B.Sc.(Hons.) Agriculture

| | | | | | |
|---|---|---|---|---|---|
| Semester | : I (New) | Term | : I | Academic Year | : 2018-19 |
| Course No. | : MIBO 111 | Title | : Introductory Microbiology | | |
| Credits | : 2(1+1) | | | | |
| Day & Date | : Friday, 28.12.2018 | 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 important branches of microbiology and write scope and importance of microbiology in agriculture with suitable examples.

Q.2 Write one important contribution of the following Scientists (Any Four).

a) S.A. Waksman b) N.V.Joshi c) Louis Pasteur

d) J.B. Boussingault e) B.Frank f) P.A. Millardet

Q.3 Draw a neat and labeled diagram of a typical bacterial cell. Explain in brief bacterial growth curve.

Q.4 Write in brief about generalized and specialized transduction.

Q.5 Illustrate with suitable diagram the nitrogen cycle.

Q.6 Define rhizosphere. State the factors affecting rhizosphere microflora and write about effect of soil pH and soil moisture.

Q.7 Define bio-fertilizers and enlist their types. Enlist various methods of their application and write in short about seed dressing and seedling root dip.

Q.8 Write short notes (Any Two).

a) Silage production

b) Bio-fungicides

c) Bio-degradation of organic matter

d) Bio-gas production

Q.9 Give scientific names of any four edible mushroom species and write in brief the cultivation practices of oyster mushroom on the following aspects.

a) Substrate b) Bed filling and spawn run c) Harvesting

Q.10 Define Biological Nitrogen Fixation (BNF). Write in brief about types of BNF with suitable example.

**(P.T.O.)**

agromind.in

Telegram - AgroMind

## SECTION "B"

Q.11 State True or False.

1) Mycoplasma contains both DNA and RNA.
2) Conjugation is the process of transfer of gene between two bacterial cells that are in physical contact.
3) *Frankia* fixes atmospheric nitrogen symbiotically with legumes.
4) Actinomycetes are Gram negative in nature.

Q.12 Fill in the blanks.

1) Simple microscope was invented by _____
2) Blue green algae are also known as _____
3) Prions were discovered by _____ in 1983
4) Bacterium with a tuft of flagella either at one end are known as _____.

agromind.in

Telegram - AgroMind