



MCR-003-001511 Seat No. _____

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

May / June - 2018

B - 503: Ecology

Faculty Code : 003

Subject Code : 001511

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

[Total Marks : 70

- 1** Answer to the point : **20**
- (1) Define: Holism
 - (2) Which are biotic components in structure of ecosystem?
 - (3) What is artificial ecosystem? Give one example.
 - (4) What is the source of radiant energy in ecosystem?
 - (5) Explain: Net productivity of ecosystem.
 - (6) While studying characteristics of community, what idea does trophic structure give?
 - (7) What is physiognomy?
 - (8) Which are the three different forms of sampling unit?
 - (9) Forest biomes are further divided into three categories viz. _____.
 - (10) Enlist the three general causes of succession?
 - (11) What is the main difference between numerical density and biomass density?
 - (12) In S-shaped growth curve the peak constant level (K) is called _____.
 - (13) Draw pyramid of number for parasitic food chain.
 - (14) What regulates the biological clock on an organism?
 - (15) What was the experiment of Liebig's from which he gave 'law of the minimum'?
 - (16) Enlist any two abiotic limiting factors.
 - (17) Define: Microhabitat.
 - (18) What is the goal of environmental education?
 - (19) What is the aim of the act 'The Biomedical Waste 1998'?
 - (20) What are the limitations of GPS?

- 2** (A) Answer in short : (Any **Three**) **6**
- (1) Give differences between population and community.
 - (2) What is gross primary productivity?
 - (3) Discuss: Growth forms as characteristics of a community.
 - (4) Draw growth curve for rapidly growing yeast culture and label it.
 - (5) Explain trophic niche.
 - (6) Discuss: The Biological Diversity Act- 2002.
- (B) Answer in brief : (Any **Three**) **9**
- (1) Discuss the role of microconsumers in structure of ecosystem.
 - (2) Describe grassland biome.
 - (3) Explain: Primary and secondary succession.
 - (4) Write a note on biological clock.
 - (5) Explain: Liebig's law of minimum.
 - (6) What is the role of NGOs in environmental education?
- (C) Answer in detail : (Any **Two**) **10**
- (1) What are the different types of ecosystem? Discuss any one with diagram.
 - (2) Give location, habitat, climate, life forms of forest biome.
 - (3) Discuss: Age structure and draw age pyramids.
 - (4) Explain: Shelford's law of tolerance.
 - (5) Describe the working and application of GPS in biology.
- 3** (A) Answer in short : (Any **Three**) **6**
- (1) Discuss the non-living components in structure of ecosystem.
 - (2) Explain transect as a method of ecological study.
 - (3) What is the role of invasion in process of plant succession?
 - (4) What is the effect of age structure on community?
 - (5) What is threshold level?
 - (6) Enlist the objectives of environmental education.

(B) Answer in brief : (Any **Three**) **9**

- (1) Write a note on productivity of the ecosystem.
- (2) Discuss any three characteristics of community.
- (3) What is quadrat method of community study? Discuss its types.
- (4) Define: Emigration and migration. Give its differences.
- (5) Describe: Multifactor or hypervolume niche.
- (6) Which are the three segments of GPS?

(C) Answer in detail : (Any **Two**) **10**

- (1) Write a note on: Single-channel energy flow model.
- (2) Discuss: Qualitative character of community.
- (3) Write a note on ecological pyramids.
- (4) Describe : Light and temperature as ecological factors.
- (5) Discuss: Formal and non-formal environmental education.
