

Paper II: Technical Subject

1. Diseases in Tropics

- 1.1 **Food - and Water - borne Diseases:** Food and water-borne gastrointestinal diseases caused by bacteria, viruses, protozoa: life-cycle; pathogenesis; pathology; clinical manifestations; diagnosis; treatment; prevention and control
- 1.2 **Soil - transmitted Helminthiasis :** Soil-transmitted helminthes: life-cycle; pathogenesis; pathology; clinical manifestations; diagnosis; treatment; prevention and control
- 1.3 **Food - and Water - borne Diseases (Tissue Parasites) :** Water-borne extra-gastrointestinal parasitic diseases; pathogens; intermediate hosts; life-cycle; pathogenesis; pathology; clinical manifestation; diagnosis; treatment; prevention and control. Schistosomiasis, Guinea Worm
- 1.4 **Other Tissue Parasites:** Trematodes and Tapeworms - pathogens; life-cycle; pathogenesis; pathology; clinical manifestation; diagnosis; treatment; prevention and control
- 1.5 **Mosquito-borne Diseases :** Mosquito-borne diseases such as malaria, dengue infection, Japanese encephalitis and lymphatic filariasis; Chikungunya; epidemiology; pathogens; mosquito vectors; life cycle, pathogenesis; pathology; clinical manifestations; management; prevention and control
- 1.6 **Non-mosquito Vector-borne Diseases and Zoonoses :** Non-mosquito vector-borne diseases and zoonoses with details of pathogens, vectors, life cycles, clinical manifestations, management, prevention and control of diseases - Kala -azar including cutaneous forms, Trypanosomiasis and Chaga"s disease, Onchocerciasis and Trachoma; Rabies, Leptospirosis, Typhus, Plague, Hanta virus, etc.
- 1.7 **Genetic Diseases: Sickle Cell, G6PD deficiency :** Ectoparasites and Others: Scabies, Myiasis, louse infestations - pathogens; life-cycle; pathogenesis; pathology; clinical manifestation; diagnosis; treatment; prevention and control

2. Medical Problems in the Tropics

- 2.1 **Common problems and diseases in tropical region:** nutritional deficiency disorders; liver diseases; infectious diseases; tropical cutaneous diseases and tropical ulcer; endocrine disorders; treatment of diseases; prevention and vaccination
- 2.2 **AIDS:** epidemiology, pathogenesis; pathology; clinical manifestations; diagnosis; treatment; prevention and control
- 2.3 **Mycology:** Common fungal diseases in tropics and systemic mycosis - epidemiology, pathogenesis; pathology; clinical manifestations; diagnosis; treatment; prevention
- 2.4 **Epidemiology and Control of Communicable Diseases and Vaccine preventable diseases**
- 2.5 **Tropical Environmental Health – heat induced illnesses and cold induced illnesses - heat exhaustion, heat stroke; frost bite, etc.**

- 2.6 Sexually Transmitted Infections – epidemiology, pathogenesis; pathology; clinical manifestations; diagnosis; treatment; prevention
- 2.7 Antibiotic Drug Resistance and Malaria drug therapeutic and Resistance Study
- 2.8 Updates on latest national treatment guidelines and protocols including national elimination programmes in communicable diseases – malaria, kala-azar, Neglected Tropical Diseases, etc.
- 2.9 GIS (Geographical Information System) in tropical diseases

3. Viral diseases

3.1 Introduction of viral diseases

- 3.1.1 General characteristic, replication, genetic, epidemiology, pathogenesis of viruses
- 3.1.2 Classification of viruses
- 3.1.3 Laboratory diagnosis and use of molecular tools in viral diseases
- 3.1.4 Principles of treatment of viral diseases
- 3.1.5 Antiviral therapy
- 3.1.6 Vaccinology
- 3.1.7 Emerging diseases: Novel viruses including SARS, MERS, Ebola virus, Nipha virus

3.2 Infection

- 3.2.1 Basic of transmission of viral diseases
- 3.2.2 Major manifestations of infections in viral diseases
- 3.2.3 Diseases due to viruses
- 3.2.4 Principles of management, including antiviral agents and prevention of infection

4. Travel Medicine:

- 4.1 Common problems and diseases in travelers: pre-travelling and post-travelling screening, counseling, prevention, management and vaccination
- 4.2 Pre-travel counseling, travel-related diseases prevention, travelers' malaria, travelers' diarrhoea, water purification for travelers, international health control, underwater hazard, vaccination care of returned traveler
