

ORAL QUESTIONS FROM MICROBIOLOGY FOR 2nd-YEAR STUDENTS OF DENTISTRY

A. General microbiology

1. The onset and course of microbial disease
2. Bacteria and the structure of bacterial cell
3. Bacterial pathogenicity and virulence, virulence factors
4. Antibacterial drugs – classification and mechanisms of activity on bacterial cells; in vitro susceptibility testing of antimicrobial drugs; mechanisms of bacterial resistance to antimicrobial drugs
5. Beta-lactam antibiotics
6. Tetracyclines, chloramphenicol
7. Macrolides, lincosamides and glycopeptide antibiotics
8. Sulphonamides, co-trimoxazole, metronidazole
9. Quinolones, aminoglycosides
10. Antituberculotics
11. Staphylococcal infections
12. Streptococcal and enterococcal infections
13. Infections caused by *Enterobacteriales*
14. Infections caused by Gram-negative non-fermenting bacteria
15. Infections caused by *Treponema*, *Borrelia* and *Leptospira*
16. Infections caused by mycobacteria
17. Infections caused by anaerobic non-spore-forming bacteria and clostridia
18. Infections caused by *Chlamydia*, *Mycoplasma* and *Ureaplasma*
19. Infections caused by *Legionella* and *Bordetella*
20. Infections caused by *Haemophilus* and *Neisseria*
21. Infections caused by corynebacteria, *Helicobacter* and *Campylobacter*
22. General characteristics of pathogenic micromycetes, pathogenesis of fungal diseases, laboratory diagnostics and treatment of fungal diseases
23. Mycoses of skin and mucosa; subcutaneous mycoses
24. Systemic mycoses
25. General characteristics of medically important parasites, laboratory diagnostics, prevention and treatment of parasitic diseases
26. Parasitic protozoa of tissue and body cavities (*T. gondii*, *T. vaginalis*, *T. tenax* and *E. gingivalis*)
27. Parasitic protozoa of the intestine (*G. intestinalis*, *E. histolytica*) and blood (*Plasmodium* spp.)
28. Intestinal parasitic worms (*A. lumbricoides*, *E. vermicularis*, *T. solium*, *T. saginata*)
29. Characteristics of viruses, viral infection at the level of the cell and the organism; laboratory diagnostics of viral infections; antiviral chemotherapeutics
30. Adenoviruses, Parvoviruses, Poxviruses
31. Papillomaviruses, Polyomaviruses
32. Orthomyxoviruses, paramyxoviruses
33. Picornaviruses, coronaviruses, rotaviruses
34. Herpesviruses (HSV-1,2; VZV, EBV, CMV)
35. Hepatitis viruses
36. Retroviruses and AIDS
37. Rhabdoviruses, arboviruses
38. Slow viral infections and prion diseases
39. General principles of correct sampling and transport of material for microbiological diagnostics, principles of microbiological diagnostics
40. Disinfection and sterilisation
41. Direct and indirect diagnostics of microbial diseases

B. Clinical microbiology

1. Physiologic microbiota of the skin and urogenital tract
2. Physiologic microbiota of the respiratory and gastrointestinal tract
3. Respiratory tract infections
4. Uropoetic system diseases, basic algorithms of microbiologic diagnostics
5. Genital tract diseases and sexually transmitted diseases, basic algorithms of microbiologic diagnostics

6. Gastrointestinal system diseases of microbial aetiology, basic algorithms of microbiologic diagnostics
7. Sepsis, basic algorithms of microbiologic diagnostics
8. Infectious endocarditis, basic algorithms of microbiologic diagnostics
9. Nosocomial infections
10. Neuroinfections and prion diseases, basic algorithms of microbiologic diagnostics
11. Infections of the skin, wounds and soft tissue, basic algorithms of microbiologic diagnostics
12. Active immunisation, passive immunisation and immunomodulation

C. Microbial infections in dentistry

1. Oral microbiota, dental plaque, its stages, composition of dental plaque, types and comparison of supra- and subgingival plaque, dental calculus
2. Dental caries, cariogenic bacteria and aetiology of dental caries, phases of dental caries, risk factors of dental caries, caries inhibitors, options for laboratory evaluation of dental caries risk
3. Dental pulp infections and their complications – aetiology, pathogenesis, causative agents, laboratory diagnostics options, prevention and therapy
4. Periodontal infections (gingivitis, periodontitis, abscesses), acute, necrotising and chronic periodontal infections, periodontal-endodontic abscesses – causative agents, laboratory diagnostics options, prevention and therapy
5. Specific gum diseases and the other bacterial, viral and mycotic infections of the oral mucosa; laboratory diagnostics options and therapy
6. Odontogenic infections of fascial spaces, routes of spread of dental infections, Ludwig's angina, infections of the retropharyngeal spaces, mediastinitis, cervicofacial actinomycosis; laboratory diagnostics options, prevention, therapy
7. Osteomyelitis and osteonecrosis of jaws, acute and chronic osteomyelitis, diffuse sclerotising osteomyelitis, osteoradionecrosis, drug-related osteomyelitis; laboratory diagnostics options, prevention, therapy
8. Salivary gland infections, predispositions, infections of bacterial, viral and other aetiology, diagnostics, prevention, therapy
9. Odontogenic sinusitis and odontogenic systemic infections; laboratory diagnostics options, prevention, therapy
10. Dental implants, causes and symptoms of implant failure, causative agents of periimplantitis, apical peri-implantitis, peri-implant mucositis; laboratory diagnostics options, prevention, therapy
11. Nosocomial infections in dental office, nosocomial infections in inpatient dental departments – causative agents and their transmission; prevention
12. Immunity of oral cavity and options of its modulation