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B.Sc. (Agriculture) (2014 to 2018) (Sem.-2)

Subject Code : BSAG-201

Max. Marks : 60

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt **ANY FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt **ANY TWO** questions.

1. Write a short note on the following :

- (a) Fermentation
- (b) Toadstools
- (c) Generation time
- (d) PGPR's
- (e) Lichens
- (f) Humus
- (g) Indicator organisms
- (h) Energy parasites
- (i) Mesosomes
- (j) Food preservation

SECTION-B

2. Write down some of the applied fields of microbiology and make a general statement of the importance of microorganisms in each field.
3. Draw labeled growth curve of bacteria grown in batch culture. Discuss various phases along with the factors which determine the beginning and end of each phase.
4. What is BNF? Discuss nitrogen cycle in detail with microorganisms involved at each step.
5. What is biogas? Describe the detailed process of biogas production.
6. What is Glycolysis? Explain its pathway mentioning the enzyme involved along with the ATP's produced.

SECTION-C

7. What are bacteriophages? Explain different stages of lytic cycle for its multiplication. How does it differ from the lysogenic cycle?
8. What is microbial food spoilage? Explain different types of food spoilage, their causative agents and measures to prevent the spoilage of food.
9. What are microbial inoculants? Explain the different types of bioinoculants along with their advantages and constraints.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.