

[6]

4. Write an essay on solid waste management.

Or

Write short notes on the following :

- (a) Composting,
- (b) Role of national organisation in biotechnology.

★ ★ ★ ★ ★ c ★ ★ ★ ★ ★

G-3/305/21

Roll No.....

III Semester Examination, April-2021

M.Sc.

BIOTECHNOLOGY

Paper I

(Environmental Biotechnology)

Time : 3 Hours]

[Maximum Marks : 80

Note : *All questions are compulsory. Question Paper comprises of 3 sections. Section A is objective type/Multiple Choice questions with no internal choice. Section B is short answer type with internal choice. Section C is long answer type with internal choice.*

SECTION 'A'

1×8=8

(Multiple Type Questions)

Choose the correct answer :

1. Which of the following is a particulate pollutants :
 - (a) Ozone
 - (b) Radon
 - (c) Fly ash
 - (d) Ethylene

[4]

SECTION 'B'

4×6=24

(Short Answer Type Questions)

Note : Answer the following questions in 250 words.

1. Describe the various parameters to determine the water quality.

Or

Discuss the various methods of measuring air pollution.

2. Write a note on microbiology of waste water treatment.

Or

Discuss the aerobic methods of waste water treatment.

3. Write a note on biopesticides and explain how it is important in integrated pest management.

Or

Explain oil pollution and its control measures.

4. What is green house effect and discuss its consequences.

Or

Describe the acid rain and its consequences.

[3]

6. A process using microbes to convert toxic industrial waste to less toxic or nontoxic compound is :

- (a) Precipitation (b) Complement fixation
(c) Bioconversion (d) Bioremediation

7. What is the full form of UNFCCC with respect to global warming :

- (a) United Nations Framework Convention on Climate Change
(b) United Nations Federation Convention on Climate Change
(c) United Nations Federation Centre on Climate Change
(d) United Nations Framework Centre on Climate Change

8. Which of the following statement is true about zero waste management :

- (a) Separate collection of each kind of waste
(b) Segregation of garbage at the source
(c) Community involvement
(d) All of the above

[2]

2. The major photochemical smog is :
- (a) Hydrogen peroxide
 - (b) Chlorofluoro carbon
 - (c) Peroxyacetyl nitrate
 - (d) All of the above
3. The most commonly used coagulant is :
- (a) Alum
 - (b) Ferric sulphate
 - (c) Lime stone
 - (d) Coal
4. Which of the following gas is produced in large amount during sludge digestion ?
- (a) CH_4
 - (b) CO_2
 - (c) H_2
 - (d) N_2
5. Which bioremediation approach involved mixing of contaminated soil with water, carbon dioxide and fertilizer in a bioreactor to stimulate biodegradation :
- (a) Insitu hybridization,
 - (b) Slurry phase bioremediation
 - (c) Biopile treatment
 - (d) Composting

G-3/305/21

[5]

SECTION 'C'

12×4=48

(Long Answer Type Questions)

Note : Answer the following questions in 500 words.

1. Write an essay on water pollution and its control through biotechnology.

Or

How air pollution affects the environment and human health ? Discuss the control measures of air pollution.

2. Describe the treatment scheme for waste water of dairy industry.

Or

Describe the treatment scheme for waste water of distillery industry.

3. Write an essay on bioremediation of contaminated soil.

Or

Explain the degradation of various xenobiotic compounds.

G-3/305/21

P. T. O.