



**JB-3182**

**Second Year B. Sc. (Sem. IV) Examination**

**April/May - 2013**

**Microbiology : MB - X  
(Microbial Ecology)**

Time : Hours]

[Total Marks : 50

**Instructions :**

(1)

नीचे दशांशव  निशान्तीवाणी विगतो उत्तरवडी पर अवश्य कपनी. Fillup strictly the details of  signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
SECOND YEAR B. SC. (SEM. 4)	<input type="text"/>
Name of the Subject :	<input type="text"/>
MICROBIOLOGY : MB - 10	<input type="text"/>
Subject Code No. : <input type="text" value="3"/> <input type="text" value="1"/> <input type="text" value="8"/> <input type="text" value="2"/> Section No. (1, 2,.....): <input type="text" value="Nil"/>	<input type="text"/>
	Student's Signature

- (2) Draw figures wherever necessary.  
(3) Figures to the **right** indicate full marks of the question.  
(4) All questions are **compulsory**.

- 1 Give specific answers. 10
- (i) Define
- (a) Phyllosphere
- (b) Rhizosphere
- (ii) What is humus ? State its importance in soil.
- (iii) How are anoxic zones created in aquatic environment ?
- (iv) What is the difference between assimilatory and dissimilatory reduction ?
- (v) What is a salt wedge ?
- 2 Explain any **two** of the following : 12
- (i) Eutrophication is a significant phenomenon in aquatic environment.
- (ii) Describe the Lake Vastok ecosystem. Why is it termed as a chemo-synthesis based microbial community explain.
- (iii) Discuss the uptake and transfer of ammonium by arbuscular mycorrhizae to the plant host.

- 3** Answer any **two** of the following long questions : **16**
- (i) Explain micro-organism – Insect Mutualisms.
  - (ii) Discuss the role of commensalistic micro-organisms in humans. State the sites where they are found in relation to human body.
  - (iii) Give a detailed account of micro-organisms in fresh water environment.
- 4** Write shortnotes on any **three** of the following : **12**
- (i) Phosphorus cycle
  - (ii) Zonation in lakes
  - (iii) Bacterial endophytes
  - (iv) Types of micro-organisms in soil environment.
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