

2014

( 5th Semester )

BIOTECHNOLOGY

Paper : BT-VIII

( Environmental Biotechnology )

Full Marks : 55

Time : 2 hours

( PART : B—DESCRIPTIVE )

( Marks : 35 )

*The figures in the margin indicate full marks  
for the questions*

1. Define global warming and describe its effects in detail. 1+6=7

Or

Define biodiversity. Explain different levels of biodiversity and add a note on biodiversity loss. 1+3+3=7

2. What is biodiversity hot spot? Mention the criteria and types of hot spot by region. 1+6=7

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( Turn Over )

Or

What is seed bank? Discuss the main principle and processes involved in seed preservation. 1+6=7

3. Define eutrophication. Describe the characteristic features of eutrophic water. 1+6=7

Or

Write a note on wastewater treatment and recycling. 7

4. Explain the types of biopesticides and discuss their applications. 1+6=7

Or

What is vermiculture? Discuss the applications and process involved in vermiculture. 1+6=7

5. What are the techniques involved in bioremediation? 7

Or

Write a note on the principle and applications of biofuels.

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2014

( 5th Semester )

**BIOTECHNOLOGY**

PAPER : BT-VIII

**( Environmental Biotechnology )**

( PART : A—OBJECTIVE )

( Marks : 20 )

*The figures in the margin indicate full marks for the questions*

SECTION—I

( Marks : 5 )

1. Choose the correct answer and put its number within the brackets provided : 1×5=5

(a) Ozone is present in which layer of the atmosphere?

(i) Mesosphere

(ii) Troposphere

(iii) Ionosphere

(iv) Stratosphere

[     ]

(b) Which of the following is used for testing viability of seeds?

- (i) Alcohol
- (ii) Tetrazolium
- (iii) Chromium
- (iv) Colchicine [ ]

(c) Hardwater is characterized by having total hardness value of

- (i) 50 mg/l
- (ii) 50-60 mg/l
- (iii) 60-70 mg/l
- (iv) 40-50 mg/l [ ]

(d) Pyrethrin is a chemical obtained from

- (i) *Azadirachta indica*
- (ii) *Chrysanthemum cinerarifolium*
- (iii) *Urtica dioica*
- (iv) All of the above [ ]

(e) Which of the following bacteria is called 'super bug' that could clean up oil spills?

(i) *Pseudomonas putida*

(ii) *Bacillus subtilis*

(iii) *Pseudomonas denitrificans*

(iv) *Bacillus denitrificans*

[     ]

SECTION—II

( Marks : 15 )

2. Write short notes on the following :  $3 \times 5 = 15$

(a) Acid rain

(b) National park

(i) *Pseudomonas putida*

(ii) *Bacillus subtilis*

(iii) *Pseudomonas aeruginosa*

(iv) *Bacillus pasteurii*

(c) Components of biosphere

(Marks: 15)

2. Write short notes on the following: (5-15)

(a) Acid rain

(d) Siltation

(e) Renewable sources of energy

( 5th Semester )

BIO TECHNOLOGY

PAPER : BT VIII

( Environmental Biotechnology )

( PART : A - OBJECTIVE )

( Marks : 20 )

The figures in the margin indicate full marks for the questions

SECTION - I

( Marks : 5 )

1. Choose the correct answer and put its number within the brackets provided :

(a) Ozone is present in which layer of the atmosphere?

(i) Mesosphere

(ii) Troposphere

(iii) Ionosphere

(iv) Stratosphere

(e) Renewable sources of energy

- (i) Alcohol
- (ii) Tetrazolium
- (iii) Chrysochlorin
- (iv) Colchicine

(f) Hardwater is characterized by having a high hardness value of

- (i) 50 mg/l
- (ii) 50-60 mg/l
- (iii) 60-70 mg/l
- (iv) 40-50 mg/l

(g) Pyrethrin is a chemical obtained from

- (i) Azadirachta indica
- (ii) Chrysanthemum cinerariifolium
- (iii) Citrus aurantium
- (iv) All of the above

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