



HCN-003-001511 Seat No. _____

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

October - 2017

Botany : Paper - 503

(Ecology)

Faculty Code : 003

Subject Code : 001511

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

[Total Marks : 70

Instructions :

- (1) Write answers of all questions in main answer book.
- (2) Draw neat and labelled diagrams wherever necessary.
- (3) Figures to the right side indicate full marks for the questions.

1 Give the short answers of the following questions : **20**

- (1) What is Biome ?
- (2) Write definition : Population
- (3) What do you mean by Biological clock ?
- (4) What does the biotic potential indicate ?
- (5) What is ecological efficiency ?
- (6) Give the name and the number of Basic types of succession ?
- (7) Give the second law of Thermodynamics.
- (8) Where are Taiga found in India ?
- (9) What is a niche for an organism ?
- (10) Write definition : Shelford's law.

- (11) The concept of ecological pyramids was given by _____
- (12) The term ecology was coined by _____.
- (13) Which of the ecological pyramid is always straight ?
- (14) Definition : Net primary productivity.
- (15) Write the sequence of communities of primary succession in water.
- (16) How many percentage energy is transferred from one trophic level to another ?
- (17) What is population dynamics ?
- (18) Write the names of major types of ecosystems.
- (19) Plant species having a wide range of genetically distribution evolve into a local population known as _____
- (20) Maximum productivity is found in _____ Ecosystem.

2 (a) Give the answers in short : (any three)

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- (1) Explain the roles of various organizations for environmental education.
- (2) Define : Ecad, Vegetation and Flora.
- (3) Explain : Ecological factors.
- (4) Describe "Fidelity" as a synthetic character of community.
- (5) Explain the structure of plant community.
- (6) Describe the Shelford's law of tolerance.

- (b) Give the answers in brief : (any three) **9**
- (1) Write a note on biological clock.
 - (2) Explain : Forest ecosystem.
 - (3) Describe : Reed-swamp stage and Sedge-meadow stage.
 - (4) Write short note : Pond ecosystem.
 - (5) Explain the theory of population dynamics.
 - (6) Discuss the causes of succession.
- (c) Describe in detail : (any two) **10**
- (1) Briefly discuss the food chain in ecosystem.
 - (2) Explain the Y-shaped energy flow model.
 - (3) Briefly state the basic concept of ecology.
 - (4) Describe the methods of ecological studies.
 - (5) Describe Raunkiaer's life form classes of plant community.
- 3** (a) Give the answers in short : (any three) **6**
- (1) Give the general objectives of MBA (Man and Biosphere Programme)
 - (2) Write definition : Density and frequency.
 - (3) Explain – ecological efficiency.
 - (4) Discuss the Liebig's law of the minimum.
 - (5) Describe : natality.
 - (6) Write short note : Ecological niche.

- (b) Give the answers : (any three) **9**
- (1) State only the names of any six Rules / Laws for Environment Protection Act.
 - (2) Explain the principle of limiting factors.
 - (3) Give the short note on GPS.
 - (4) Describe the process of primary succession.
 - (5) Write a note on Xero-sere.
 - (6) Discuss – "Composition" as a character of a community.
- (c) Give the answers in brief : (any two) **10**
- (1) Describe the sampling units as a method of study of community.
 - (2) Explain the Savanna biomes.
 - (3) Describe the general laws for environment in India.
 - (4) Describe : Aquatic succession.
 - (5) Discuss about producers, consumers and decomposers of Desert Ecosystem.
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