28-3-2018

Doon University

Mid Semester Examination, Second Semester, 2018

School of Environment & Natural Resources

M.Sc. (Environmental Studies)

Course: EES-627: Environmental Microbiology & Biotechnology

Time Allowed: 2 Hours *Maximum Marks: 30*

Note: Attempt all questions from Sections A, B, C.

SECTION: A **(Short Answer Type Questions to be answered in about 50 words)**

Attempt any TEN Questions. *(Marks: 1X10=10)*

1. Who postulated the germ theory of disease and what is the germ theory of diseases?
2. Define the term GMM.
3. What do you understand by the vertical and horizontal gene transfer in bacterial cell?
4. What is the bacterial heredity material?
5. Define the Baltimore classification of viral cells?
6. What are obligate autotrophs?
7. Who is the father of Microbiology?
8. Describe the lag and log phase of bacterial growth characteristics?
9. How will you define the term Estuaries?
10. What is the Mycoplasma?
11. How would you describe the differential media?
12. Differentiate between acidophile and alkaliphile.

SECTION: B **(Short Answer Type Questions to be answered in about 250 words)**

Attempt any FIVE Questions. *(Marks: 2X5=10)*

1. Explain the general characteristic of Fungi
2. What are differences between gram positive and gram negative bacteria?
3. What are the differences between autotrophy and heterotrophy?
4. What is active diffusion?
5. Write short notes on
   a) Hyphae b) Phagocytosis c) Symport d) Halophiles
6. Describe the term genetic recombination.
7. Define the different zone in fresh water environment.
8. How would you isolate the pure microbe?

SECTION: C **(Long Answer Type Questions to be answered in about 750 words)**

Attempt any ONE Question. *(Marks: 10X1=10)*

1. Describe the detail cell structure of bacteria.

OR

Describe the different types of plasmid and their role in Genetic engineering.