

## **MB4PG12- VIROLOGY, MYCOLOGY AND PROTOZOOLOGY**

**Number of Hours / Week: 4**

**Credits: 4**

### **UNIT I**

General properties of viruses. Morphology and structure of viruses, Bacteriophages, viroids, prions . Genetic modification of viruses. Virus multiplication. Cultivation of viruses.

### **UNIT II**

Virus infections. A systematic study of medically important viruses such as Pox, Herpes, Adeno, Entero, Myxo, Arbo, Rhabdo, Hepatitis, Oncogenic and HIV. Miscellaneous viruses. General methods for the laboratory diagnosis of viral diseases. Prophylaxis of virus diseases .Antiviral agents.

### **UNIT III**

General characters of fungi. Classification of fungi, Reproduction in fungi. Methods for the study of fungi. Cultivation of fungi.

### **UNIT IV**

Fungal infections in man. Superficial and deep mycoses. Opportunistic fungal infections & Mycotic poisoning. Common laboratory contaminants. Molds and their association with other organisms.

### **UNIT V**

Protozoa- General features and classification. Medically important protozoans.*Entamoeba histolytica*, *Giardia lamblia*, *Trichomonas*, Trypanosomes, Leishmania, Plasmodium, Toxoplasma and Pneumocystis.

### **References**

1. Molyneux, D.H., and Ashford, R.W. (1983). The biology of Trypanosoma and Leishmania, parasites of man and domestic animals (New York, International Publications Service)
2. Garraway, M.O., and Evans, R.C. (1991). Fungal nutrition and physiology (Malabar, FL, Krieger Pub. Co.).
3. Fields, B.N., Knipe, D.M., and Howley, P.M. (2007). Fields virology, 5th edn (Philadelphia, Wolters Kluwer Health/Lippincott Williams & Wilkins)

4. Fraenkel-Conrat, H., and Wagner, R.R. (1974). Comprehensive virology (New York, Plenum Press).
5. Topley, W.W.C., Wilson, G.S., Parker, T., and Collier, L.H. (1990). Topley and Wilson's Principles of Bacteriology, Virology and Immunology (Edward Arnold)
6. Medical Mycology a practical approach by Evans and Richardson (Ed). IRL Press at Oxford University Press, Oxford.
7. Emmons, C.W. (1977). Medical mycology (Philadelphia, Lea & Febiger) , 3rd ed
8. Rippon, J.W. (1988). Medical mycology : the pathogenic fungi and the pathogenic actinomycetes, (Saunders ,Philadelphia) 3rd ed
9. Chatterjee, K.D. (2009). Parasitology (CBS Publishers & Distributors) 13<sup>th</sup> ed
10. Kucera, L.S., and Myrvik, Q.N. (1985). Fundamentals of medical virology (Lea & Febiger, Philadelphia)2nd ed
11. Beaver, P.C., Jung, R.C., Cupp, E.W., and Craig, C.F. (1984). Clinical parasitology (Lea & Febiger, Philadelphia) 9th ed
12. Desselberger, U. (1995). Medical virology: a practical approach (IRL Press)
13. Ananthanarayan, R., and Paniker, C.K.J. (2006). Textbook of microbiology(Orient Blackswan) 7<sup>th</sup> ed.