

[Total No. of Questions - 9] [Total No. of Printed Pages - 3]
(2125)

15324

B. Tech 7th Semester Examination

Waste and Sewage Treatment (NS)

CE-414

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

- Note :** (i) Attempt FIVE Questions in all.
(ii) Select ONE question from each of section A, B, C and D. Attempt all subparts.
(iii) Section E is compulsory.

SECTION - A

1. (a) Explain the composting process in detail. (7)
(b) Explain the concept of stationary and hauled container system in detail. (8)
(c) Discuss the care to be taken during storage of Hazardous waste. (5)
2. (a) What is Risk Assessment? What is the purpose of it? Why it is important for hazardous waste site? (7)
(b) Which are the treatment options available for hazardous waste? Discuss any two in detail. (8)
(c) Write short note on: Transfer Station. (5)

[P.T.O.]

2

15324

SECTION - B

3. (a) Explain the detailed classification of Bio-medical waste with colour coding practices. (10)
(b) Write short note on: Bio-medical waste Management Handling rule 2000. (5)
(c) Justify the statement
Special type of container made form HDPE material may be used for the collection of Bio-medical waste. (5)
4. (a) Discuss the Bio-medical waste Management Practices followed in India. (10)
(b) Write the difference between Solid Waste and Bio-Medical waste (5)
(c) Justify the statement
Reuse and Recycle option are not suitable for Bio-Medical waste. (5)

SECTION - C

5. (a) Discuss various structural and functional components of Eco-system in detail. (10)
(b) With sketch discuss various types of Eco-system in detail (10)
6. (a) Define Ecology and state objectives of its study. (5)
(b) Discuss the important characteristics of Eco-system. (5)
(c) Explain the concept of food web with example. (5)
(d) Write short note on : Symbiotic Relationship. (5)

SECTION - D

7. (a) Discuss various methods and equipments used to control particulate matter and gaseous pollutant. (10)
- (b) Explain the effect of air pollution on material. (5)
- (c) "Vehicles are the major source of air-pollution in Urban area" Justify the statement. (5)
8. (a) Explain the various methods to control the air pollution at source. (7)
- (b) Write a short note on Air Act. (8)
- (c) Write the air quality standards of India according to CPCB. (5)

SECTION - E

9. Attempt the following:
- (i) How the ground water contamination problem may be avoided in Sanitary Land filling site?
- (ii) Discuss the characteristics of Hazardous waste.
- (iii) Discuss functions of Shredders in managing Bio-medical waste.
- (iv) Why Bio-medical waste is taken care by urban authority?
- (v) Discuss the factors to be considered for the generation of solid waste.
- (vi) Discuss the man and environment relationship.
- (vii) Define and classify the natural resources.
- (viii) Discuss the role of NO_x as green house gases.
- (ix) Write the utility of High volume sampler in air-pollution.
- (x) Discuss the effects of Carbon Dioxide on human health. (2×10=20)