

**2024/TDC (CBCS)/EVEN/SEM/  
EESSEC-601T/155**

**TDC (CBCS) Even Semester Exam., 2024**

**ECOLOGY AND ENVIRONMENTAL SCIENCE**

**( 6th Semester )**

**Course No. : EESSEC-601T**

**( Ecosystem Analysis and Biodiversity )**

Full Marks : 50

Pass Marks : 20

**Time : 3 hours**

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

**UNIT—I**

**1. Answer any three of the following questions :**

**1×3=3**

- (a) What is biome?
- (b) Give an example of grassland ecosystem.
- (c) Name two producers in a pond ecosystem.
- (d) Who coined the term 'ecosystem'?

( 2 )

2. Answer any *one* of the following questions : 2

- (a) What do you mean by agro-ecosystem?
- (b) Name two plants and animal species of grassland biome.

3. Answer any *one* of the following questions : 5

- (a) Write the major characteristics of mangrove ecosystem. Mention its importance.  $3+2=5$

(b) Write short notes on the following :  $2\frac{1}{2}+2\frac{1}{2}=5$

- (i) Tundra biome
- (ii) Desert biome

## UNIT—II

4. Answer any *three* of the following questions :  $1\times 3=3$ 

- (a) What is food web?
- (b) Define biogeochemical cycle.
- (c) Name the main source of phosphorous cycle.
- (d) Name two methods of measuring productivity.

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5. Answer any *one* of the following questions : 2

- (a) What do you mean by food chain? Mention its types with example.
- (b) Differentiate between primary and secondary productivity.

6. Answer any *one* of the following questions : 5

- (a) Illustrate the different types of ecological pyramids with suitable example.
- (b) Illustrate the nitrogen cycle with a diagram.

## UNIT—III

7. Answer any *three* of the following questions :  $1\times 3=3$ 

- (a) Define physiognomy.
- (b) What are the factors that determine a community?
- (c) Which ecosystem has maximum stratification?
- (d) Define point method of studying communities.

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8. Answer any *one* of the following questions : 2

- (a) Differentiate between horizontal and vertical stratifications. Give example.
- (b) What is cover and basal area?

9. Answer any *one* of the following questions : 5

- (a) Discuss the transect method and its different types of studying community ecology.
- (b) Discuss the qualitative and quantitative characters of a community.

## UNIT—IV

10. Answer any *three* of the following questions :  
1×3=3

- (a) Define climax community.
- (b) What is hydrosere?
- (c) Give an example of primary succession.
- (d) What is secondary succession?

11. Answer any *one* of the following questions : 2

- (a) What are the different stages of succession in xerosere?
- (b) What do you mean by microbial succession?

( 5 )

12. Answer any *one* of the following questions : 5

- (a) Explain with diagram, the different stages of succession in hydrosere.
- (b) What is ecological succession? Illustrate the different types of ecological succession with diagram. 1+4=5

## UNIT—V

13. Answer any *three* of the following questions :  
1×3=3

- (a) What is *in-situ* conservation? Give example.
- (b) Define tissue culture.
- (c) Name two diversity hotspots of India.
- (d) Name two biosphere reserves of North-East India.

14. Answer any *one* of the following questions : 2

- (a) Differentiate between biosphere reserve and wildlife sanctuaries.
- (b) What does IUCN stand for? List the different categories of Red Data Book. 1+1=2

( 6 )

**15. Answer any *one* of the following questions : 5**

(a) Write a note on India as a mega biodiversity nation.

(b) Write short notes on the following :

$2\frac{1}{2}+2\frac{1}{2}=5$

(i) Agroforestry

(ii) Seed bank

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