NIMS UNIVERSITY RAJASTHAN, JAIPUR

DIRECTORATE OF DISTANCE EDUCATION
EXAMINATION MONTH YYYY (TERM X)

M.Sc. BIOTECHNOLOGY 1ST YEAR

PAPER: GENERAL MICROBIOLOGY / CODE:XYZ16101

Maximum Marks: 70 **Duration: 03 Hours**

Instructions:

1. This paper is divided into 3 sections – A, B and C.
2. Section A consists of 10 questions of 1 mark each. All questions in Section A are compulsory.
3. Section B consists of 7 questions of 3 marks each. You must attempt ANY FIVE questions.
4. Section C consists of 5 questions of 15 marks each. You must attempt ANY THREE questions.

SECTION – A (All questions are compulsory)

1. Define Microbiology.
2. How will you prove that Microorganisms cause diseases?
3. How does DNA replication occur in Mitochondria DNA?
4. What is Induced Mutation?
5. Define Central Dogma.
6. Briefly explain the process of Nitrogen Fixation.
7. What are Carrier Mediated Proteins?
8. List three examples of Antibiotics that are industrially viable.
9. What is Parasitism?
10. How do bacteria oxidize Ammonia into Nitrite?

SECTION – B (Attempt any five questions)

11. What is Biofertilizer? Write a note on its significance?
12. Write short notes on Sedimentation.
13. How do bacteria survive after invasion in Eukaryotic Cell.
14. Explain how Viruses cause Tumor.
15. What do you know about the Defense System of a body?
16. Discuss the mechanism of Phagocytosis.
17. Explain different forms of DNA.

SECTION – C (Attempt any three questions)

18. Write short notes on the following:
    (a) Circular DNA (b) Single Stranded DNA
    (c) Total Cell Count (d) Chemostat.
19. Write short notes on the following:
    (a) Disinfection of potable water.
    (b) Primary treatment of sewage.
20. Write a descriptive note on how Microbiology benefits humans.
21. With the help of suitable diagrams describe Watson and Crick's model of double helix of DNA.
22. Provide a detailed classification of microorganisms on the basis of nutrition.