

Lesson Plan

Name of the Faculty : guest faculty

Discipline : Medical Lab Technology

Year : 1st Year

Subject : Clinical Microbiology-I&11

Lesson Plan : 30 weeks (from July2018 -April 2019)

Work load (lecture/practical) per week (in hours) : Lectures-03, practicals-04

Week	Theory		Practical	
	Lecture day	Topic(including assignment test)	Practical Day (2 hours lab each day), (2 hours each day*2days in week=4 weekly load)	Topic
1 st	1 st	Introduction to the whole syllabus of CMB-I	1 st & 2 nd	Demonstration of safety rules(universal precautions) in microbiology laboratory
	2 nd	Ch - 1 Microbiology – Introduction , History		
	3 rd	Importance of microbiology		
2 nd	4 th	Assignment -1 Anatomical Structure of a bacterial cell	3 rd & 4 th	Preparation of claeaning agents and techniques of cleaning of glass and plastic ware
	5 th	Bacterial cell including spores,flagella,capsules		
	6 th	Bacterial growth curve		
3 rd	7 th	Bacterial nutrition	5 th & 6 th	Sterilization by autoclave and hot air oven.

	8 th	Revision of unit 1		
	9 th	Morphological classification of Bacteria		
4 th	10 th	Revision of unit 2	7 th & 8 th	Sterilization by filtration(Seitz)
	11 th	Microscopy- principle,care,working		
	12 th	Dark Field Microscope		
5 th	13 th	Assingment -2 Flourescent ,Phase Contrast,Electron Microscope	9 th & 10 th	Viva of the exrperiments performed in lab
	14 th	Revision of unit 3		
	15 th	Sterilization – Introduction, By dry ,moist heat		
6 th	16 th	Autoclave and hot air oven, structure ,function	11 th & 12 th	Handling and use of compound microscope
	17 th	Revision of unit 4		
	18 th	Sterilization indicators,filtration		
7 th	19 th	Antiseptics and Disinfectants- introduction,type,uses	13 th & 14 th	Staining techniques: Gram,Albert's,Ziehl-Neelson's
	20 th	Revision of unit 5		
	21 st	Bacterial culture		

8 th	22 nd	Culture Techniques	15 th & 16 th	Demonstration of motility(Hanging drop method)
	23 rd	Inoculation,aerobic culture		
	24 th	Isolation of mixed and pure culture		
9 th	25 th	Revision of unit 6	17 th & 18 th	Revision of experiment 5,6,7
	26 th	Culture media –Ideal and its types		
	27 th	Liquid and solid,defined and synthetic,basal		
10 th	28 th	Enriched ,selective,enrichment,indicator ,transport media	19 th & 20 th	Prep and Sterilization of various culture media
	29 th	Revision of unit 7		
	30 th	Staining Techniques-method ,procedure		
11 th	31 st	Assignment -3 Gram ,ZN,Albert Stain	21 st & 22 nd	Cultivation of Bacteria- Aerobic
	32 nd	Identification and characteristics of bacteria by microscopic examination		
	33 rd	Colony characteristics,motility methods,Biochemicals		
12 th	34 th	Carbohydrate utilization,catalase,oxidase	23 rd & 24 th	Antimicrobial susceptibility testing by Stokes disc diffusion method
	35 th	Coagulase, Indole,MR,VP,citrate utilization		

	36 th	Revision of unit 8		
13th	37 th	Antibiotics sensitivity	25 th & 26 th	Biochemical Testing
	38 th	Revision of ch 9		
	39 th	Disc diffusion method		
14th	40 th	Revision of unit 10	27 th & 28 th	VIVA
	41 st	Revision of unit 11		
	42 nd	Revision of unit 12		
15th	43 th	Doubt class of unit 1 to 6	29 th & 30 th	Revision of experiments
	44 th	Doubt class of unit 7 to 12		
	45 th	Revision of whole syllabus		
16th	46 th	Introduction to the whole syllabus of CMB-II	31 st & 32 nd	Collection, transportation of clinical samples, processing including culture of urine
	47 th	Bacteriology - General characteristics of bacteria		
	48 th	Discussion General characteristics of bacteria morphology, staining		
17th	49 th	General characteristics of bacteria culture	33 rd & 34 th	Collection, transportation of clinical samples, processing including culture of stool.
	50 th	biochemical – Characteristics		

	51 st	distribution of :- Staphylococi		
18th	52 nd	distribution of :- Streptococci	35 th & 36 th	Collection, transportation of clinical samples, processing including culture of sputum throat swabs
	53 rd	distribution of :- pneumococci		
	54 th	Enterobacteriaceae - (E coli, Salmonella, Shigella)		
19th	55 th	Enterobacteriaceae - (E coli, Salmonella, Shigella)	37 th & 38 th	Collection, transportation of clinical samples, processing including culture of pus and pus swab.
	56 th	Pseudomonas		
	57 th	Proteus		
20 th	58 th	Vibrio Cholerae	39 th & 40 th	Viva of the experiments performed in lab
	59 th	Neisseria		
	60 th	Treponema Pallidum		
21 st	61 st	Mycobacterium tuberculosis	41 st & 42 nd	Collection, transportation of clinical samples, processing including culture of Blood
	62 nd	Revision of the bacterias		
	63 rd	Class test – Bacterias		
22 nd	64 th	Bacterial pathogenicity Introduction of pathogenicity	43 rd & 44 th	Collection, transportation of clinical samples, processing including culture of Skin

	65 th	Introduction of pathogenicity & infection		
	66 th	Sources of infection		
23rd	67th	Mode of spread of infection	45 th & 46 th	Collection, transportation of clinical samples, processing including culture of Eye and Ear swabs
	68 th	Types of infection		
	69 th	Types of infection		
24 th	70 th	Nosocomial Infection-Introduction	47 th & 48 th	Revision of experiment
	71 st	Common types		
	72 nd	source of nosocomial infection		
25th	73 rd	source of nosocomial infection	49 th & 50 th	Identification of known bacterial cultures of common pathogens
	74 th	Control of nosocomial infections		
	75 th	Control of nosocomial infections		
26th	76 th	Revision	51 st & 52 nd	Identification of known bacterial cultures of common pathogens
	77th	Class test		
	78 th	Laboratory diagnosis of infectious diseases: introduction		

27th	79 th	Respiratory tract infections (Throat Swab and Sputum sample)	53 rd & 54 th	Viva of experiment
	80 th	Wound infections		
	81 st	Urinary tract infections		
28th	82 nd	Enteric fever & Intestinal infection	55 th & 56 th	Problem solving sessions of students in practicals
	83 rd	Revision of Bacterial pathogenicity		
	84 th	Class test Bacteria		
29th	85 th	Revision of Nosocomial	57 th & 58 th	VIVA
	86 th	Revision Nosocomial infections		
	87 th	Revision test Lab diagnosis		
30th	88 th	Revision of strepto, staphylococci etc	59 th & 60 th	Revision of experiments
	89 th	Revision test of whole syllabus		
	90 th	Revision of whole syllabus		