



**RP-003-1015039**

Seat No. \_\_\_\_\_

**B. Sc. (Sem. V) (CBCS) Examination**

**February - 2019**

**Botany : B - 503**

*(Ecology) (New Course)*

**Faculty Code : 003**

**Subject Code : 1015039**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

- Instructions :** (1) Attempt all the questions.  
(2) Draw neat and labelled diagram wherever necessary.  
(3) Figures to the right side indicate total marks for the questions.

- 1 (a) Answer the following objective type questions : 4  
(1) Define - ecosystem.  
(2) Detritus food chain goes from ..... into microorganisms and then to organisms feeding on detritus.  
(3) Net productivity is generally expressed as production of .....  
(4) Define - food web.
- (b) Answer in brief : (any 1 out of 2) 2  
(1) Give information about abiotic component of typical ecosystem.

**OR**

- (2) Write a note on grass land ecosystem.
- (c) Answer in detail : (any 1 out of 2) 3  
(1) Explain biotic component of typical ecosystem.

**OR**

- (2) Describe Primary productivity.

- (d) Write a note on : (any 1 out of 2) 5
- (1) Describe single channel energy flow in typical ecosystem.
- OR**
- (2) Explain Pond ecosystem.
- 2** (a) Answer the following objective type questions : 4
- (1) What is community ?
- (2) Who coined the term biocoenosis ?
- (3) According to Raunkiaer life form, explain the therophytes.
- (4) Give the filll form of IVI.
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Write a short note on - Phanerophytes.
- OR**
- (2) Give information about Fidelity.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Explain Frequency and density as quantitative characters used in community structure.
- OR**
- (2) Write a note on - cove and basal area.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Describe stratification, sociability and vitality as qualitative characters used in community structure.
- OR**
- (2) Describe different methods of study of community.
- 3** (a) Answer the following objective type questions : 4
- (1) State the name of population characteristics which is related to birth and death rate of population.
- (2) ..... is pioneers stage in lithosere succession.
- (3) The concept of ecological pyramids was given by .....
- (4) A population said to be stable when .....

- (b) Answer in brief : (any 1 out of 2) 2  
 (1) Explain pyramid of biomass.  
**OR**  
 (2) Write note on Age structure as population characteristics.
- (c) Answer in detail : (any 1 out of 2) 3  
 (1) Write the causes of succession.  
**OR**  
 (2) Write a note on Pyramid of numbers.
- (d) Write a note on : (any 1 out of 2) 5  
 (1) Explain the general process of succession.  
**OR**  
 (2) Give an account of the sequential stage of a typical hydrosere.
- 4 (a) Answer the following objective type questions : 4  
 (1) Give the equation to find reproductive capacity of any plant.  
 (2) What do you mean by Biological clock ?  
 (3) Niche term was first time used by .....  
 (4) ..... is the most critical phase in life cycle of a plant.
- (b) Answer in brief : (any 1 out of 2) 2  
 (1) Give information about Ecotype.  
**OR**  
 (2) Write a note on - seed dormancy.
- (c) Answer in detail : (any 1 out of 2) 3  
 (1) Explain - Ecological niche.  
**OR**  
 (2) Describe principle of limiting factors.
- (d) Write a note on : (any 1 out of 2) 5  
 (1) Discuss the Shelford's law of tolerance.  
**OR**  
 (2) Describe Ecological amplitude.

- 5 (a) Answer the following objective type questions : 4
- (1) Internationally MAB is guided by ..... which is inter-governmental and representative in character.
  - (2) Give the form of IUCN.
  - (3) Write the function of Environmental protection agency.
  - (4) ..... is established as world environment day.
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Write a note on - The Environment (Protection) Act, 1986.
- OR**
- (2) Write objectives of environmental education.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Describe National Environment Policy.
- OR**
- (2) Write a note on: GPS.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Explain about formal environmental education in India.
- OR**
- (2) Discuss the guiding principles of environmental education with reference to India.
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