

B.Sc. Semester - 5 (CBCS) Examination
December -2020 (NEW COURSE)
Ecology (Core)

Time: 1:30 Hours**Marks: 42****Instructions:**

1. Figures to the right indicate marks.
 2. There are five questions in the question paper.
 3. Answer any three of the following questions.
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Q-1(A) Answer in very short:**(04)**

- (i) **Fill in the blank:** plants growing well in bright (full) sunlight are called _____ .
- (ii) Name the bottom layer of water body in thermal summer stratification.
- (iii) What is the term used for the life cycle of plant in response to the rhythmic seasonal variations?
- (iv) What do you mean by the term steno thermals?

Q-1(B) Answer in brief (any one):**(03)**

- (i) **Explain:** Mutualism.
- (ii) Write notes on: Liebig's law of minimum.

Q-1(C) Answer in detail (Any one):**(07)**

- (i) **Discuss:** light as a climatic ecological factor.
- (ii) **Explain:** Biological clock.

Q-2(A) Answer in very short:**(04)**

- (i) **Give the term:** distribution of crowns of different plant species in well definite layers or Storeys.
- (ii) Name the transition zone between two communities.
- (iii) Give the formula for the calculation of basal area of species.
- (iv) In which type of life form, the perennating buds remain under water?

Q-2(B) Answer in brief (Any one):**(03)**

- (i) What is fidelity? Discuss fidelity with its classes.
- (ii) Write note on: Abundance and density.

Q-2(C) Answer in detail (Any one):**(07)**

- (i) Describe the sampling unit methods of studying communities.
- (ii) What are life forms? Discuss the Raunkiaer (1934) life form based on the position of perennating buds.

Q-3(A) Answer in very short:**(04)**

- (i) **Give the term:** The establishment of a species in the bare area immediately after Invasion.
- (ii) Define: Natalty.
- (iii) Name types of succession based on nutritional status of dominant community.
- (iv) **True or false:** "No two species in the same general territory can occupy for long identically the same ecological niche."

Q-3(B) Answer in brief (Any one):**(03)**

- (i) **Explain:** Population dispersal and population dispersion.
- (ii) Discuss the cause of plant succession.

Q-3(C) Answer in detail (Any one):**(07)**

- (i) What is ecological niche? Discuss the hyper volume niche.
- (ii) Give account of the sequential stages of a typical hydrosere.

Q-4(A) Answer in very short:

(04)

- (i) What is standing state?
- (ii) The limnic ecosystem is divided into two sub type. Name it.
- (iii) **True or false:** If Pg (Gross primary production) value is equal to R (Respiration loss) there is no storage of energy.
- (iv) Which technical term used for organisms that break up to bodies of plant into simple Compounds.

Q-4(B) Answer in brief (Any one):

(03)

- (i) Discuss the number pyramid in forest ecosystem.
- (ii) Give the difference between the Gross primary productivity and Net primary Productivity.

Q-4(C) Answer in detail (Any one):

(07)

- (i) Describe the abiotic and biotic components of any fresh water ecosystem Studied by you.
- (ii) What is an ecosystem? Discuss single channel energy flow model.

Q-5(A) Answer in very short:

(04)

- (i) **Fill in the blank;** The diversity of a micro habitat is called _____.
- (ii) Who coined the term biodiversity?
- (iii) In which phytogeographic region the Sundarbans sub-zone includes?
- (iv) **True or false:** Key stone species are usually predators.

Q-5(B) Answer in brief (Any one):

(03)

- (i) **Explain:** Role of key stone species in ecosystem.
- (ii) Give concept of Bio diversity.

Q-5(C) Answer in detail (Any one):

(07)

- (i) Describe any two phytogeographic region of India studied by you.
- (ii) **Explain:** Biosphere reserve as a tool for conservation.
