## B. Sc. DEGREE EXAMINATION, NOVEMBER 2019 BRANCH V (a) - PLANT BIOLOGY AND PLANT BIOTECHNOLOGY FIFTH SEMESTER

| COURSE | $:$ | MAJOR - CORE |
| :--- | :--- | :--- |
| PAPER | $:$ | MICROBIOLOGY |
| TIME | $:$ | 3 HOURS |

## SECTION - A

## ANSWER ALL QUESTIONS

## I. Choose the correct answer

1. Louis Pasteur developed the procedure of
a.Sterilization
b. Pasteurization
c. Lycophilization
d. Immunization
2. Mesosomes are invaginated structures formed by infoldings of the plasma membrane in
a. virus
b. algae
c. bacteria
d. fungi
3. The Tobacco Mosaic Virus is made up of
a. dsRNA
b. sRNA
c. sDNA
d. dsDNA
4. Botulism is a type of food poisoning caused by
a. Salmonella
b. E.coli
c. Clostridium
d. Streptococcus
5. In IMViC tests, E.coli turns methyl red into
a. yellow
b. blue
c. red
d. pink

## II. Fill in the blanks:

(5x1=5)
6. The administration of attenuated strains of pathogens is called
7. Potato dextrose agar medium is otherwise called as $\qquad$ medium.
8. Infectious ssRNA plant pathogens with no encapsulation are called $\qquad$
9. Bunchy Top of Banana is caused by $\qquad$
10. Biological Oxygen Demand is $\qquad$ in sewage water.

## III. True or False:

(4x1=4)
11. The Kingdom Monera includes eukaryotic microorganisms
12. Conjugation is established between two different cells through sex pilli .
13. Citric acid is a commonly used chemical preservative.
14. The Millipore filter technique is used for microbiological examination of water samples

## IV. Match the following

15. Edward Jenner

- disease resistance

16. Plasmid - cold sores
17. Sewage water - smallpox
18. Herpes viruses

- coliforms


## b. Answer any six questions, each answer not exceeding 50 words

19. Germ theory of disease
20. Fimbriae
21. Icosahedral capsid
22. Actinomycetes
23. Sedimentation
24. Endospore
25. Protista
26. Prions
27. Mycoplasma

## SECTION - B

ANSWER ANY FOUR QUESTIONS EACH ANSWER SHOULD NOT EXCEED 200 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY (4x6=24)
28. Write short notes on Whittaker's five kingdom concept.
29. With diagrams explain transformation.
30. Enumerate the general properties of TMV.
31. Explain the causal organism, symptoms and control measures of Citrus canker disease.
32. Give a schematic representation of the steps involved in purification of drinking water?
33. Describe the chemical composition of bacterial cell wall .

## SECTION - C

## ANSWER ANY TWO QUESTIONS EACH ANSWER SHOULD NOT EXCEED 1000 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY <br> ( $2 \times 20=40$ )

34. Describe the physical and chemical methods of control of microrganisms.
35. Explain in detail lysogenic cycle of bacteriophages
36. With schematic diagrams explain the nitrogen cycle .
37. Give an account of the steps involved in sewage water treatment.
