

2021

Time : 3 hours

Full Marks : 70

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from all the Parts as directed.

Part - A

(Objective Type Questions)

1. Choose the correct answer in each of the following / fill in the blanks : $1 \times 10 = 10$

(a) Industrial waste may contain toxic

_____.

- (i) Chemicals
- (ii) Phenols
- (iii) Acids
- (iv) All of these

(b) Which of the following is biodegradable waste ?

- (i) Lead and Mercury
- (ii) Cow dung
- (iii) Nuclear waste
- (iv) Plastic

(c) Major gases produced from a land fill are :

- (i) $\text{CO}_2 + \text{CH}_4$
- (ii) $\text{NH}_3 + \text{H}_2$
- (iii) $\text{CO} + \text{N}$
- (iv) $\text{H}_2\text{S} + \text{O}_2$

(d) In disposal of refuse complete destruction of pathogens is by :

- (i) Land fill
- (ii) Pulverization
- (iii) Incineration
- (iv) Composting

(e) In India as CPCB, average per capita solid waste is about :

- (i) 0.1 kg per day
- (ii) 0.5 kg per day
- (iii) 0.3 kg per day
- (iv) 1.5 kg per day

(f) Solid waste is decomposed by anaerobic microbial action

(g) Fly ash is waste material produced from coal based power plants.

(h) The process of decomposing of biodegradable solid waste by earthworm is called Vermicomposting

(i) Most important product of anaerobic digestion is biogas and digestate

(j) If per capita per day solid waste produced in Patna is 500g and population of Patna is 25 lakhs, municipal solid waste(MSW) produced per day is _____ tons.

Part - B

(Short-answer Type Questions)

2. Answer any four questions of the following :

$$5 \times 4 = 20$$

(a) What are common methods of solid waste disposal ?

(b) What is meant by composting ?

(c) What do you understand by segregation of solid waste ?

(d) How do you define e-waste ? Give examples of e-waste.

- (e) Explain 4-Rs of solid waste management.
- (f) Differentiate between hazardous and non-hazardous waste.

Part – C

(Long-answer Type Questions)

Answer any four questions of the following :

10×4 = 40

3. Write in details about common methods of waste disposal.
4. What is vermi-composting ? How it is accomplished ?
5. What are different types of wastes ? Describe each of these.
6. Describe the role of rag-pickers in solid waste management.
7. Is producing energy from waste a viable solution ? Discuss.
8. Describe the main features of hospital waste management.



WR – 16/2 (600)

(4)

Env. Sc./BCA
(Sem-IV) —
SEC – 2 (SWM)