

CORE V

MEDICAL BACTERIOLOGY

Semester	Subject code	Subject name	Category	Lecture		Theory		Practical		Credit
				Total hrs	Hrs / week	Total hrs	Hrs / week	Total hrs	Hrs / week	
V		Medical Bacteriology	Core	75	5	75	5	0	0	5

COURSE OBJECTIVES

On the successful completion of the course students will be able to acquire knowledge about common agents and its causes

COURSE OUTCOMES

CO Number	CO Statement	Knowledge level (K1-K4)
CO1	To understand the procedures in collection and transportation of specimens by which an infectious agent causes disease	K1
CO2	To describe the normal flora and virulence factors of microbes.	K2
CO3	To remember the microbial pathogenesis ,transmission ,diagnosis, treatment of respiratory and pathogenic organisms	K3
CO4	To remember the microbial pathogenesis ,transmission ,diagnosis, treatment of intestinal and pathogenic organisms	K3
CO5	To understand the hospital borne infections and infection control programs.	K2

MAPPING

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	M	S	S
CO2	M	S	S	S	M	M
CO3	S	S	S	S	S	M
CO4	M	S	M	M	S	S
CO5	S	M	S	M	S	S

S- Strong;

M- Medium;

L- Low

Unit I: Collections and transport of specimens

15

hrs

Recommendation for Collections and transport of specimens. Primary Media for isolation and their quality control. Antibiotic sensitivity testing procedure.

Unit II: Host Parasite Relationships

15

hrs

Normal microbial flora of human body, Virulence factors of bacterial pathogens, Microbial infections-transmission of infections, carriers and their types. Host Parasite Relationships.

Unit III: Bacterial pathogens and associated diseases part I

17

hrs

Morphology, classification, cultural characteristics, pathogenicity, Lab diagnosis epidemiology, treatment, prevention and control of disease caused by *Staphylococcus aureus*, *Streptococcus pyogenes*, *Neisseriae gonorrhoea*, *Mycobacterium tuberculosis* *Corynebacterium diphtheriae*, *Bacillus anthracis*, *Clostridium botulinum*, *Clostridium tetani*

Unit IV: Bacterial pathogens and associated diseases part II

16 hrs

E.coli, Salmonella typhi Shigella dysenteriae, Vibrio cholerae, Pseudomonas aeruginosa, Treponema pallidum, Rickettsiae, Chlamydiae, Mycoplasmas and Ureoplasmas.

Unit V: Nosocomial and Zoonotic diseases

Hospital acquired infection – infection control committee, Zoonotic diseases.

DISTRIBUTION OF MARKS: Theory - 100% and Problems – Nil

TEACHING METHODOLOGY:

- ❖ **Lectures**
- ❖ **Power point presentation**
- ❖ **Charts**
- ❖ **Models**
- ❖ **Group discussion**
- ❖ **Group assignments**

TEXT BOOKS:

S.N O	AUTHOURS	TITLE	PUBLISHERS	YEAR OF PUBLICATIO N
1.	Collee JC, Duguid, JP, Fraser A.C., Marimon B.P. “Mackie and McCartney .	Textbook of Microbiology	Churchill Livingstone	1996
2.	Ananthanarayanan R and Jayaram Panicker, C.K.	Textbook of Microbiology	Orient Longman	2017
3.	.David Greenwood, Richard C.B, Slack, John Forest Peuthere	Medical Microbiology”	ELBS with Churchill Livingstone.	2003

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REFERENCE BOOKS:

S.NO	AUTHOURS	TITLE	PUBLISHERS	YEAR OF PUBLICATION
1.	Topley, Wilsons	Principles of Bacteriology, Virology and Immunology,	Edward Arnold, London	1995
2.	Patricia Tille	Bailey and Scott diagnostic Microbiology	Elsevier Health Science Division.	2013
3.	Jawetz L., J.L. Melnic and L.A. Adelberg	Medical Microbiology	Tata McGraw Hill.	2019
4.	David Greenwood, Richard C.B., Slark, John Forest Penthere	Medical Microbiology	Churchill Livingstone	2012
5.	Zinsser ,Wolfgang, Joklik and David T. Smith	Microbiology,	Appleton, Century Grafts, New York.	1995
6.	Cowan and Steel	Manual for Identification of Medical Bacteria,	Cambridge University Press, London.	2004
7.	John G. Holt, Noel R. Krieg, Peter H.H, Sneath, James T. Staley and Stanely T. Williams	Bergy's Manual of Determinative Bacteriology	Lippincott Williams and Wilkins Publishers	2013

WEB REFERENCE:

<http://www.microbeworld.org/>

<http://www.microbes.info/>

<http://www.protocol-online.org/>

<http://www..microbiologyonline.org.uk/>

<http://microbiology.mtsinai.on.ca/manual/default.asp>

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