

ELECTIVE COURSE – IV (EC) – MICROBIAL DISEASES

Medical Microbiology

Unit I – Introduction

Early discovery of pathogenic microorganisms; development of bacteriology as scientific discipline; contributions made by eminent scientists. Classification of medically important micro organisms; Normal microbial flora or human body; role of the resident flora; normal flora and the human host.

Unit II –

Chemical conditions and diagnosis of the following diseases.

Bacteria

Disease	Pathogen
a. Pneumonia	<i>Streptococcus pneumoniae</i>
b. Whooping – cough	<i>Bordetella pertussis</i>
c. Meningitis	<i>Haemophilus influenzae</i>
d. Diphtheria	<i>Corynebacterium diphtheriae</i>
e. Pulmonary Tuberculosis	<i>Mycobacterium tuberculosis</i>
f. Leprosy	<i>Mycobacterium leprae.</i>

Unit III -

Chemical conditions and diagnosis of the following diseases.

Disease	Pathogen
g. Typhoid	<i>Salmonella typhi</i>
h. Cholera	<i>Vibrio cholerae.</i>
i. Tetanus	<i>Clostridium tetani</i>
j. Syphilis	<i>Treponema pallidum</i>
k. Gonorrhoea	<i>Neisseria gonorrhoeae</i>
l. Dental caries	<i>Streptococcus mutans</i>
m. Dysentery	<i>Shigella dysenteriae</i>
n. Bacterial food poisoning	<i>Shigella dysenteriae</i>
o. Gastroenteritis	<i>Clostridium botulinum</i>
p. Zoonotic disease and their control	<i>Escherichia coli</i>

Unit IV – Classification of pathogenic bacteria

Staphylococcus, *Streptococcus*, *Pneumococcus*, *Neisseria*, *Cornebacterium bacillus*, *Clostridium*, Non sporing Anaerobes, Organisms belonging to *Enterobacteriaceae*, *Vibrios*, Non fermenting gram negative bacilli *Yersinia*; *Haemophilus*; *Bordetella*, *Bucella*; *Mycobacteria*, *Spirochaetes*, *Actinomycetes*, *Rickettsiae*, *Chlamdiae*.

Unit V – Viral, protozoan and helminth – Common diseases

Virus: Small pox, Influenza, Measles, Poliomyetitis, Common cold (Rhino virus), Hepatitis, *Encephalitis*, Rabies, AIDS. Protozoa: Amoebiasis – *Entamoeba histolytica*, Malaria – *Plasmodium vivax*, *P. malariae*. Helminths: Liverfluke – *Fasciola hepatica*, Filariosis – *Wuchereiria bancrofti*. Hospital acquired infection: Hospital infections Principles of control committee – functions; Hospital waste disposal – Ethical committee – functions.

Reference:

Collee, J.G., Duguid, J.P., Fraser, A.G. and Marimoin, B.P. (~1989). Mackie and Mc Cartney Practcial Medical Microbiology, 13th edition. Churchill Livingstone.

David Greenwood, Richard CD., Slack, John Forrest Peutherer. (1992). Medical Microbiology. 16th edition. ELBS with Churchill Livingstone.

Joan Stokes, E., Ridgway GL and Wren MWD (1993). Clinical Microbiology, 7th edition, Edward Arnold. A division of Holder and Stoughton.

Tom Parker, M., Leslie H. Collier (1990). Topley & Wilson's Principles of Bacteriology, Virology and Immunity (VIII Edition).