

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Sc. HONORS/ HONORS WITH RESEARCH (BIOTECHNOLOGY) – SEMESTER - 1
EXAMINATION - WINTER - 2024

Subject Code:BS01001041

Date: 26 Dec 2024

Subject Name: Human Microbial Diseases

Time:10:30 AM TO 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Draw neat and clean diagrams as required

Q.1 Write a note on following

**(Marks-
10X2=20)**

1. Define incubation period and its role in the spread of infectious diseases.
2. Differentiate between infectious and noninfectious diseases.
3. List two airborne and two waterborne diseases.
4. Define mass immunization and herd immunity.
5. Propose four control measures to prevent the spread of COVID in densely populated areas.
6. List two sexually transmitted diseases.
7. Define microbial pathogenicity islands with an example.
8. What are two ways that microorganisms can enter the body?
9. Discuss the role of vaccines in preventing oncogenic infections.
10. Name two microbes known to cause oncogenic infections.

Q.2 Answer the following (Any 2 out of 3)

**(Marks-
2X10=20)**

1. Describe the clinical features, causes, and treatment options for common respiratory diseases.
2. Discuss the process of microbial entry, colonization, and invasion in the human body, and the outcomes of such infections.
3. Discuss the role of the immune system in preventing oncogenic infections.

Q.3 Answer the following (Any 6 out of 8)

**(Marks-
6X5=30)**

1. Assess the challenges in biomedical waste disposal.
2. Enumerate the key characteristics of nosocomial infections and their common sources.
3. Discuss the differences in transmission, symptoms, and prevention methods of airborne and waterborne diseases.
4. Outline the principles of epidemiology and their application in controlling disease outbreaks.
5. Explain the modes of transmission and control strategies for mosquito-borne diseases.
6. Analyze the role of microbial colonization and invasion in causing systemic infections.
7. Name and describe the mechanism of oncogenesis caused by microbes.
8. Evaluate the role of designing chemotherapeutic remedies for oncogenic infections caused by microbes.
