

# Notes on Medical Microbiology for BRIT

## Contents

<i>Foreword</i> .....	<i>vii</i>
<i>Preface</i> .....	<i>ix</i>
<i>Acknowledgement</i> .....	<i>xi</i>
<i>Syllabus</i> .....	<i>xiii</i>

### Unit I - General Microbiology

1. History of Microbiology .....	1
2. Microscopy and Morphology of Bacteria .....	3
3. Growth, Nutrition and Metabolism of Bacteria – Physiology of Bacteria...	12
4. Sterilization and Disinfection.....	16
5. Specimen Collection, Transport, Processing and Identification of Bacteria	24
6. Hospital Acquired Infections .....	28
7. Hospital Waste Management.....	32

### Unit II - Bacteriology

8. Staphylococcus.....	37
9. Streptococcus .....	41
10. Corynebacterium.....	47
11. Mycobacterium tuberculosis .....	52
12. Spirochaetes .....	60

### Unit III - Virology

13. General Properties of Viruses.....	66
14. Laboratory Diagnosis of Viral Infections.....	74
15. Herpesviruses .....	79
16. Picornaviruses .....	85
17. Hepatitis Viruses .....	89

18. Human Immunodeficiency Virus (HIV).....	97
19. Oncogenic Viruses .....	105

## **Unit IV – Mycology**

20. Introduction to Mycology .....	110
21. Opportunistic Mycoses (Candidiasis, Cryptococcosis, Aspergillosis, Zygomycosis, Pneumocystosis, Penicillosis, Miscellaneous) .....	114

## **Unit V – Parasitology**

22. Introduction and Classification of Parasitology .....	126
23. Entamoeba histolytica .....	130
24. Leishmania donovani .....	134
25. Malaria Parasites .....	138
26. Taenia saginata and Taenia solium.....	146
27. Echinococcus granulosus .....	151
28. Strongyloides stercoralis .....	155
29. Ancylostoma duodenale.....	158
30. Ascaris lumbricoides.....	161
31. Wuchereria bancrofti.....	164

## **Practicals**

1. Microscope.....	168
2. Collection and Transportation of Specimens .....	170
3. Gram’s Staining.....	175
4. Acid Fast Stain (Ziehl-Neelsen Stain) .....	178
5. Liquid Culture Media.....	180
6. Solid Culture Media .....	183
7. Identification of Microbes/Biochemical Tests .....	186
8. Antimicrobial Susceptibility Testing (AST) .....	194
9. Laboratory Diagnosis of Fungal Infections .....	197