv.	Which method used for size reduction of MSW a) shredders b) cutting machine c) steel cutter d) machine with sharp blade	
v.	mRDF is a) reused derived fuel b) Mass refused derived fuel c) retentation dispal of fluid d) all of the above	
vi	Air density classification is related to a) separation of MSW b) Paper& plastic separation from MSW c) separate light metal d) None	
vii	Haul container system is related to a) transportation of MSW b) transportation of bio hazards c) transportation of solid waste d) all of the above	
viii	HDPE is; a) High density polyethylene b) high disperse polyethylene c) None d) All of the above.	
ix	What is true for ecosystem (a) primary consumers out number producers (b) producers are more than primary consumers (c) primary consumers are least dependent upon producers (d) secondary consumers are largest	
x	Write the major source of municipal solid waste	
Q.2	Short answer type questions (4 questions @ 2.5 marks)	10
i.	Short note on screening of MSW in collection center.	
ii.	Why are decomposer are so important in ecosystem	

iii.	Give five major factor which influence the solid waste generation.	
iv.	Energy flow in a fresh water lake system (only flow chart diagram).	
Q.3A	Draw the oxygen cycle with chemical reactions.	05
Q.3B	Write short note on leachate.	05
Q.4A	Draw the flow chart of commingled waste	05
Q.4B	Short note on method of drying and dewatering of solid waste	05
Q.5A	Draw the complete flow chart of solid waste generation on the basis of different sources.	05
Q.5B	Explain the bio-geocycle with the example of sulfur cycle.	05
Q.6A	Discuss the advantage and disadvantage of sanitary landfill.	05
Q.6B	What is RDF? Explain its principle and uses for solid waste.	05
	OR	
Q.6B	We are doing integrated management of MSW, and how we recover the energy from waste.	05
Q.7A	Give the flow diagram of the food chain in the natural ecosystem and explain each step with the example.	05
Q.7B	Draw a route for collection of solid waste in laliya ka vas & JKLU campus	05
	OR	
Q.7B	Explain Anaerobic digestion process for the organic waste.	05
Q.8A	Describe the landfill technique for municipal solid waste disposal.	10
Q.9A	We are human being we are top consumer of ecosystem how, we are exploiting the resource of ecosystem . What would be the serious consequences to be the face our new generation.	10
Q.9B	Discuss the phosphate cycle in land as well as in water	10
	OR	
Q.9B	Explain the types of reactions occurring during landfill of solid waste.	10