

SKILL BASED SUBJECT IV

CLINICAL MICROBIOLOGY

Semester	Subject code	Category	Lecture		Theory		Practical		Credit
			Total hrs	Hrs/week	Total hrs	Hrs / week	Total hrs	Hrs/week	
VI		Skill based	30	2	30	2	0	0	2

COURSE OUTCOMES

To enable the students to understand the concepts of Laboratory techniques in diagnosis

COURSE OUTCOMES

On the successful completion of the course, students will be able to develop strong and potential skills to work in the clinical laboratories.

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	To apply appropriate microbiology laboratory techniques, methodologies, instruments and equipment in accordance with current laboratory safety protocols	K3
CO2	To characterize the bacterial pathogenesis, transmission, diagnosis and its susceptibility.	K2
CO3	To know about the important fungal specimen collection ,processing and diagnostics.	K2

CO4	To examine the human parasites in fecal samples which are medically important.	K2
CO5	To understand the salient features of antigen antibody reaction and it's uses in diagnostics.	K3

MAPPING WITH PROGRAMME OUTCOMES:

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

S- Strong;

M- Medium;

L- Low

Unit I: Introduction to Diagnostic Microbiology

6 hrs

Introduction to Diagnostic Microbiology: Role of microbiology laboratory, Basic procedures of Microbiology. Quality Control. Specimen collection handling & processing .

Unit II: Diagnosis of Bacterial infections

6 hrs

Systematic grouping& characteristics of Pathogenic bacteria. Identification of infectious agents & disease. Antimicrobial susceptibility test.

Unit III: Diagnosis of Mycotic infections

6 hrs

Introduction to fungi. Specimen collection processing & diagnosis of Mycotic infections.

Unit IV: Diagnosis of Parasitic infections

6 hrs

Collection and Handling of fecal specimens. Parasitological examination of Stool & Laboratory identification of human parasites.

Unit V: Serology**6 hrs**

Principle and Procedures of common serological /immunological tests in the laboratory.

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

TEACHING METHODOLOGY:

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

TEXT BOOKS:

S. No	Authors	Title	Publishers	Year Of Publication
1.	Kanai L. Mukherjee	Medical Labty Technology	Tata McGraw-Hill	2017
2.	Ananthanarayana R. and Jayaram Panicker	“Text book of Microbiology”.	Orient Longman	2017

REFERENCE BOOKS:

S.No	Authors	Title	Publishers	Year Of Publication
1.	BalowS. A., Hauser. W.J, Ohauhi. M.,and Turano.A	Laboratory diagnosis of infectious diseases. Principles and Practice (Vol 1)	Springer – Vertag, New York	2012
2.	David Greenwood, Richard C. B.,	“Medical Microbiology.”	ELBS with Churchill	2012

			Livingstone	
3.	Jawetz, E., J. L. Melnic and E. A. Adelberg.	Medical Microbiology,	Tata McGraw Hill	2019

WEB REFERENCE:

<https://www.khanacademy.org/science/health-and-medicine/human-anatomy-and-physiology>

<https://www.slideshare.net/dryuktisharma/chapter-1-introduction-to-anatomy-and-physiology>

https://en.wikipedia.org/wiki/List_of_systems_of_the_human_body

<https://study.com/academy/lesson/what-are-the-organ-systems-of-the-human-body.html>

https://en.wikipedia.org/wiki/Medical_laboratory

SYLLABUS DESIGNER:

1. Mrs. S.Arunadevi, Assistant Professor
2. Dr. A.Vidhya HOD & Assistant Professor