

Bankura University
ACTIVITY CODE:1903132021

B.Sc. 6th Semester (Honours) Examination, October 2020

Subject: MICROBIOLOGY

Course ID: 62216

Course Code: SH/MCB/603/DSE-3

Course Title: Microbes in Sustainable Agriculture and Development

Full marks: 15

Time: 45 mins

The figures in the right hand side margin indicate marks

Answer all the questions

UNIT-I

1. Answer any five questions from the following: 1×5=5

- a) What is humus?
- b) Define nitrification.
- c) What is bioaugmentation?
- d) Why symbiotic N₂-fixation occur in absence of oxygen?
- e) Write the role of β-carotene in plant?
- f) Define green revolution.
- g) What is bioremediation?
- h) What is hyperparasitism?

UNIT-II

2. Answer any two questions from the following: 5×2=10

- a) What is cellulose? Describe the microbial involvement in cellulose decomposition. 1+4=5
- b) What is the role of phosphorous in living organism? State the mechanisms that microorganism use to solubilize phosphate and make it available. 1+4=5
- c) What is biofertilizer? Briefly describe the different types of biofertilizer. 1+4=5
- d) Schematically represent the biochemistry of nitrogen fixation in root nodules. =5
- e) Describe the isolation of *Rhizobium* from root nodules of leguminous plant. =5