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TI - EXAMINATION (February - 2020)

B. Tech. (VI- SEM.)

COURSE CODE: 14M31CE115

MAX. MARKS: 15

COURSE NAME: Solid Waste Management

COURSE CREDIT: 3

MAX. TIME: 1 HR

Note: Attempt all questions. Assume suitable data if required. Carrying of mobile phone during examinations will be treated as case of unfair means

1. Briefly discuss the salient features of 'Environmentally Sound Solid Waste Management' (ESSWM). In the same context briefly discuss the 'Environmental Sound Technologies' (EST) associated with the above principles. Explain with an example if necessary. (4)
2. In the context of management of MSW, define the term 'Waste Stream Assessment'. In this context, explain (a) reasons for carrying out waste characterization studies and (b) need for field investigations including a discussion on specific activities involved. (4)
3. 'Solid waste characteristics vary from place to place and country to country'. Justify the statement in an Indian context using suitable examples and references (3)
4. Determine the capacity of transfer station using the different methods using following information (a) collection vehicle payload of 800 tons (b) total length of dumping space is 1.5 km or about 4920 feet (c) effective time of 8 hours of delivering waste (d) unloading time of 8 minutes (e) length of push pit is 12 feet (f) number of push pit is 5 (g) cycle time is 45 minutes (h) transfer trailer payload is 7 tons and number of transfer trailers loading simultaneously is 8 hours. (i) time to remove and replace each loaded trailer is 25 minutes (j) time to load each transfer trailer is 15 minutes (k) number of hoppers is 12 and (l) length of each hopper is 15 ft. (m) peaking factor of 3 (4)