

Academic year 2013/14, 1st semester

MICROBIOLOGY FOR DENTISTRY

**I. General and Medical Bacteriology**

1. Bacterial morphology
2. Physiology of bacterial growth
3. Toxic virulence factors
4. Nontoxic virulence factors
5. Sterilization and disinfection. I. Chemical agents
6. Sterilization and disinfection. II. Physical agents
7. Cell wall and cell membrane inhibiting antibacterial drugs
8. Antibacterial drugs inhibiting protein and nucleic acid synthesis
9. Antibacterial drugs with uncertain mechanisms of action. Drug resistance
10. Constitutive defenses against bacteria
11. Immune defenses against bacteria
12. Immunization against bacteria
13. Staphylococcus aureus
14. Streptococcus pyogenes
15. Clostridium tetani
16. Histotoxic clostridia
17. Corynebacterium diphtheriae
18. Mycobacterium tuberculosis
19. Neisseria gonorrhoeae. Commensal neisseriae
20. Bordetella pertussis

## **II. Virology and mycology**

1. Characteristics of viruses, viral structure.
2. Replication of viruses
3. Effects of viruses on host cells. Congenital viral infections.
4. Acute and persistent viral infections
5. Constitutive defenses against viruses
6. Immune defenses against viruses
7. Immunization against viruses
8. Antiviral chemotherapy
9. Laboratory diagnosis of virus infections
10. Papillomaviruses
11. Herpes simplex virus and varicella-zoster virus
12. Cytomegalovirus. Human herpesvirus 6 and 7
13. Epstein-Barr virus and human herpesvirus 8
14. Poxviruses. Picornaviruses
15. Paramyxoviruses
16. Hepatitis A and E virus
17. Hepatitis B, C and D virus
18. Human immunodeficiency virus
19. Characteristics of fungi: cell structure and classification
20. Systemic mycoses
21. Opportunistic mycoses
22. Antifungal therapy

### **III. Oral microbiology**

1. Oral streptococci. Anaerobic streptococci
2. Lactobacilli
3. Actinomycetes. Actinobacillus actinomycetemcomitans
4. Porphyromonas, Prevotella, Fusobacterium
5. Treponema pallidum. Oral treponemes
6. Acquisition of the oral microflora
7. Factors modulating oral microbial growth
8. Metabolism of oral bacteria
9. Development of dental plaque
10. Bacterial composition of dental plaque from different sites. Calculus
11. Microbial interactions in dental plaque. Antiplaque agents
12. Aetiology of dental caries
13. Prevention of dental caries
14. Aetiological factors of periodontal diseases
15. Chronic marginal gingivitis and chronic periodontitis
16. Aggressive periodontitis. Acute necrotizing ulcerative gingivitis
17. Pathogenic mechanisms in periodontal disease
18. Pulpitis. Dentoalveolar and periodontal abscess
19. Ludwig's angina
20. Osteomyelitis of the jaws
21. Cervicofacial actinomycosis
22. Oral manifestations of HIV infection
23. Orofacial candidosis
24. Oral manifestations of systemic and non-candida opportunistic fungal infections
25. Infectious agents of concern in dentistry
26. Infection control procedures in dentistry