5. Describe the symptoms and treatment of the following diseases: [2x7=14]

   (a) Tuberculosis

   (b) Tobacco mosaic virus (TMV)

OR

6. Describe the Baltimore classification of viruses with suitable examples. [14]

7. Explain the process of L-lysine production and state the industrial uses of L-lysine. [14]

OR

8. Answer the following questions: [2x7=14]

   (a) Describe the adaptative features of thermophiles with examples.

   (b) Write a note on extremophiles

9. Discuss the role of microorganisms in improving soil fertility. Add a note on the biogeochemical cycle. [14]

OR

10. What are xenobiotics? Discuss the process of xenobiotic degradation by microbes. [14]

★★★

PG Even Semester Examination, May 2025

LIFE SCIENCE & BIOINFORMATICS

2nd Semester

Course No. : LS - 552

(Microbiology)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

(Answer all questions)

1. Discuss the mode of action of ionizing radiation used in microbial control. Add a note on its advantages and disadvantages. [10+4=14]

OR

2. Discuss the polyphasic approach for microbial identification and classification. [14]

3. Using appropriate illustrations, compare and contrast prokaryotes and eukaryote cells. [14]

OR

4. Write short notes on the following: [2x7=14]

   (a) Methanogenic bacteria

   (b) Aerobic and anaerobic respiration

(Turn Over)