

BIM –S-601
DSE-1 MEDICAL MICROBIOLOGY

MM : 100
Time : 3 hrs
L Credit
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Sessional : 30
ESE : 70
Pass Marks : 40

Total Hours: 60

Learning objectives:

- Students will understand the disease caused by the bacteria, fungi, virus and protozoa.
- To know the diagnosis and treatment of bacteria, fungi and viral pathogens.

Learning outcomes:

At the end of course students will be able to

- Understand the development and contribution of different scientist in the field of medical microbiology.
- Describe etiology, pathogenicity, epidemiology and laboratory diagnosis of disease caused by microorganism.
- To isolate and detect the pathogens from the clinical samples.
- Suggest different antimicrobial agent for the treatment of bacterial infections.

UNIT-I

Normal microflora of the human body: importance of normal microflora, normal microflora of skin, throat, gastrointestinal tract, and respiratory tract; Immunology- concept of innate and adaptive immunity, T-cell and B-cell, Antigen- Antibody reactions (Precipitation, Agglutination, and ELISA).
(14 Lectures)

UNIT -II

Bacterial diseases: symptoms, mode of transmission, prophylaxis, treatment and control of: Respiratory Diseases: *Streptococcus pyogenes*, *Mycobacterium tuberculosis*; Gastrointestinal Diseases: *Escherichia coli*, *Salmonella typhi*, *Vibrio cholerae*, others: *Staphylococcus aureus*
(12 Lectures)

UNIT -III

Viral diseases: Symptoms, mode of transmission, prophylaxis and control of Polio, Herpes, Hepatitis-B, Rabies, Dengue and AIDS
(12 Lectures)

UNIT-IV

Fungal diseases: Brief description of each of the following types of mycoses and one representative disease to be studied with respect to transmission, symptoms and prevention of cutaneous mycoses: Tinea pedis (Athlete's foot); Systemic mycoses: Histoplasmosis; opportunistic mycoses: candidiasis.
(12 Lectures)

UNIT-V

Prevention of Microbial Diseases: General preventive measures, Importance of personal hygiene, environmental sanitation and methods to prevent the spread of infectious agents Vaccines: Importance, types of vaccines, vaccination schedule in Indian context.
(10 Lectures)

Suggested Reading

1. Dubey R.C. and Maheshwari, D.K. *A Textbook of Microbiology*. 3rd ed., S. Chand & Co, Ram Nagar, New Delhi, p. 1034. ISBN 81-219-2620-3
2. Mackie and McCartney. *Practical Medical Microbiology*, Elsevier
3. CKJ Paniker. *Test Book of Microbiology*, Orient Longman
4. D.R.Arora. *Medical Mycology*, CBS Publisher and Distributors

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Ashok J.P. Rahul
17.4.21

Anshu Dhanu Chait