

B. Sc. DEGREE EXAMINATION, NOVEMBER 2023
BRANCH V (a) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
FIFTH SEMESTER

COURSE : MAJOR – CORE
PAPER : MICROBIOLOGY
SUBJECT CODE : 19BT/MC/MB54
TIME : 3 HOURS

MAX.MARKS:100

SECTION – A

ANSWER ALL QUESTIONS

(18x1=18 marks)

I. CHOOSE THE CORRECT ANSWER

(5x1=5)

- Who is known as the father of Microbiology?
(a) Edwin John Butler (b) Ferdinand Cohn
(c) Robert Koch (d) Antoni van Leeuwenhoek
- Transfer of genetic material in bacteria through virus is termed as
(a) Transduction (b) Recombination
(c) Conjugation (d) Transformation
- The protein coat of viruses that enclose the genetic material is called _____.
(a) Virion (b) Capsid
(c) Peplomers (d) Capsomers
- Which type of vector is responsible for transmitting Banana Bunchy top virus (BBTV)?
(a) Mosquitoes (b) Aphids
(c) Whiteflies (d) Mites
- A process using microbes to convert toxic waste to non-toxic or less toxic compound is called as _____.
(a) Precipitation (b) Bioremediation
(c) Complement fixation (d) Agglutination

II. FILL IN THE BLANKS

(5x1=5)

- Measles has been controlled in many countries by _____ vaccine.
- _____ is the suitable pH range for the proper growth of most of the clinically important bacteria.
- Viral genome incorporated and integrated with bacterial genomes is referred to as _____.
- The conversion of N_2 to NH_3 is _____.
- The abbreviated form of BOD is _____.

III. TRUE OR FALSE:

(3x1=3)

- The bacterial flagella are similar to eukaryotic flagella in having 9 + 2 structure.
- Fusarium a fungal plant pathogen, causes wilting disease in cotton plant.
- Primary treatment of sewage involves filtration and distillation.

IV. MATCH THE FOLLOWING**(5x1=5)**

- | | | |
|---------------------|---|----------------------|
| 14. Germ theory | – | Zinder and Lederberg |
| 15. Transduction | – | Robert Koch |
| 16. Viroids | – | Varo and Columella |
| 17. Small pox | – | Edward Jenner |
| 18. Animalia minuta | – | Theodor O Diener |

**V. ANSWER ANY SIX QUESTIONS,
(Each answer not exceeding 50 words)****(6x3=18)**

19. Pili
20. BCG
21. Empirical culture media
22. Prions
23. TMV
24. VAM
25. Nitrification
26. Bioaerosols
27. Eutrophication

SECTION - B**ANSWER ANY FOUR QUESTIONS EACH ANSWER SHOULD NOT EXCEED
200 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY****(4x6=24)**

28. Outline Whittaker's classification.
29. Discuss the types of culture media.
30. What are the common features of viruses?
31. Comment on Little leaf of Brinjal
32. Highlights about coliform bacteria.
33. Explain the role of microbes in sewage treatment plants.

SECTION - C**ANSWER ANY TWO QUESTIONS EACH ANSWER SHOULD NOT EXCEED
1000 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY****(2x20=40)**

34. Write an essay on morphological features of bacteria
35. Give a detailed account on physical and chemical factors which control the microorganisms.
36. Elucidate the lytic and lysogenic cycles in bacteriophages.
37. Illustrate the Nitrogen cycle and Phosphorus cycle.
