

B.Sc. Semester - 5 (CBCS) Examination

Oct/Nov. – 2019

ECOLOGY (CORE)

Time: 2:30 Hours

Marks: 70

Instructions:

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

Q-1(A) Answer in very short (Any three):

(03)

- (1) What percentage of productivity is contributed by Oceans?
- (2) Name subtypes of the limnic ecosystem.
- (3) **True or false:** Green plants are not found beyond a certain depth in Oceans.
- (4) Which technical term used for organism that breaks up to bodies of plant into simple Compounds.
- (5) Name the dominant producers in a deep aquatic ecosystem.

Q-1(B) Answer in brief (Any one):

(04)

- (1) Distinguish between: Producers and consumers
- (2) Give the difference between the Gross primary productivity and Net primary Productivity.

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

(07)

- (1) Describe the abiotic and biotic components of any stagnant fresh water ecosystem.
- (2) What is an ecosystem? Discuss Box and pipe energy flow model.

Q-2(A) Answer in very short (Any three):

(03)

- (1) **Complete the statement:** Events of phenology are shown by.....
- (2) Name the transition zone between two communities.
- (3) Give the formula for the calculation of basal area of species.
- (4) Which frequency (Percentage) range is belongs to class-B in Frequency classes?
- (5) In which type of life form, the perennating buds remain under water?

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

(04)

- (1) Describe physiognomy as Synthetic characteristics
- (2) **Write note on:** Stratification as Qualitative characteristics

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

(07)

- (1) Describe the line and Belt transects methods of studying vegetation.
- (2) What are life forms? Discuss the Raunkiar (1934) life form based on the position Of perennating buds.

Q-3(A) Answer in very short (Any three):

(03)

- (1) Give the term: The establishment of a species in the bare area immediately after Invasion.
- (2) What is Emigration?
- (3) Name two processes which influence population density.
- (4) In a pond there were 200 frogs. 40 more were born in a year. Calculate the birth rate of the population?
- (5) Name types of succession based on nutritional status of dominant community.

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

(04)

- (1) Explain: Population dispersal and population dispersion.
- (2) Distinguish between: seral stage and climax community

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

(07)

- (1) Discuss the number pyramid in grassland, ponds and tree ecosystem.
- (2) How is climax community established? Describe the xerarch succession.

Q-4(A) Answer in very short (Any three):

(03)

- (1) **Fill in the blank:** The study of individual species of all stages of lifecycle in relation to environment is called _____.
- (2) What are limiting factors?
- (3) What do you mean by the term stenothermal?
- (4) **Give the term:** A form of a plant modified by its habitat, the modification are Induced by environment.
- (5) What is species?

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

(04)

- (1) Explain: Ecological amplitude.
- (2) Write notes on: Liebig's law of minimum.

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

(07)

- (1) Discuss: Shelford's law of tolerance.
- (2) Explain: Biological clock.

Q-5(A) Answer in very short (Any one):

(03)

- (1) **Fill in the blank:** Educating the people on environment and its impact is called _____.
- (2) Name the act to protect and improve the environment on all matters connected with it.
- (3) Name the two types of environment education.
- (4) Name the center of excellence of environmental science and management in Gujarat.
- (5) What is GPS?

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

(04)

- (1) Explain: Various level of formal education for environment in India.
- (2) Discuss the problems in effective implementation of environmental law in India.

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

(07)

- (1) Write short account of Indian laws enacted from time to time for environmental Management.
- (2) **Explain:** Structure of GPS.
