Roll No…….. **Total No. of Printed Pages: [01]**
Total No. of Questions: [09]

B. Sc. Agriculture (Semester – 2nd)
AGRICULTURAL MICROBIOLOGY
Subject Code: BAGRS1255
Paper ID: [21130116]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a) Enlist the micro-organisms involved in Nitrification Process.
b) Write the example of aerobic and anerobic Bacteria.
c) Define denitrification in soil
d) What you know about Immobilization.
e) Define conjugation.
f) Define transduction.
g) What is Plasmid?
h) Draw a well-defined diagram of Carbon Cycle
i) Enlist various types of edible mushroom with their scientific name.
j) Define Bio fertilizer and Bio pesticide.

Section – B **(5 marks each)**

Q2. Explain Biological Nitrogen fixation with the well-labeled diagram of Nitrogen Cycle
Q3. Differentiate between prokaryotic and Eukaryotic Cell with example.
Q4. Define Microbiology. Write the short note on importance of microbes in soil fertility and crop production.
Q5. What is mycorrhiza? Explain various types of mycorrhiza.
Q6. Explain the long and short method of composting of Agaricus bisporus.

Section – C **(10 marks each)**

Q7. Define the Bacterial Cell and structure with the well-defined diagram along with Bacterial growth.
Q8. Explain the processes how variation or recombination occurs in Bacteria.
Q9. Explain the compost and spawn preparation technique for Pleurotus spp.