MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION
B.Sc.(Hons.) Agriculture

Semester	: **I (New)**	**Term**	: **I**	**Academic Year**	: **2017-18**
Course No.	: MIBO 111				
Credits	: 2(1+1)	**Title**	: **Introductory Microbiology**		
Day & Date	: Saturday, 06.01.2018	**Time**	: 09.00 to 11.00	**Total Marks**	: **40**

Note :
1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Define microbiology. Enlist and describe its scope and importance in agriculture and allied fields with suitable examples.

Q.2 Draw neat and well labeled diagram of a typical bacterial cell. Describe about cell wall, flagella and pili.

Q.3 Define biofertilizers and classify them. State the role of biofertilizers in agriculture along with suitable examples.

Q.4 Define growth in bacteria and describe various growth phases in bacteria along with growth curve.

Q.5 Write short notes (Any Two).
a) Mycoplasmas b) Mycorrhizas c) Flagellation in bacteria

Q.6 What do you mean by genetic recombination? Enlist and describe various modes of gene transfer in bacteria.

Q.7 Define Nitrogen cycle and describe its cycling in nature with biochemical reactions, microbes involved and diagram.

Q.8 Define rhizosphere and describe various factors influencing rhizosphere microflora.

Q.9 Define biogas and describe its production along with biochemical reactions and microbes involved.

Q.10 Differentiate between the following (Any Two).
a) Prokaryotes and Eukaryotes
b) Viruses and Viroids
c) Aututrophs and Heterotrophs

SECTION "B"

Q.11 Do as directed.
1) Give two examples of edible mushrooms.
2) The term rhizosphere was coined by _____. (Fill in the blank)
3) Blue green algae are eukaryotic in nature. (State True or False)
4) The bacterium inducing nodulation in legumes is *Rhizobium*/ *Azorhizobium* (Choose the correct word)

Q.12 Define the following terms.
1) Mycology 2) Diazotrophs
3) Phyllosphere 4) Mesophiles

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