**Week 7: Question Bank**

Course: M.Sc., Microbiology Semester IV

Subject: Environmental Microbiology

Course Code: MICR-641

Subject teacher: Dr. Nidhi S. Belwal/ Dr. Sana Iram/ Dr. S. Dheeman

**By: Dr. Nidhi S. Belwal**

**Topic:** Bioremediation of Heavy Metals

Q1. Very short answers:

a) Are heavy metals biodegradable?

b) What is heavy metal pollution?

c) What is the most toxic heavy metal?

d) What is the least toxic metal?

e) What are the most common heavy metals?

f) What are the sources of heavy metal pollution?

g) What is the most toxic element?

Q2. Illustrate the different mechanisms by which heavy metal pollution can be removed using microbes.

Q3. What can heavy metals do to environment?

**By: Dr. Sana Iram**

**Topic:** Sources of water pollution and Groundwater contamination

Q1. Multiple choice question:

**i) The source of Arsenic in water is**

a) Industrial waste

b) Fertilizers

c) Phosphate rocks

d) All of the above

**ii) Lead content must be checked in ground water analysis.**a) True
b) False

**iii) Which of the following organisms found in human waste that cause water pollution?**a) Coliform bacteria
b) Viruses
c) Protozoa
d) Parasitic worms

**iv) Why certain parts of water bodies contain a greater number of algae?**a) Due to favourable environment
b) Due to run-off excess fertilizers
c) Due to lack of fertilizers
d) Due to water pollution

**v) How to minimize the pollution of water pollution due organic chemicals that release to water bodies?**a) To remove all the aquatic organisms from the water
b) To purify water manually after released to the water bodies
c) Purify the water before enter the water directly from industries
d) Leave the water bodies without using it

Q2. What do you mean by water pollution and their sources? Suggest various remedial and control measures to minimize water pollution.

Q3. How important is groundwater? What are the various factors and sources responsible for groundwater contamination?

**By: Dr. S. Dheeman**

**Topic:** Microbiology of Earthworm and termite Gut, Terrestrial Microbiology

1. How microbes interact in gut of earthworm? Describe.
2. How earthworm ecology is important for plant growth promotion?
3. Give a brief of earthworm gut physiology with a representative diagram
4. Describe on gut microbe of termite.
5. Illustrate termite physiology for uric acid production and fermentation.
6. Describe role of termite in agriculture with special reference to N-fixation.
7. What is sediments and how they important for generation of SOM.
8. What is soil profile?
9. Describe function of microorganisms in soil sediments interfaces.
10. What are soil components? Describe.