



**MAX-003-001418** Seat No. \_\_\_\_\_

**B. Sc. (Sem. IV) (CBCS) Examination**

**March / April - 2018**

**BT-401 : Environmental Bio. Tech.**

**Faculty Code : 003**

**Subject Code : 001418**

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

[Total Marks : 70

**1 Answer the following questions : 20**

- (1) When two different species overlap in the same biological niche, they are in competition' with \_\_\_\_\_
- (2) Many individuals of the same species living together in a defined area form a/an \_\_\_\_\_
- (3) The association of heron and buffalo is known as \_\_\_\_\_
- (4) Azolla and Azotobacter are known for its active role in \_\_\_\_\_ cycle.
- (5) \_\_\_\_\_ organisms are best known for their role in bioremediation of oil contaminated sites?
- (6) Disposing of biodegradable toxic waste by land application is a cheap and efficient method because \_\_\_\_\_
- (7) Animal dung is \_\_\_\_\_ waste.
- (8) Nylon is a \_\_\_\_\_ waste. (Biodegradable/Non Biodegradable)
- (9) A maximum aeration period for a conventional activated sludge system is \_\_\_\_\_ hors.
- (10) The organic loading in activated sludge plant is defined as a \_\_\_\_\_
- (11) Acid rain are produced by excess \_\_\_\_\_ and \_\_\_\_\_ from burning fossils fuel.

- (12) Major aerosol pollutant in jet plane emission is \_\_\_\_\_
- (13) Azolla is used as a biofertilizer as it has \_\_\_\_\_
- (14) Greater the hydrophilicity of polymers \_\_\_\_\_ is the rate of degradation. (larger/smaller)
- (15) The process of extracting metals from ore bearing rock is called \_\_\_\_\_
- (16) Which gas produced in open dump from decomposition of biodegradable waste?
- (17) Evolution of life shows that life forms had a trend of moving from water to \_\_\_\_\_
- (18) Theory of inheritance of acquired characters was given by \_\_\_\_\_
- (19) Origin of species was written by \_\_\_\_\_
- (20) The first organisms were \_\_\_\_\_ (chemoheterotrophs or autotrophs)

- 2** (A) Write any **three** out of six : **6**
- (1) What is denitrification?
  - (2) Define Biome.
  - (3) Give full form of following terms: PCB, DDT
  - (4) Enlist four physical properties of wastewater
  - (5) What are Bioplastics?
  - (6) Enlist different prezygotic isolating mechanisms.
- (B) Write any **three** out of six : **9**
- (1) Write a short note on models of population growth
  - (2) Why biodegradation of xenobiotics is difficult?
  - (3) What is activated sludge? Explain.
  - (4) What are the advantages of bioplastics?
  - (5) Write about the contribution of Wallace in study of evolution
  - (6) What is acid mine drainage? Explain.

- (C) Write any **two** out of five : **10**
- (1) What are aquatic biomes? Mention types
  - (2) Explain Biodegradation.
  - (3) Write a short note on primary, secondary and tertiary treatment of waste water.
  - (4) Write about the types of Biofertilizer and its uses.
  - (5) Explain process of speciation.
- 3** (A) Write any **three** out of six : **6**
- (1) Enlist positive interactions among two different species.
  - (2) Define biomagnifications.
  - (3) Enlist the flora and fauna of Desert biome.
  - (4) Enlist four chemical properties of wastewater.
  - (5) Name the insects that are used as biocontrol agents.
  - (6) Enlist different postzygotic isolating mechanisms.
- (B) Write any **three** out of six : **9**
- (1) What are the causes of depletion of biodiversity?
  - (2) Write a short note on biodegradation of nitrobenzene.
  - (3) Write a short note on acid rain.
  - (4) What is bioleaching? Explain.
  - (5) What is the main peculiarity in Darwin's finches?
  - (6) Explain the role of biogeochemical cycles in nature.
- (C) Write any **two** out of five : **10**
- (1) Explain nitrogen cycle in brief with diagram.
  - (2) Write short note on Biodegradation of PCBs(Polychlorinated biphenyls).
  - (3) Write a short note on Bioremediation.
  - (4) Write a short note on Bioleaching.
  - (5) Write short note on phylogenetic tree.