

B. Sc. DEGREE EXAMINATION, APRIL 2022
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
SECOND SEMESTER

COURSE : MAJOR – CORE
PAPER : BASICS OF APPLIED BIOTECHNOLOGY
TIME : 3 HOURS MAX. MARKS: 100

SECTION A

Answer all the questions. (18 MARKS)

I. Choose the correct answer: (5 x 1 = 5)

- The ring on the stipe of the mushroom is called
(a) mycelium (b) hypha (c) annulus (d) gill
- Phenyl acetic acid is used as _____ for the production of specific Penicillin.
(a) nitrogen source (b) mineral source (c) precursor (d) pyrogen
- Air is added to culture medium through
(a) Ventilator (b) Sparger (c) Agitator (d) Impellor
- The evolution of CO₂ into the dough increases
(a) flavour (b) porosity (c) keeping quality (d) surface colour
- The most suitable method for mass cultivation of bio fertilizers are
(a) cemented tank method (b) shallow trough method
(c) polythene lined sheet method (d) submerged tank method

II. Fill in the blanks: (5 x 1 = 5)

- Large *Portobello* mushroom have high concentration of _____.
- Roquefort cheese is commonly known as _____.
- The stabilizer used in yogurt is _____
- Microbial flocs are used as _____
- The term Biotechnology was coined by _____.

III. State Whether True or False: (3 x 1 = 3)

- Amanita* sps are edible.
- Pyrogens are fever producing substances.
- Baffles are used to remove vortex formation.

IV. Match the following : (5 x 1 = 5)

- Seitz Filter - *Staphylococcus aureus*
- Penicillinase - Hard Cheese
- Azolla* - Paddy Straw Mushroom
- Cheddar - Sterilization
- Volvariella* - Biofertilizer

V. Answer any SIX of the following. Each answer should not exceed 50 words:

(6 x 3 = 18)

19. Traditional Biotechnology
20. Camembert cheese
21. Poisonous Mushrooms
22. BGA
23. Basic concepts of Plant tissue Culture
24. Algalization
25. Uses of Penicillin
26. Callus
27. Bt Brinjal

SECTION – B

Answer any FOUR of the following. Each answers not exceeding 200 words. (4 x 6 = 24)

28. Discuss the scope of Biotechnology.
29. Give an account on Cheddar and Roquefort cheese.
30. Explain any two types of Edible Mushrooms.
31. List the role of yeast in bread making.
32. Enumerate the steps involved in the manufacture of Yoghurt.
33. Tabulate the types of fermenters with advantages and disadvantages.

SECTION – C

Answer any TWO of the following. Each answers not exceeding 1000 words.

(2 x 20 = 40)

34. Summarize Single Cell Protein with special reference to *Spirulina*.
35. Substantiate the microbial fermentation of Citric acid
36. Elucidate the cultivation of Oyster Mushroom. Add a note on nutritive value of Mushrooms.
37. Describe in detail the process of manufacturing Cheese.
