

2014

( 5th Semester )

ENVIRONMENTAL SCIENCE

SIXTH PAPER (EVS-502)

( Environmental Biology and Restoration Ecology )

Full Marks : 75

Time : 3 hours

( PART : B—DESCRIPTIVE )

( Marks : 50 )

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

1. Describe briefly the ecological factors influence upon the plants and animals.

5+5=10

Or

Discuss with suitable examples, the positive and negative interactions between two different populations.

5+5=10

G15—100/175a

( Turn Over )

2. Write short notes on the following : 5+5=10

- (a) Community stratification
- (b) Methods of study of community

Or

Describe the characteristics of community and community structure. 10

3. Write short notes on the following : 5+5=10

- (a) Population density
- (b) Biotic potential of population

Or

What do you mean by population? Describe different characteristics of population with suitable examples. 2+8=10

4. Give detailed accounts on the following : 5+5=10

- (a) Restoration of wetlands
- (b) Reclamation of wasteland

Or

Define restoration. Give a detailed account of different strategies for ecological restoration. 2+8=10

5. Write short notes on the following : 5+5=10

- (a) Biofertilizers
- (b) Biopesticides

Or

Give a detailed account on the biotechnological approach of environmental pollution abatement. 10

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2014

( 5th Semester )

**ENVIRONMENTAL SCIENCE**

SIXTH PAPER (EVS-502)

**( Environmental Biology and Restoration Ecology )**

( PART : A—OBJECTIVE )

( Marks : 25 )

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

SECTION—A

( Marks : 10 )

I. Put a Tick (✓) mark against the correct answer in the brackets provided : 1×10=10

1. Rapid growth cycles of plants in areas with short growing seasons is an example of

(a) structural adaptation ( )

(b) functional adaptation ( )

(c) mimicry ( )

(d) competition ( )

2. Evolution theory was given by

(a) Charles Darwin ( )

(b) E. P. Odum ( )

(c) Ernst Haeckel ( )

(d) A. G. Tansley ( )

3. A relationship between two organisms in the ecosystem where one species benefits while the other remains unaffected is called

(a) commensalism ( )

(b) predation ( )

(c) symbiosis ( )

(d) mutualism ( )

4. Maximum number of individuals that can be sustained in a particular habitat is called

(a) population ( )

(b) community ( )

(c) field capacity ( )

(d) carrying capacity ( )

5. Bioremediation using fungi as microorganism tool is called

- (a) phytoremediation ( )
- (b) mycoremediation ( )
- (c) microremediation ( )
- (d) saproremediation ( )

6. Inoculation with strain of microorganism known to be capable of degrading the contaminants of a site is called

- (a) biomonitoring ( )
- (b) bioventing ( )
- (c) bioaugmentation ( )
- (d) biosparging ( )

7. In a rapidly growing population, the graphical structure of the population will be

- (a) pyramid-shaped ( )
- (b) bell-shaped ( )
- (c) urn-shaped ( )
- (d) round-shaped ( )

8. Among the following life forms of Raunkier, the group with the tallest member would be

- (a) cryptophytes ( )
- (b) phanerophytes ( )
- (c) chamaephytes ( )
- (d) hemicryptophytes ( )

9. The process by which the component species of a community changes over time is called

- (a) extinction ( )
- (b) succession ( )
- (c) competition ( )
- (d) disturbance ( )

10. Biomining is an approach to the extraction of desired

- (a) chemicals ( )
- (b) minerals ( )
- (c) nutrients ( )
- (d) microorganisms ( )

SECTION—B

( Marks : 15 )

II. Answer the following in brief :

3×5=15

1. Differentiate intra- and interspecific competition with example.

2. Explain any one of the technologies of bioremediation.

II. Answer the following in brief :  
3×5=15  
1. Differentiate intra- and interspecific competition with an example.  
(a) intraspecific competition  
(b) interspecific competition

9. The process by which the component species of a community change over time is called

- (a) extinction
- (b) succession
- (c) competition
- (d) disturbance

10. Biomining is an approach to the extraction of

- (a) chemicals
- (b) minerals
- (c) nutrients
- (d) microorganisms

3. Write a brief note on the negative effect of shifting cultivation.

( 5th Semester )

ENVIRONMENTAL SCIENCE

SIXTH PAPER (ENV-602)

( Environmental Biology and Restoration Ecology )

( PART - A - OBJECTIVE )

( Marks : 25 )

The figures in the margin indicate full marks for the questions

SECTION - A

( Marks : 10 )

1. Put a Tick (✓) mark against the correct answer in the brackets provided : ( 10 = 10 )

1. Rapid growth cycles of plants in areas with short growing seasons is an example of

(a) structural adaptation

(b) functional adaptation

(c) mimicry

(d) competition

4. How can biotechnology be utilized for conservation of species?

- (a) Charles Darwin
- (b) F. P. Ojima
- (c) Ernst Haeckel
- (d) A. G. Tansley

5. A relationship between two organisms in the ecosystem where one species benefits while the other remains unaffected is called

- (a) commensalism
- (b) predation
- (c) symbiosis
- (d) mutualism

6. Maximum number of individuals that can be sustained in a particular habitat is called

- (a) population
- (b) community
- (c) field capacity
- (d) carrying capacity

5. Differentiate between predation and parasitism with example.

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