

B.Sc. Semester - 5 (CBCS) Examination**Oct/Nov. - 2018****ECOLOGY (CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Q-1(A) Answer in detail: (Any one) (07)
- (i) What are ecosystem energetics? Describe γ – shaped energy flow model with diagram.
 - (ii) Discuss with diagram pond ecosystem as an ideal ecosystem.
- Q-1(B) Describe in brief: (Any one) (04)
- (i) What is an ecosystem? Explain biotic component of an ecosystem.
 - (ii) Give chart representing basic types of ecosystem with example and discuss artificial ecosystem.
- Q-1(C) Answer in very short : (Any three) (03)
- (i) Give one reason: All the primary productivity is not available to a herbivore.
 - (ii) What will happen to an ecosystem if all producers are removed?
 - (iii) What is meant by 10% law?
 - (iv) Name the trophic level occupied by tertiary consumers.
 - (v) Name the sub-types of limnic ecosystem.
- Q-2(A) Answer in detail: (Any one) (07)
- (i) What is Quadrat method? Discuss various types of quadrat and its size in various ecological survey.
 - (ii) Define a biotic community. Explain cover and phonology as a characters used to describe community structure.
- Q-2(B) Describe in brief: (Any one) (04)
- (i) Explain: species diversity and keystone species
 - (ii) Describe: Fidelity and its five classes
- Q-2(C) Answer in very short : (Any three) (03)
- (i) Give the formula to calculate density.
 - (ii) Complete the statement: Events of phonology are shown by _____
 - (iii) Define: Frequency
 - (iv) Which characteristics of plant community show through phytosociological methods?
 - (v) Give ecological term: The array of percentage of all life-form groups in a habitat is called_____.
- Q-3(A) Answer in detail: (Any one) (07)
- (i) What are ecological pyramids? Who gives idea of it? Distinguish between upright pyramid and inverted pyramids and give importance of ecological pyramids.
 - (ii) Give an account of the three sequential stages of a typical hydrosere.

- Q-3(B) Describe in brief: (Any one) (04)
- (i) Distinguish between: Primary succession and secondary succession
 - (ii) Describe with diagram: Age pyramids
- Q-3(C) Answer in very short : (Any three) (03)
- (i) If 8 individuals in a laboratory population of 80 fruit flies died in a week, then what would be the death rate of population for the said period?
 - (ii) Name two processes which influence population density.
 - (iii) Define: Climax community.
 - (iv) In which ecosystem pyramid of numbers is inverted?
 - (v) Give ecological term: Spatial pattern of individuals in a population relative to one another.
- Q-4(A) Answer in detail: (Any one) (07)
- (i) Discuss: Phenological behavior of the species and the different factors of the environment that affect plants.
 - (ii) Describe: Law of tolerance with graph
- Q-4(B) Answer in brief: (Any one) (04)
- (i) Discuss law of the minimum by giving various experimental proof.
 - (ii) Explain term: Ecads, Ecotypes, Ecological amplitude and Ecospecies
- Q-4(C) Answer in very short : (Any three) (03)
- (i) Give ecological term: species that tolerate wide range of salinity are called.
 - (ii) What are limiting factors?
 - (iii) What is species ecology?
 - (iv) Define: Seed output
 - (v) By which common test seed viability is tested?
- Q-5(A) Answer in detail: (Any one) (07)
- (i) Discuss issues involved in Enforcement of Environmental Legislations.
 - (ii) Explain: Composition of GPS.
- Q-5(B) Describe in brief: (Any one) (04)
- (i) Describe Non – formal environmental education in India.
 - (ii) Justify the statement: Implementation of environmental law in India is problematic.
- Q-5(C) Answer in very short : (Any three) (03)
- (i) What is Environmental Education?
 - (ii) Give full form : EIA
 - (iii) Name two type of pollution control boards.
 - (iv) In which year the water act enacted?
 - (v) What is GPS system?
