

DEPARTMENT OF MICROBIOLOGY

Semester	III
Course	2
Paper Code	MBOE 3
Paper Title	Microbial Diseases: Causes, Prevention and Cure
Number of teaching hours per week	03
Total number of teaching hours per semester	42
Number of credits	03

Learning outcomes:

Microbes are tiny organisms, too tiny to see without a microscope, yet they are abundant on Earth. They live everywhere: in air, soil, rock, and water. Some live happily in searing heat, while others thrive in freezing cold. Some **microbes** need oxygen to live, but others do not. Though microscopic, one can't overemphasize the importance of microbiology. Society benefits from microorganisms in many ways. In contrary to those microorganisms also have harmed humans, animals, plants and so on, and disrupted society over the millennia. Microbial diseases undoubtedly played a major role.

This elective draws our relationship closer to microbes. This relationship involves not only the beneficial effects but also familiarize us with the harmful effects of certain microorganisms. Here we will bring to you the ways microbes affect our lives by causing diseases. We will also try and learn the measures to be taken to prevent the spread of microbial diseases and if affected to treat them

UNIT – I	4
Introduction to Microbiology: microbial biodiversity – distribution, abundance, ecological niche and types.	2
General structure of bacteria, fungi and virus	1
Normal microflora of Human body	1

UNIT-II	
History of diseases. Definition of infection and disease. Classification of infections; localized, generalized, endemic, epidemic, sporadic and pandemic. Classification of diseases as communicable and non-communicable with examples.	6

UNIT-III	5
Sources of infection: - Air, humans, animals, insects, soil, water and food.	3
Methods of transmission of infection: - Contact, inhalation, ingestion, inoculation, insects, congenital, iatrogenic (health care associated infections) and laboratory infections.	2
UNIT - IV	14
Causes, prevention and treatment of infections /diseases. HIV, Hepatitis, Tuberculosis, Aspergillosis and Malaria and currently relevant outbreaks (any 2)	12
Other common microbial infections Microbial diseases of the skin – Acne, Dandruff, Ring worm infection Common food borne infections and intoxications	2
UNIT - V	13
Hospital acquired infection, secondary infections, prevention and control (CDC)	3
Disinfection: - types of disinfection procedures	2
Vaccines and Immunization schedule	3
Chemotherapy - Use and abuse	3
Maintenance of health and hygiene	2

REFERENCES:

1	Willey, J. M., Sherwood, L., Woolverton, C. J., Prescott, L. M., & Willey, J. M. (2011). <i>Prescott's microbiology</i> . New York: McGraw-Hill.
2	Ananthanarayan and Paniker; (2006); <i>Text book of Microbiology</i> , 8 th Edition; Orient Longman publication, Hyderabad.
3	Greenwood, D., Slack, R. C. B., Peutherer, J. F., & Duguid, J. P. (1992). <i>Medical microbiology</i> , 7 th Edition, Elsevier India Private Ltd., New Delhi.
4	https://www.cdc.gov/
5	https://www.nios.ac.in/media/documents/secscicour/English/Chapter-32.pdf
6	https://nios.ac.in/media/documents/dmlt/Microbiology/Lesson-07.pdf

BLUEPRINT:

Code number: MBOE3

Title of the Paper: Microbial Diseases: Causes, Prevention and Cure

Chapter number	Number of Hrs	Total marks for which the questions are to be asked (including bonus questions)
Unit I	4	9
Unit II	6	13
Unit III	5	10
Unit IV	14	29
Unit V	13	27
	42	88
Maximum marks for the paper (Excluding bonus question) = 60		