

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Winter Examination-2018

Subject Name : Environmental Microbiology

Subject Code : 5SC03EMB1

Branch: M.Sc. (Microbiology)

Semester : 3

Date : 29/11/2018

Time : 02:30 To 05:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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SECTION I

Q.1 Attempt the following questions : (7)

- a. Define : Ecology.
- b. Municipal water is treated through the process of _____.
(chlorination/coagulation/filtration)
- c. Give example of any two extremophilus bacteria.
- d. What are layers of lake based on sunlight penetration?
- e. NAAQM is operated by?
- f. Define : Recalcitrant Compound.
- g. Amoeba is a type of protozoa. True/false.

Q.2 Write a Brief note on : (14)

- a. What is Biogeochemical cycle? Explain in detail about Nitrogen Cycle. (7)
- b. Water Pollution and its causes and effects. (7)

OR

Q.2 Write a Brief note on : (14)

- a. Theories of Evolution of Earth. (6)
- b. Microbial Mats and Biofilms. (5)



c. Biodeterioration process with example. (3)

Q.3 Write in details on : (14)

a. Explain about different types of Lakes and its nutrient dynamics. (7)

b. Explain about different layers and horizons of Soil. (7)

OR

Q.3 Write a Brief note on : (14)

a. Different Classifications of waste and its sources. (7)

b. Eutrophication and its Impacts. (7)

SECTION II

Q.4 Attempt the following questions : (7)

a. Define : Ecosystem.

b. Uppermost layer of soil is known as?

c. _____ (methane/argon/water vapour) is most abundant in atmosphere.

d. SPM stands for?

e. Define : Succession.

f. What is Biomagnification?

g. Define : Pyrolysis.

Q.5 Write a Brief note on : (14)

a. Write about different properties of soil. (7)

b. Activated Sludge and Trickling Filters. (7)

OR

Q.5 Write a Brief note on : (14)

a. Explain different types of Soil Micro flora with examples. (6)

b. SCP. (5)

c. Biodegradation of Recalcitrant compound. (3)



Q.6 Write a Brief note on : (14)

- a. Urey Miller's Experiment with labeled figure. (4)
- b. Different types of Interactions with examples. (7)
- c. What is Biodegradation? Enlist category and factors affecting degradation. (3)

OR

Q.6 Write a Brief note on : (14)

- a. Explain about overall procedure of Waste Water Treatment with figure. (6)
- b. What is Composting method? Explain process and factors affecting it. (5)
- c. What is Air Pollution? Enlist its sources and effects. (3)

