

M.Sc. Microbiology Sem – III Examination
November /December -2016
Environmental Microbiology - Paper No. IX
Subject Code No. 3690

Time :- 2.30h

Total Marks :70

Instructions :

- (i) **Attempt all questions.**
 - (ii) **Each question carries equal marks**
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Q .1 Write on :

- (a) Siderophore mediated iron transport mechanisms in fungi
- (b) Eutrophication and its control

OR

Q .1 Discuss in detail microbial leaching of metal ores with suitable examples.

Q .2 Discuss anaerobic treatment of waste water.

OR

Q .2 Write notes on:

- (a) RBC
- (b) Composting

Q .3 What are biosurfactants? Describe their types, biosynthesis and mode of action along with applications. Enlist their merits and demerits.

OR

Q .3 Define biodegradation? Discuss biodegradation of PAHs by bacteria.

Q .4 Discuss in detail co-metabolism. Why does an organism undergo co-metabolic mode of degradation?

OR

Q .4 What are GMOs? Write on their types, construction, release and risk assessment in bioremediation. Mention their merits and demerits.

Q.5 Discuss biotechnological applications of extremophiles.

OR

Q .5 Write on : Molecular adaptations of bacteria to

- (a) Osmotic and
 - (b) Thermal stress
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