Microbiology & Pharmacology BVOCOP-104

**Unit :1**

Introduction to Microbiology; Types of Micro organism bacteria : cell structure, element idea about classification and morphological basis. Staining reaction: Gram staining, acid fast staining, Bacterial growth: nutritional requirements, Physical factors Effecting culture media and growth curve. Sterilization and disinfection in the laboratory. Antibiotic: Bacteriostatic and bactericidal effects.

**Unit:2**

Micro Vs Humans,The development of infection, the disease process, Pathogenicity and virulence- Ocular Bacteriology- Gram Positive (Staphylococcus aureus,Staphylococcus epidermidis,Streptococcus Propionibacterium, actinomyceses,nocardia)Pneumococcus.Bactetria including acid fast bacilli (mycobacterium tuberculosis,mycobacterium leparae )

**Unit:3**

Ocular Bacteriology:- Gram negative Bacteria (Pseudomonas,Heamophilous,Brucella,neisseria,morazella) Spirochetes (Treponema,,Leptospiraccae)

**Unit:4**

Virology:- Classification of viruses in ocular disease, Rubella, Adenovirus, Oncogenic viruses(HPV, HBV, Retrovirus), HIV Fungi-yeast, Filamentous, Dimorphic – intracellular parasites – Chlamydia,protozoa(taxoplasmosis,acanthamoeba),heliminthus(toxocariasis,filariasis,onc hocerciasis,trematodes)

**Unit:5**

Various methods of administration of drugs in ophthalmology-topical drugs used for mydriatis / miotics-antibiotic-fortified drops-anesthetics-systemic drugs in glaucomamiscellaneous drugs –lubricants-steroids

**Text Book**

1) BURTON G.R.W: Microbiology for the Health Sciences,3rd edition, J.P Lippincott Co.,St.Louis,1988 2) M J Pelczar (Jr),ECS Chan , NR Krieg:Microbiology,5th edition,TATA McGRAWHILL Publisher,New Delhi,1993

3) KD TRITATHI-Essentials of Medical Pharmacology,7th edition,J P Brothers Medical Publishers (P)Ltd,2013