

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E/Civil	Year / Semester :IV/VII	Format No.	NAC/TLP-07a.13
Subject Code :EN8591	Subject Name : Municipal Solid Waste Management	Rev. No.	02
Unit No : IV	Unit Name : Processing Of Wastes	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S.No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
Unit-IV / Processing Of Wastes		
Objectives of waste processing – Physical Processing techniques and Equipment; Resource recovery from solid waste composting and biomethanation; Thermal processing options – case studies under Indian conditions.		
1.	What are the methods in which energy can be recovered from Waste to energy (1) Heat (2) Electricity (3) Co-generation a) By (1), (2) and (3) b) By (1) and (2) c) By (2) and (3) d) None of the above	L2
2.	What are the advantages of Waste to energy? a) Reduce volume of waste b) It is economical c) Recover useful energy d) High degree of sophistication is required	L2
3.	What are the special facilities to separate recyclables into various streams? a) Shredding b) Compaction c) Screens d) Mechanical separators	L2
4.	Which of the following statements is not true for plastic wastes? a) Can be used to make compost b) All of the above c) It lasts for a longer period of time d) Toxic fumes are produced when burnt	L1
5.	Why it is difficult to recycle plastics? a) It is very hard b) It contains different types of polymer resins c) It comes in different sizes d) It is adhesive	L2
6.	The process of burning municipal solid wastes under suitable temperature and conditions in a specific furnace is called a) Incineration b) Landfill c) Recycling d) Vermicomposting	L1
7.	The density of ash produced in the municipal solid waste is _____ a) 700 kg/m³ b) 100 kg/m ³ c) 1000 kg/m ³ d) 450 kg/m ³	L1
8.	The waste produced in cotton mills are _____	L1

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	<p>a) Municipal solid waste b) Non hazardous waste c) Non biodegradable waste d) hazardous waste</p>	
9.	<p>_____ is the cutting and tearing of municipal solid waste.</p> <p>a) Land fills b) Shredding c) Pulverization d) Composting</p>	L1
10.	<p>_____ is the crushing and grinding of municipal solid waste.</p> <p>a) Land fills b) Shredding c) Pulverization d) Composting</p>	L1
11.	<p>There are _____ ways to treat waste thermally.</p> <p>a) 5 b) 3 c) 2 d) 6</p> <p>View Answer Answer: b Explanation: The process which use heat to treat the waste are referred to as a thermal treatment. These include incineration (combustion of waste & recover energy for electricity/heating), pyrolysis (decomposition of organic waste with low oxygen and high temperature), and open burning (environmentally harmful and mostly practical).</p>	L1
12.	<p>Bio-medical waste can be effectively managed by the thermal process.</p> <p>a) True b) False</p> <p>View Answer Answer: a Explanation: The thermal process uses heat in varying temperatures to disinfect the pathogens present. Autoclave & microwave process uses low heat whereas incinerator and hydroclaring use high heat to render the waste pathogen free.</p>	L1
13.	<p>The WHO has classified the bio-medical waste into _____ categories.</p> <p>a) 5 b) 4 c) 3 d) 2</p> <p>View Answer Answer: b Explanation: The WHO has classified these into 4 categories- infectious (waste from surgeries and any material containing pathogens), pathological (tissues/organs/drugs, etc which are not required), radioactive (contaminated with a radioactive substance) and others</p>	L1

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	L1 (waste from hospital housekeeping/kitchen).	
14.	<p>Why burning waste is not an acceptable practice of solid waste management?</p> <p>a) Because it is very costly b) Because it requires modern technologies c) Because it cause several environmental issues d) Because it requires lot of space</p> <p>View Answer Answer: c Explanation: Burning waste is not an acceptable practice, because if we look into environmental or health prospective burning waste creates lots of pollution and it is harmful to both environment and as well as organisms.</p>	L2
15.	<p>Why plastics are difficult to recycle?</p> <p>a) Because it is very hard material b) Because it is very adhesive in its nature c) Because of different types of polymer resins d) Because of different sizes of plastic</p> <p>View Answer Answer: c Explanation: Plastic are difficult to recycle because of the different types of polymer resins in their production. Since each type has a distinct chemical composition, different plastics cannot be recycled together.</p>	L2
16.	<p>What is called for the process of burning municipal solid waste in a properly designed furnace under suitable temperature and operating conditions?</p> <p>a) Landfill b) Recycling c) Vermicomposting d) Incineration</p> <p>View Answer Answer: d Explanation: Incineration is a chemical process in which the combustible portion of the waste is combined with oxygen forming carbon dioxide and water, which are released into the atmosphere. Suitable temperature and operating conditions are required to achieve for incineration.</p>	L1
17.	<p>The process of burning of municipal solid waste at high temperature is called _____</p> <p>a) Incineration b) Composting c) Land filing d) Shredding</p> <p>View Answer Answer: a Explanation: Incineration is the most sanitary method of disposal of municipal solid waste. Solid waste should have a high calorific value.</p>	L1
18.	The density of ash produced in the municipal solid waste is _____	L1

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	<p>a) 100 kg/m³ b) 450 kg/m³ c) 700 kg/m³ d) 1000 kg/m³ View Answer Answer: c Explanation: The range of the d density of ash produced from the municipal solid waste is 700-850kg/m³.</p>	
19.	<p>_____ is the cutting and tearing of municipal solid waste. a) Land fills b) Shredding c) Pulverization d) Composting View Answer Answer: b Explanation: Shredding is the cutting and tearing of municipal solid waste. It helps in reducing the size and volume of municipal solid waste.</p>	L1
20.	<p>. _____ is the crushing and grinding of municipal solid waste. a) Land fills b) Shredding c) Pulverization d) Composting View Answer Answer: c Explanation: Pulverization is the crushing and grinding of municipal solid waste. It changes the character of municipal solid waste and reduced its volume by 40%.</p>	L1
21.	<p>Which of the following is used in the production of Plastic? (a) Mercury (b) Lead (c) Vinyl chloride (d) None of these</p>	L1
22.	<p>Which of the following element/s is/are cause of e-waste? A. Lead B. Cadmium C. Beryllium, or Brominates flame retardants D. All of the above</p>	L1
23.	<p>Which of the following are the main contributors of the e-waste in the world? I. Refrigerators/freezers, washing machines, dishwashers II. Small household appliances (toasters, coffee makers, irons, hairdryers) III. Personal computers, telephones, mobile phones, laptops, printers, scanners, photocopiers IV. Gas cylinder, chimneys & home appliances A. Only I, II, III B. Only I & II</p>	L1

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	C. Only I, III, IV D. All of the above	
24.	Which toxic compound is not found in e-waste? A. Mercury B. Cadmium C. Neon D. Lead	L1
25.	E-waste contains hazardous substances that are harmful to the environment and human health if not properly treated or disposed of, therefore they must be handled with care. What are the health hazards which can be caused by E-Waste? A. Lung cancer B. DNA damage C. Brain D. All of the above	L2
26.	What is the normal storage time of incinerable hazardous waste at the incinerator site? a) 4 months b) 5 months c) 6 months d) 7 months	L2
27.	Which of the following techniques can be implemented to reduce hazardous waste? a) Analysis b) Transportation c) Trans boundary movement d) Chemical exchange	L1
28.	Facilities with tanks and boilers should notify EPA 60 days prior before closure. a) True b) False	L1
29.	Hazardous waste tracking system is regulated by _____ a) NPL and RCRA b) RCRA and CERCLA c) EPA and DOT d) CERCLA and EPA	L2
30.	Dust from steel manufacturing is example for _____ waste category. a) Organic aqueous b) Inorganic aqueous c) Organic liquid d) Inorganic sludge	L1
31.	Sludge from painting operations is an example for _____ waste category. a) Organic aqueous b) Inorganic aqueous c) Organic liquid d) Organic sludge	L1
32.	If I place my food scraps in a paper sack, I can throw the sack into the composting bin along	L1

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	with the food scraps. a) True b) False	
33.	What happens to food that is put into yard waste carts or into a school composting container? a. The food scraps go to a special food-only landfill b. The food scraps are made into new food c. It's turned into compost that can be used to nourish our gardens	L2
34.	Name one product that paper is recycled into after it goes in a recycling bin. Any of the following answers is correct: Cardboard, more paper, paper towels, napkins, magazines, shirt boxes, paper bags, egg cartons, almost any paper item	L1
35.	There are _____ ways to treat waste thermally. a) 5 b) 3 c) 2 d) 6 View Answer Answer: b Explanation: The process which use heat to treat the waste are referred to as a thermal treatment. These include incineration (combustion of waste & recover energy for electricity/heating), pyrolysis (decomposition of organic waste with low oxygen and high temperature), and open burning (environmentally harmful and mostly practical).	L1
36.	What are the advantages of Waste to energy? a. It is economical b. Reduce volume of waste c. Recover useful energy d. High degree of sophistication is required	L2
37.	There is a high demand for compost in a market a. True b. False	L1
38.	Which of the following carbon and nitrogen (the C:N ratio) gives best composting result a) 20:1 to 25:1 b) 25:1 to 30:1 c) 30:1 to 35:1 d) 15:1 to 20:1	L1
39.	Which of the following factor is needd to be considred during mackyard compositing? a) Compositing unit b) Water c) Mixing to maintain contact with air d) All of the above	L1
40.	Backyard composting reducing collection rates a) True b) False	L1

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41.	In Composting process, to minimize loss of N as ammonia (NH_3 +) gas, the pH should be kept below 8.5 a) True b) False	L1
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