Oral and medical microbiology for DENTISTRY studies, 2001/2011

Students answer *one triplet* of questions containing one question from each of the following groups:

1. General and clinical microbiology
2. Special bacteriology, mycology, and oral microbiology
3. General and special virology and parasitology

FIRST QUESTIONS

General and clinical microbiology

1. Morphology of bacteria and structure of bacterial cell
2. Microbial metabolism, bacterial growth
3. Bacterial genetics and resistence to antimicrobials
4. Pathogenicity and virulence
5. Infection process – its course, forms and outcomes
6. Microbial invasivity
7. Microbial toxins
8. Innate immunity (overview)
9. Acquired immunity (overview)
10. Microbial antigens, antibody production
11. Antibody production
12. Evasion
13. Hypersensitivity
14. Microbes and environment
15. Sterilization
16. Disinfection
17. Effects of antimicrobials on bacteria
18. Adverse effects of antibiotics
19. Principles of rational antibiotic therapy and profylaxis
20. Penicilines, monobactames and carbapenemes
21. Tetracyclines a chloramphenicol, cephalosporines
22. Aminoglycosides, polypeptides, glycopeptides and ansamycines
23. Macrolides, lincosamides and antibacterial chemoterapeutics
24. Active immunization
25. Passive immunization
26. Etiology of CNS infections
27. Etiology of sepsis
28. Etiology of upper respiratory tract infections and eye and ear infections
29. Etiology of lower respiratory tract infections
30. Etiology of wound infections, bones and joints infections
31. Etiology of skin infections
32. Etiology of STI and congenital infections
33. Etiology of urinary tract infections
34. Etiology of infectious diarrhea
35. Etiology of nosocomial infections
36. Oral symptoms of the systemic infections
37. Biofilm and its importance in medicine
38. Oral biofilm

SECOND QUESTIONS

Special bacteriology

1. Gramnegative non-fermenting rods (*Pseudomonas, Acinetobacter sp.)*
2. *Legionella, Brucella, Bordetella, Francisella sp.*
3. *Campylobacter, Helicobacter and Vibrio sp.*
4. *Salmonella, Shigella, and Yersinia sp.*
5. *Escherichia* and other facultative pathogens among enterobacteriaceae
6. *Haemophilus, Pasteurella, and Actinobacillus sp.*
7. *Neisseria sp.*
8. Non-sporulating anaerobes
9. *Staphylococcus aureus*
10. Coagulase-negative staphylococci
11. *Streptococcus pyogenes*
12. *Streptococcus agalactiae*
13. *Streptococcus pneumoniae*
14. Oral streptococci
15. *Enterococcus and Listeria sp.*
16. *Corynebacterium* a *Arcanobacterium*, *Bacillus and Lactobacillus sp.*
17. *Nocardia, Rhodococcus,* and *Rothia sp.*
18. *Clostridium botulinum and Clostridium tetani*
19. *Clostridium difficile* and gas gangrene clostridia
20. *Actinomyces, Propionibacterium* and *Bifidobacterium sp.*
21. *Mycobacterium sp.*
22. *Mycoplasma* and *Ureaplasma sp.*
23. *Chlamydia* and *Chlamydophila sp.*
24. Rickettsia and related microorganism (overview)
25. *Borrelia sp.*
26. *Treponema and Leptospira sp.*

Mycology

1. General features of fungi, antifungal therapy
2. Yeasts (other than *C. albicans*)
3. *Candida sp*
4. Filamentous and dimorfic micromycetes
5. Mycoses localized primarily in the oropharynx

Oral microbiology (other "oral questions" are dealt with other topics)

1. Dental plaque, its importance and structure
2. Dental plaque and the carriogenic process
3. Carriogenic microorganisms
4. Bacterial infection localized primarily in the oropharynx
5. Anaerobic bacteria in the mouth
6. Parodontitis
7. Oral microflora in systemic infections

THIRD QUESTIONS

General virology

1. Classification and structure of viruses
2. Multiplication of viruses and viral genetics
3. Antiviral immunity and impacts of viral infectons on the cell

4. Viral infections – their course, forms and pathogenesis
5. Prevention, profylaxis and therapy of viral infections
6. Viruses and environment, inactivation of viruses
7. Viral infections localized primarily in the oropharynx
8. Symptoms of immunosupression in the mouth and their impact on the oral flora

Special virology

1. *Rotavirus*
2. *Enterovirus*
3. *Rhinovirus*
4. *Coronavirus*
5. *Hepatovirus*
6. Arboviruses (overview)
7. *Rubivirus*
8. *Flavivirus* (incl. TBEV) - overview
9. *Hepacivirus*
10. HIV
11. *Respirovirus* a *Rubulavirus*
12. *Morbillivirus*
13. *Pneumovirus*
14. *Lyssavirus a Hantavirus*
15. Influenzaviruses
16. *Erythrovirus*
17. *Papillomavirus*
18. *Mastadenovirus*
19. *Simplexvirus*
20. *Varicellovirus a Ortopoxvirus*
21. *Cytomegalovirs*
22. *Roseolovirus*
23. *Lymphocryptovirus*
24. *Orthohepadnavirus*
25. Prions

Parasitology

1. Main medically important protozoa
2. Main medically important nematodes
3. Main medically important trematodes
4. Main medically important cestodes
5. Main medically important arthropods

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