Dr. D.Y. Patil Vidyapeeth's
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Second Year B. Sc. Nursing

Subject: Microbiology

Faculty: Department of Microbiology, Dr D. Y. Patil Medical College.

Mr. Sandeep Kale (Internal Faculty)

UNIT	TOPIC	No of lectures	Lecture Serial No
I Introduction :	• Importance and relevance to nursing	1	1
	• Historical perspective	1	2
	• Concepts and terminology	2	3-4
	Principles of microbiology	1	5
II General characteristics of Microbes	• Structure and classification of Microbes.	2	6-7
	• Morphological types • Size and form of bacteria • Motility • Colonization	1	8
	• Growth and nutrition of microbes * Temperature * Moisture * Blood and body fluids	2	9-10
	• Laboratory methods for Identification of Micro-organisms	2	11-12
	• Staining techniques, Gram staining, Acid fast staining, Hanging drop Preparation Culture; various medias	3	13-15
III Infection control	•Infection: Sources, portals of entry and exit, transmission. • Asepsis	2	16-17
	• Disinfection; Types and methods	2	18-19
	• Sterilization ; Types and Methods •Chemotherapy and antibiotics	2	20-21
	•Standard safety measures	1	22
	•Biomedical waste management	1	23
	•Role of Nurse	1	24
	•Hospital acquired infection, Hospital infection control programme •Protocols, collection of samples, preparation of report and status of rate of infection in the unit / hospital, nurse's accountability, continuing education etc.	1	25

IV Pathogenic organisms	• Micro-organisms ○ Cocci – gram positive and gram negative ○ bacilli-gram positive gram negative ○ Spirochaete ○ Mycoplasms ○ Rickettsiae ○ Chlamydie	4	26-29
	• Viruses	2	30-31
	• Fungi-Superficial and Deep mycoses	2	32-33
	• Parasites	2	34-35
	• Rodents & vectors Characteristics, Source, portal of entry, transmission of infection Identification of disease producing micro-organisms Collection, handling and transportation of various specimens.	2	36-37
V Immunity	• Immunity – Types, classification	2	38-39
	• Antigen and antibody reaction	2	40-41
	• Hypersensitivity – skin test	1	42
	• Serological tests	1	43
	• Immuno prophylaxis ○ Vaccines & sera – Types & Classification, storage and handling, cold chain ○ Immunization for various diseases Immunization Schedule	2	44-45

Laboratory Hours: - 15 hours

- **Bibliography:**

1. Alice Corraine Smith, "Microbilogy and pathology" 9th ed., Mosby Co.
2. Bernard D. Davis, Rentap Dalbecco Herman N. Eisen & Harold S. Ginsberg, "Microbiology", 3rd Ed, A Harper International edition.
3. Hug L. L Moffet, (1981) "Clinical microbiology", 2nd ed., J. B. Lippincott Co.
4. Macbie and Mecartney, (1980), "Medical microbiology" 13th ed., printed.
5. P. Ananthanarayan and C. K. Jayarm Panikar, "Textbook of microbiology", 8th ed., Orient Longman Company Ltd.
6. Chakravarti Text book of Microbiology.
7. T. Panjratan Text Book of Microbiology in nursing, New central Bool agency Culcutta 2002.

Evaluation Scheme

INTERNAL ASSESSMENT 25 marks

Periodical	:	25
Midterm	:	50
Pre-final	:	75
Total	**:**	**150**

15 marks (Send to University)

Assignment - 10 marks

EXTERNAL ASSESSMENT

University examination : 75 marks