

B. Sc. DEGREE EXAMINATION, APRIL 2017
BRANCH VI.A. – ADVANCED ZOOLOGY AND BIOTECHNOLOGY
FOURTH SEMESTER

COURSE : MAJOR – CORE
PAPER : MICROBIOLOGY
TIME : 3 HOURS

MAX. MARKS: 100

SECTION A

ANSWER ALL THE QUESTIONS.

(10x3 =30)

1. Name the French & German Scientist who laid the foundation for Microbiology.
2. Differentiate between Prokaryotes & Eukaryotes.
3. Define Viroids & Prions.
4. What is Archaea?
5. Give an example each for Photoautotroph, Chemoautotroph and Heterotroph in Microbiology.
6. Name two glands in the human body whose secretions help control entry of Microorganisms.
7. Match the following;
 - a. Lactobacilli - Genital tract
 - b. Candida - Intestine
 - c. Mycobacterium - Nose
 - Mouth
8. What is zoonoses? Give examples.
9. What are Probiotics? Name some health conditions in which they are useful.
10. Explain the mechanism by which paper is being deteriorated by microorganisms.

SECTION B**ANSWER ANY FIVE QUESTIONS****(5x6=30)**

11. Enumerate the methods of isolation and maintenance of Pure Cultures. Explain the Streak plate technique.
12. Write a note on Bacterial Transduction.
13. Explain the different phases of a typical bacterial growth curve in liquid culture.
14. Explain in detail the Epidemiology of the infectious disease Pneumonia.
15. Describe in detail the microbiology of Milk and measures taken to minimize its contamination.
16. Enlist the steps involved in Cheese making. What is Rennet? Explain its role in making cheese.
17. Draw a neat labelled diagram and explain the structure of a T₄ Bacteriophage.

SECTION C**ANSWER ANY TWO QUESTIONS****(2x20 = 40)**

18. Elaborate on the Slide preparation and staining techniques employed to study bacteria.
19. Draw the Nitrogen Cycle and explain the role of microorganisms in Nitrogen fixation.
20. Describe in detail the chemical composition and characteristics of bacterial Cell Wall. Add a note on its function.
21. Name the causative agents for any three common Sexually Transmitted Diseases. Explain them in detail.
