

TEST QUESTIONS FROM MICROBIOLOGY FOR DENTISTRY STUDENTS:

1. The relationship between the microorganism and the host is characterized by:

- no immune response is present in both infection and colonization
- + an immune response is present during infection
- in infection, the host tissue must be damaged
- the infection is always manifested by clinical signs of the disease
- + the host's own immune response may also be responsible for disease manifestations
- + the infection may not be manifested by clinical symptoms of the disease
- + during vaccination we induce an infection, but not a typical disease

2. Pathogenicity means the ability of a microorganism to:

- + to induce disease in a susceptible host
- alter the composition of the host's normal flora
- cause disease even in an immune host
- actively spread directly from host to host
- + damage the host (structures or its functions)
- + penetrate the host organism
- resist the effects of antibiotics

3. The reservoir of the causative agent of microbial infection can be:

- + sick person
- + bacilonosič germ carrier
- + sick animal
- insects as a passive vector
- dust particles
- contaminated objects
- + infected or colonized host

4. The ways of transmission of microbial infection include:

- sick animal
- germ carriers
- + infectious aerosol
- + sexual intercourse
- + contaminated water, soil and objects
- + insect vectors
- + transplacental transmission

5. Commensal micro-organisms on the mucous membranes:

- + they promote resistance to pathogens by competing for adhesion to epithelial cells
- prevent the transfer of plasmids between pathogens
- they consume nutrients necessary for pathogens
- they reduce the resistance of pathogens to antibiotics and immune factors
- + they are part of non-specific immunity
- + inhibit the reproduction of pathogenic microorganisms
- + they can change the pH of the environment and thus inhibit the growth of pathogens

6. During sterilization:

- all bacteria except non-pathogenic ones must be destroyed
- + all microorganisms and their spores must be destroyed

- prions are destroyed by pasteurization
- + we use physical and chemical methods
- + all viruses, fungi and parasites must also be removed
- we use exclusively physical methods
- + we use special methods to inactivate prions

7. For sterilization we can use:

- benzalcohol in combination with chlorhexidine
- streaming (flowing) steam
- + steam under pressure, burning in a flame or ethylene oxide
- 3% hydrogen peroxide
- Ajatin
- + moist heat sterilization under pressure
- + vapors of peracetic acid

8. Disinfectant agents include:

- amphotericin B
- + sodium hypochlorite
- + preparations containing iodine
- neomycin
- acyclovir
- + septonex
- gamma radiation

9. Bacterial cell wall:

- + decides on the type of Gram stainability
- it is part of the surface of all genera of bacteria
- contains peptidoglycan, which can't be cleaved by lysozyme
- in G+ bacteria it contains lipopolysaccharide
- + contains antigens that can be used in diagnostics
- + absent in Mycoplasma and Ureaplasma genera
- Gram-positive bacteria have an outer phospholipid membrane

10. We use the native preparation:

- in the diagnostics of streptococcal angina
- in the diagnostics of gonorrhea
- to proof of capsule
- + for evidence of movement and observation of spirochetes (in the dark field)
- + for evidence of bacterial movement
- + in the diagnostics of fungal microorganisms and parasites
- + in the diagnostics of leptospirosis

11. Gram staining has the following procedure:

(F = fixation, CV = crystal violet, W = water, A = acetone, L = Lugol's solution, C = carbolfuchsin)

- F-CV-A-W-C-W
- CV-W-L-A-C-W
- F-L-CV-A-W-C-W
- + F-CV-L-A-W-K
- CV-L-W-A-W-C-W

- C-L-W-CV-W
- C-A-W-CV-L

12. Strict anaerobes include:

- Escherichia coli
- + Prevotella melaninogenica
- Neisseria gonorrhoeae
- Mycobacterium tuberculosis
- Pseudomonas aeruginosa
- + Peptostreptococcus
- + Bifidobacterium

13. Virulence of the microorganism:

- + is the specific degree of pathogenicity of the particular strain
- is a characteristic of a bacterial species
- is the ability of a microbial species to cause disease
- it is constant for the particular strain and can't be changed
- + is a property, which is specific to a particular strain
- + is a genetically determined characteristic
- + pasážovaním sa môže zvyšovať alebo znižovať it can be increased or decreased by the transfer of cell inoculum from existing tissue culture to fresh growth medium

14. Streptococci:

- all streptococci can be classified according to Lancefield
- β -hemolytic streptococci include *S. pneumoniae*
- viridance streptococci are involved in the formation of dental caries and endocarditis in connection with an artificial or damaged valve
- they are transmitted by vectors
- + *Streptococcus pyogenes* is regularly susceptible to penicillin
- + *Streptococcus agalactiae* can colonize the vaginal mucosa
- + the basic division is according to the polysaccharide substance C

15. Poststreptococcal consequences :

- rheumatic fever occurs after a pharyngeal infection caused by *S. agalactiae*
- + the cause are the cross-reacting antibodies that arise during *S. pyogenes* infection
- they occur only after a manifest infection with scarlet fever
- are the immediate continuation of streptococcal infection
- we will examine the level of antistreptolysin S in the patient's serum
- + diagnostically, we rely on the examination of ASLO and anti-DNase levels
- only the kidneys and heart are affected

16. Streptococcus pneumoniae:

- + in addition to pneumonia, it causes otitis and meningitis in children
- + the basic virulence factor is the polysaccharide capsule
- produces a neurotoxic protein
- antibodies against capsular antigens are not protective
- + it can more often cause pneumonia in older people
- + the source of infection is always a person
- all strains are susceptible to penicillin

17. Staphylococcus aureus:

- + forms an enzyme coagulase
- serotyping is used for identification
- does not form hemolysins
- it does not multiply under anaerobic conditions
- + it can occur in the nasopharynx of healthy carriers
- + can cause post-antibiotic enterocolitis
- the virulence factor is endotoxin

18. Coagulase negative staphylococci:

- + they grow in the form of biofilms
- cause diarrhea in children
- + are mostly sensitive to oxacillin
- are resistant to vancomycin
- they are difficult to cultivate
- + they belong to the normal microflora of the human body
- can cause post-antibiotic enterocolitis

19. To treat infections caused by MRSA strains of Staphylococcus aureus, we can use:

- + linezolid
- cefoperazone
- cephalothin
- meropenem
- + vancomycin
- + teicoplanin
- + ceftaroline

20. Penicillin is normally sensitive to:

- + Streptococcus pyogenes
- Streptococcus pneumoniae
- + Streptococcus agalactiae
- Staphylococcus aureus
- + Corynebacterium sp.
- + Clostridium sp.
- + Actinomyces sp.

21. Neisseria meningitidis:

- + the virulence factor is the polysaccharide capsule
- nasopharyngeal carriage is not epidemiologically significant
- in meningitis mononuclear leukocytes predominate in the cerebrospinal fluid
- Neisseria meningitidis cause aseptic meningitis
- + lipooligosaccharide is responsible for the toxic effect
- + we can detect the antigens of the causative agent directly in the cerebrospinal fluid by latex agglutination
- microscopic examination has no diagnostic value

22. Infections caused by Salmonella sp. - the causative agent and transmission:

- + Salmonella Enteritidis is transmitted by ingestion of contaminated food
- Salmonella Typhi is transmitted by the eggs of infected poultry
- Salmonella Enteritidis is transmitted by droplet infection

- + primary zoonotic salmonellae are transmitted by faecal-oral and by food
- + a germ carrier can transmit Salmonella Typhi
- + we use serotyping for the proof of species

23. People over 65 are recommended to be vaccinated against:

- + pneumococci
- Haemophilus sp.
- tuberculosis
- hepatitis A
- HPV
- meningitis
- + flu

24. Pseudomonas aeruginosa:

- + often causes nosocomial infections
- causes acute infections of the upper respiratory tract
- some bacterial strains are susceptible to penicillin
- + is a potentially pathogenic bacterium
- often causes folliculitis
- + often causes pneumonia in patients with cystic fibrosis
- + virulence factors are proteases, exotoxins and mucus

25. Legionella:

- coughing up sputum is characteristic of the disease
- + bacteria survive in a humid environment, in air conditioning equipment
- is very sensitive to chlorine products
- will grow on common culture media
- + can be the cause of severe atypical pneumonias
- + is a facultative intracellular bacterium
- + sputum or tracheal aspirate is collected for cultivation and urine is collected for antigen detection

26. Anaerobic gram-negative rods:

- + they include Bacteroides sp., Fusobacterium sp.
- cause exogenous infections
- aminoglycosides are used for therapy
- serological reactions are used for diagnostics
- + they belong to the normal microflora of the human body
- + surgery is also part of the treatment of some anaerobic infections
- they are cultivated in an environment in the presence of oxygen

27. Enterobacteria :

- all species belong to the normal bacterial flora of the GIT
- + enteropathogenic strains of E. coli can cause diarrhea in young children
- + agglutination is used in practice for serotyping
- the virulence factor is exclusively enterotoxin
- + some strains produce hemolysin
- + some species may be involved in nosocomial infections
- diarrhea can also be caused by Klebsiella

28. Coagulase negative staphylococci:

- exotoxins are their virulence factors
- + they have the ability to adhere to plastic materials
- are mostly sensitive to erythromycin
- + rifampicin in combination can be used for therapy
- they are coagulase positive
- + the cell wall consists of peptidoglycans and teichoic acid
- + *Staphylococcus epidermidis* is the most common opportunistic pathogen

29. Syphilis is diagnosed using:

- Gram staining
- + native microscopy (using native smear)
- cultivation on culture media
- biochemical tests
- + only serological tests with treponema antigen will confirm the diagnosis
- + the microorganism is visible in the dark field
- + we can serologically prove the disease already at the end of the 1st stage

30. Oral (viridans) streptococci:

- + they include *S. mutans*, *S. sanguinis*, *S. salivarius*
- they form the physiological flora mainly on the nasal mucosa
- they are difficult to cultivate and require special cultivation media
- they cause rheumatic fever
- + blood agar is the diagnostic medium
- they can be classified according to Lancefield
- + they are opportunistic pathogens

31. Oral (viridans) streptococci:

- + can cause bacterial endocarditis
- determination of the level of ASLO is used to diagnose the disease
- are resistant to penicillin
- they cause diseases in immunocompetent people
- they are cultivated on selective media
- + they form the physiological flora in the oral cavity
- + they can contribute to the development of dental caries

32. *Trichomonas vaginalis*:

- the infection is regularly transmitted by contaminated water
- belongs to parasitic helminths
- + laboratory diagnostics is based on microscopy and cultivation
- the diagnosis is confirmed by the presence of antibodies
- + the drug of choice is metronidazole
- it causes nosocomial infection
- + it is transmitted mainly through sexual contact

33. *Toxoplasma gondii*:

- we will confirm the disease with a microscopic blood examination
- belongs to flagellates
- + we confirm the disease with serological diagnostics
- reproduction is only sexually

- + bradyzoites are present in tissue cysts
- T. gondii causes abortion in all infected pregnant women
- + IgG antibody avidity test

34. Viruses differ from other microorganisms:

- + they are absolutely biotrophic, multiply by de novo synthesis, and have only 1 type of nucleic acid
- have exclusively anaerobic metabolism
- they are only susceptible to some broad-spectrum ATBs
- they multiply only in selected synthetic media
- + they don't have their own metabolism
- + they contain a nucleic acid and a protein capsid
- they only contain RNA

35. Cytomegalovirus (CMV)

- doesn't have teratogenic effects on the fetus
- after overcoming the infection, it can't remain latent in the organism
- + belongs to the herpetic lymphotropic viruses
- it is resistant to conventional disinfectants
- + in patients with immune disorders, it causes hepatitis
- + in patients with immune disorders, it causes CNS diseases
- + after overcoming the infection, it can remain latent in the organism

36. Epstein-Barr virus:

- it is primarily a neurotropic herpesvirus
- doesn't cause the formation of specific antibodies
- + it is a lymphotropic herpesvirus with oncogenic potential
- can induce the development of lymphomas regardless of the host's immune system status
- + it is transmitted through saliva, parenterally, sexually and transplacentally
- + participates in the development of nasopharyngeal carcinoma
- it primarily affects T-lymphocytes

37. Varicella-zoster virus:

- it causes chickenpox exclusively in children
- after the initial overcoming, it is removed from the patient's body and induces lifelong immunity
- after overcoming the infection, the virus occurs latently in the adenoid tissue
- + it's a neurotropic herpesvirus
- + it spreads through droplet infection or contact
- it does not cause an acute generalized exanthema disease
- + they belong to DNA viruses

38. Papillomaviruses:

- + are non-enveloped DNA viruses
- cause proliferative skin and mucosal infections of an exclusively benign nature
- they belong to enveloped DNA viruses
- + they are transmitted by direct and indirect contact
- + some types have oncogenic potential
- they don't cause sexually transmitted diseases
- + they can cause lesions in the larynx

39. Influenza virus

- belongs to paramyxoviruses
- overcome infection results in lifelong immunity
- it is regularly transmitted from animals to humans in endemic areas
- + Epidemiologically current viruses must be isolated every year for the detection of antigenic drift or shift
- + belongs to RNA viruses
- + belongs to enveloped viruses
- doesn't contain a lipoprotein envelope on the surface

40. HBV:

- it is transmitted fecal-oral
- + is transmitted parenterally (through blood and blood derivatives)
- + causes chronic hepatitis with subsequent cirrhosis and hepatocellular carcinoma
- there is no vaccine against HBV
- + it is transmitted through sexual intercourse
- + antibodies against the surface antigen are protective
- + it is transmitted from mother to fetus transplacentally and perinatally

41. Diagnostics of hepatitis B is based on:

- detection of specific IgM class antibodies in stool
- + HBs Ag detection (marker of infectivity)
- isolation of viruses on cell cultures
- + detection of specific antibodies by ELISA test and by Western-blott
- + detection viral nucleic acid in the patient's blood
- antibody proof is not used in diagnostics
- + the disease is more common among drug addicts

42. In the case of parotitis, the following are affected:

- lung parenchyma
- + salivary glands
- liver
- + pancreas
- + spermatogenesis (due to pressure atrophy in orchitis)
- adrenal glands
- + testicles

43. HIV:

- + it is transmitted through blood, sexual intercourse and transplacentally
- permanent immunity remains after vaccination or overcoming the infection
- laboratory diagnostics is based on a 4-fold increase in the titer of specific antibodies
- + attacks macrophages and Th-lymphocytes
- + absence of antibodies does not exclude infection
- diagnostics is based only on direct evidence of the virus
- the newborn of an HIV-positive mother is always infected

44. Viruses that cause diseases of the respiratory tract include:

- + coronaviruses
- rotaviruses

- papillomaviruses
- rhabdoviruses
- + parainfluenza and influenza viruses
- + RSV viruses
- + adenoviruses

45. Candida albicans :

- + can be the cause of superficial and organ mycoses
- it is never part of the physiological flora
- causes exclusively mucous membrane disease
- penicillin is usually used for therapy
- + causes disease in patients with a disorder of T cell immunity
- + we use fluconazole for therapy
- + diagnostics is mainly based on microscopy and cultivation

46. Aspergillus sp. :

- diagnostics is based exclusively on cultivation
- + non-specific immunity has an important role in the disease
- is primarily pathogenic
- + the entry gate of infection can be the respiratory system
- + is the causative agent of opportunistic mycoses
- the source of infection is soil contaminated with bird droppings
- + virulence factors include aflatoxins

47. Streptococcus pyogenes can cause:

- caries
- + repeated episodes of angina
- endocarditis lenta
- the majority of lower urinary tract infections
- + rheumatic fever
- ulcerative colitis
- + glomerulonephritis

48. Physiological flora of the oral cavity and respiratory tract:

- there is no bacterial colonization on the nasal mucosa
- + the lower respiratory tract is physiologically sterile
- + Staphylococcus epidermidis in the nose and oral mucosa
- Haemophilus influenzae in the paranasal sinuses
- + Lactobacillus sp. in the oral cavity
- + Corynebacterium pseudodiphtheriticum on the oral mucosa
- Moraxella catarrhalis in trachea

49. Otitis media:

- in children, they most often occur in the summer months
- it rarely occurs in children, it is characteristic for adult patients
- + the causative agents in children are often S.pneumoniae, H. influenzae, and M. catarrhalis
- we prefer bacteriostatic ATB for treatment
- caused by anaerobic non-sporulating bacteria
- + the disease is usually caused by a disorder of local immunity
- + the disease is more common in children due to the anatomical features of the Eustachian tube

50. Pneumonias:

- *Mycoplasma pneumoniae* causes lobar pneumonia
- + the main virulence factor of *S. pneumoniae* is the capsule
- + secondary bacterial pneumonia can occur after the flu has been overcome
- in the treatment of *M. pneumoniae* infection, we choose cephalosporins or penicillins
- + lung involvement is characteristic of systemic mycoses
- + repeated mycotic pneumonias point to the patient's immunodeficiency
- lung abscesses never form in staphylococcal pneumonia

51. Angina:

- the disease affects only the palatine tonsils (*tonsilla palatina*)
- + sudden onset is typical of streptococcal infections (group A)
- the clinical picture of angina is caused exclusively by bacterial infections
- we don't administer ATB in angina caused by *Streptococcus pyogenes*
- + tonsils are often affected in children
- the main causative agents of acute inflammation are staphylococci and pneumococci
- + after rheumatic fever, long-term prophylactic penicillin antibiotics are administered

52. Tuberculosis:

- + to confirm the disease, we use microscopic evidence of the causative agent
- the causative agent is isolated from sputum by cultivation on blood agar
- we will get a definitive negative result of cultivation in 1-3 weeks
- we also administer lincomycin in the case of bone infection
- + in treatment, we prefer first a 4-combination, then a 2-combination of antituberculosis drugs
- + protective immunity is primarily cellular
- intestinal tuberculosis is clinically manifested as an acute diarrheal disease

53. Primary herpetic infection can manifest as:

- recurrent herpes labialis
- + gingivostomatitis
- recurrent keratitis
- therapeutically effective is neomycin in combination with bacitracin
- + vesicular efflorescences on the skin
- + keratoconjunctivitis
- + acyclovir is effective in treatment

54. Physiological flora of the gastrointestinal tract:

- anaerobic bacteria predominate in the proximal part of the small intestine
- + anaerobic bacteria predominate in the distal ileum and colon
- enterobacteria form the main part of colon population
- in infants, the normal flora of the colon includes *Bacteroides* sp.
- + its composition supports the body's natural resistance
- we evaluate the finding of *Helicobacter pylori* in the stomach as normal flora
- + changes in its composition may cause dyspeptic problems

55. Hepatitis caused by HBV:

- the incubation period is 2-7 days
- + transmission is also possible during sexual intercourse
- antibodies against HBsAg confirm the infectiousness of the patient

- immunity is crossed with hepatitis A (HAV)
- + the incubation period is 1-6 months
- in case of oral infection, the incubation period is shortened
- + post-infection (post-vaccination) immunity is long-term

56. Hepatitis caused by HAV:

- + because of the short duration of viremia, transmission by blood transfusion is very rare
- vaccination is mandatory in Slovakia
- + the disease leaves permanent immunity
- immunity is crossed with immunity against HBV
- + the virus is naturally transmitted through the fecal-oral route
- the incubation period is usually up to 14 days
- + persons/contacts at risk can be given gamma globulin as part of pre- and post-exposure prophylaxis

57. The causative agent of hepatitis C (HCV):

- + belongs to RNA viruses
- the way of transmission of infection is identical to HAV
- + the way of transmission of infection is identical to HBV
- + there is no vaccine
- there is no successful treatment yet
- + quantitative monitoring of RNA levels in the blood serves to monitor the success of the treatment
- belongs to DNA viruses

58. HBsAg:

- is localized inside the Dane particle
- + as a part of immunocomplexes, it is involved in the pathogenesis of the disease
- is the core antigen of HBV
- it's presence in serum is a reflection of viral replication
- + it's presence in serum is a reflection of viral replication
- + the production of protective antibodies can be induced by vaccination
- is present in the serum for a long time even after recovery in mild forms of hepatitis B

59. In the case of an acute urinary tract infection, we most often expect as a causative agent:

- Streptococcus pyogenes
- + Escherichia coli
- Candida albicans
- Pseudomonas fluorescens
- + Streptococcus agalactiae
- + Klebsiella sp.
- Actinomyces israelii

60. Sexually transmitted diseases:

- Neisseria gonorrhoeae never penetrates through the mucosa into the bloodstream
- syphilis – the disease is infectious only in 1st stage
- ulcus molle is clinically indistinguishable from a lues ulcer
- + Herpes simplex virus 2 (HSV-2) belongs to the causative agents
- unrecognized gonorrhea can cause intrauterine damage of the fetus

- + the causative agent of lymphogranuloma venereum is *Chlamydia trachomatis*
- + if *Treponema pallidum* is confirmed in a pregnant woman, we expect damage of the fetus

61. Surgical wound infections:

- a frequent cause is non-compliance of antisepsis during surgery
- staphylococci dominate as the causative agents of postoperative phlegmon
- + the formation of abscesses is characteristic of staphylococcal infection
- we always administer antibiotics parenterally as a preventive measure during surgery
- + the sample must also be examined for anaerobic microorganisms
- + polyresistance to antibiotics is typical for nosocomial infections
- wounds tend to be infected exclusively by exogenous flora

62. Wound infections:

- + necrotizing fasciitis occurs mainly after surgery or trauma due to wound infection
- we consider only a visibly dirty wound to be infected
- wounds tend to be infected exclusively by exogenous flora
- + tissue devitalization is one of the conditions for the development of anaerobic infection
- we always vaccinate against rabies when bitten by an animal
- + we vaccinate against tetanus in the case of a deep soil-contaminated wound
- + staphylococcal infections usually originate from the patient's own flora

63. Bacterial sepsis:

- + subacute disease is often related to localized inflammation in the body
- in staphylococcal infection, a continuous temperature without chills is typical
- the fluctuation of temperature causes the release of exotoxins from the bacteria
- this term refers to any presence of bacteria in the blood
- + severe sepsis is characterized by the transition of sepsis to septic shock
- Gram-positive bacteria more often lead to septic shock
- a skin swab serves as proof of sepsis

64. Collection of material for microbiological examination in sepsis:

- blood is collected at the peak of the temperature curve
- + we must specify the administered antibiotics in the cover letter
- collection a smaller amount of blood does not reduce the probability of isolating of the causative agent
- if the patient is in a severe condition, it is sufficient to collect 1 blood sample
- + blood is collected from the vena cubiti
- + except blood for cultivation (hemocultivation), in addition we also collect other material according to the presumed site of sepsis
- + previous to collection of the blood sample, we will also take a swab from the injection site

65. Purulent meningitis:

- the causative agents are mainly viruses and protozoa
- when the symptoms of inflammation will decrease, the dosage of antibiotics should be gradually reduced
- + the disease caused by *Neisseria meningitidis* may have the epidemic character
- bacterial sepsis regularly causes infection of the meninges
- meningitis is also caused by unencapsulated strains of *Streptococcus pneumoniae*
- + when the symptoms of inflammation will decrease, we don't reduce the dosage of antibiotics

+ we can detect the causative agent of the disease in the cerebrospinal fluid from a lumbar puncture

66. Brain abscess:

- in the initial treatment, we administer to the patient high doses of nitrofurantoin
- + especially ceftriaxone penetrates well into the CNS
- in diagnostics we can try to isolate the virus
- a negative blood culture finding excludes the presence of an abscess
- + the causative agents may be anaerobic bacteria
- + we prove the causative agent from pus obtained by puncture
- the disease may occur exclusively through hematogenous transmission

67. Infections caused by prions:

- + the incubation period of the disease can last for years
- the causative agent induces the formation of specific IgM antibodies
- the causative agent is transmitted by droplets
- examples are rabies and herpes zoster
- + examples are Kuru and Creutzfeldt-Jakob disease
- + the disease is currently not curable
- + the disease originates on an autoimmune basis

68. In the gingival sulcus we mainly find:

- IgA antibodies
- + subgingival plaque in case of poor dental hygiene
- + IgG antibodies
- IgE antibodies
- + T lymphocytes
- + proteases
- massive polymorphonuclear leukocytes

69. In saliva we find:

- + IgA antibodies
- + lysozyme
- + lactoferrin
- extracellular polysaccharides (dextran)
- IgE antibodies
- mannans
- glucans

70. During plaque formation, a pellicle is formed:

- + after 2-3 minutes
- after 2-3 seconds
- after 1 day
- in case of good oral hygiene, it doesn't form at all
- + it is formed already a few seconds after it is washed
- + it is first colonized by Gram-positive cocci
- it is first colonized by Gram-negative rods

71. Bacteria which adhere to the pellicle and mainly form a biofilm are:

- S.pneumoniae

- S.agalactiae
- + S.mutans
- S.epidermidis
- + S.sanguis
- enterococci
- beta hemolytic streptococci

72. Bacteria from the HACEK group from the oral cavity mainly participate in:

- cystitis
- + endocarditis
- pyelonephritis
- sepsis
- + Actinobacillus actinomycetemcomitans type b can cause juvenile periodontitis
- + Cardiobacterium hominis can cause subacute endocarditis
- Haemophilus aphrophilus can cause pharyngitis

73. Cervicofacial actinomycosis

- it mainly occurs in the maxilla (upper jaw)
- + it mainly occurs in the jaw (lower jaw)
- aminoglycosides are used for therapy
- the causative agent can be cultivated on blood agar in 24 hours
- is a consequence of hematogenous dissemination
- + microscopic examination of pus has a diagnostic importance
- + the presence of drusen in pus is typical for this disease

74. The possibilities for detection of the risk of dental caries using microbiological methods are as follows:

- cultivation of bacteria that come from plaque on blood agar
- microscopic examination of bacteria in the plaque
- + examination of a saliva sample for the presence of Streptococcus mutans on special culture media
- examination of saliva for the presence of Actinomyces on blood agar
- this risk can't be determined by microbiological methods
- + use of the Dentokult test for the detection of the presence of Streptococcus mutans
- + examination of a saliva sample for the presence of Lactobacillus spp. on special culture media

75. Dental plaque:

- + has a significant impact on the pathogenesis of periodontal diseases
- it is formed only supragingivally
- it is matured after only 3 days
- the presence of glucose in food slows down its maturation
- + enamel demineralization occurs at pH 5,5
- + it is the ability of microorganisms to adhere to the surface of the tooth
- + plaque maturation is accelerated by the presence of sucrose in the diet

76. In indicated cases, the dentist may use the following antimicrobial drugs in ambulatory practice:

- aminoglycosides
- vancomycin

- + macrolides
- cephalosporins of IV. generation
- + clarithromycin
- + clindamycin
- meropenem

77. Biofilm on prosthetic replacements most often forms and at the same time causes stomatitis:

- Staphylococcus epidermidis
- + Candida albicans
- Pseudomonas aeruginosa
- Escherichia coli
- + Staphylococcus aureus
- Klebsiella oxytoca
- Neisseria sicca

78. The bacterium is part of the physiological flora and its quantity increases in carious lesions:

- Neisseria sicca
- Veillonella
- + Lactobacillus
- Streptococcus salivarius
- + Actinomyces
- + Streptococcus mutans
- Staphylococcus epidermidis

79. Actinomyces actinomycetemcomitans is involved in:

- parotitis
- + juvenile periodontitis
- chronic tonsillitis
- + infectious endocarditis
- + soft tissue infections
- + osteomyelitis
- the lower respiratory tract infections

80. After birth, during bacterial colonization of the oral cavity, bacteria which manifest the first are:

- Lactobacillus sp.
- + Streptococcus salivarius
- Actinomyces sp.
- Prevotella sp.
- Fusobacterium sp.
- + Streptococcus mitis
- + Streptococcus oralis

81. After teething, the following bacteria begin to colonize the oral cavity:

- Haemophilus influenzae
- + viridans streptococci, Veillonella sp.
- + oral neisseria
- Escherichia coli and Bacteroides fragilis

- Candida albicans
- Treponema denticola
- + coagulase-negative staphylococci

82. Aerobic bacteria that are part of the oral cavity are:

- Candida sp.
- Clostridium perfringens
- + viridans streptococci and oral neisseria
- Actinomyces sp.
- Prevotella melaninogenica
- + Staphylococcus epidermidis
- + Corynebacterium pseudodiphtheriticum

83. Anaerobic bacteria inhabiting the oral cavity include:

- Streptococcus salivarius
- + Prevotella sp.
- + Porphyromonas sp.
- bacteria of the HACEK group
- Corynebacterium sp. and koagulase-negative staphylococci
- + Fusobacterium sp.
- Enterococcus sp.

84. Dental calculus:

- its presence doesn't affect the emergence and development of gingivitis
- + porosity and a rough surface is the result of the activity of microorganisms
- it doesn't form subgingivally
- + it is porous and allows the absorption of harmful components of dental plaque
- it must not be removed in people with valve replacements
- + its main components are calcium and phosphate ions originating from saliva
- + at the level of the gums, it mainly contains gram-positive microbes

85. The oral microflora is not affected by:

- way of eating
- + shape of the teeth
- quantity and composition of saliva
- dental prosthesis
- + tooth surface
- increased intake of carbohydrates in the diet
- epithelium of gingival fissures

86. Dental plaque is destroyed by:

- products of bacteria in the oral cavity
- + mechanical washing and lauryl sulfate
- macrophages
- + oral hygiene
- lysozyme in saliva
- + regular use of toothpastes containing fluoride
- increased sugar intake

87. The following microorganisms prevail in subgingival plaque:

- Neisseria sp.
- E.coli, viridans streptococci
- + Actinomyces sp., Prevotella sp.
- + Porphyromonas sp.
- bacteria of the HACEK group
- Candida tropicalis
- + Streptococcus gordonii and Fusobacterium sp.

88. The beginning of enamel lesions due to the effect of dental plaque bacteria can be seen on the enamel as:

- gray spots
- brown spots
- black spots
- + white spots
- we don't observe the formation of any visible lesions
- enamel destruction
- + rough as chalk-stained lesions

89. The most important factor of bacteria in the development of dental caries is:

- formation of hemolysins
- + formation of glucan and lactic acid
- formation of lipopolysaccharide
- capsule formation
- + formation of extra and intracellular polysaccharides
- + acid tolerance of bacteria
- + the ability of bacteria to tolerate higher concentrations of carbohydrates

90. To prevent of dental caries, we can use:

- intravenous administration of immunoglobulins
- preventive administration of antibiotics
- + appropriate eating habits and tooth brushing technique
- increased content of lactic acid in the diet
- + improvement of oral hygiene
- + substances for the remineralization of tooth enamel
- + dental hygiene, which is based on the regular removal of dental calculus, not missing regular dental check-ups and the use of toothpaste containing fluoride

91. The causes of chronic marginal gingivitis are:

- immunocomplexes
- NK-cells
- + non-specific inflammatory reaction to bacteria in dental plaque
- IgA antibodies
- + dental plaque bacteria during their prolonged exposure to host tissue
- + bacteria with proteolytic and cytotoxic activity
- + lysosomal enzymes

92. Carriage of pathogenic bacteria in the oropharyngeal region that can lead to CNS infection includes:

- Streptococcus mutans
- Staphylococcus aureus
- + Neisseria meningitidis
- Actinomyces sp.
- Neisseria sicca
- Staphylococcus epidermidis
- Corynebacterium pseudodiphtheriticum

93. The following microorganisms are involved in acute ulcerative gingivitis:

- Streptococcus mutans
- yeasts
- Streptococcus sanguis
- + spirochetes
- staphylococci
- + Fusobacterium sp.
- beta-hemolytic streptococci

94. The following microorganisms are involved in juvenile periodontitis:

- Candida sp.
- HSV-1
- Streptococcus mutans
- Streptococcus sanguis
- + Actinobacillus actinomycetemcomitans and Prevotella gingivalis
- + Capnocytophaga sp.
- Pseudomonas aeruginosa

95. Factors in the patient involved in the development of periodontal diseases include:

- production of antibodies against periodontal pathogens
- lysozyme
- + formation of immunocomplexes and cytokines with osteoclastic activity
- IgA antibodies
- + halitosis
- + gingivitis
- + loss of gum tissue

96. Treatment options for periodontal diseases:

- + in indicated cases also oral antibiotic therapy
- fluoridation
- topical mupirocin
- + we can prescribe tetracycline
- + we can also administer metronidazole for periodontal abscess
- + in some cases, it must be solved by incision, drainage, or tooth extraction
- as a rule, we administer local antibiotics

97. Pulpitis:

- it originates as a result of the accumulation of dental calculus
- + it will originate in case of dental caries after the invasion of mainly lactobacilli and streptococci and a subsequent inflammatory reaction in the pulp
- it will originate in case of dental caries after invasion of mainly Streptococcus agalactiae and Staphylococcus aureus and a subsequent inflammatory reaction in the pulp

- it is never formed by the hematogenous route
- + acute pulpitis is caused by the penetration of an infectious agent from a carious defect in the tooth
- + in acute serous pulpitis, irreversible damage to the dental pulp occurs
- it is caused by the invasion of enterobacteria

98. The following are involved in pulp necrosis:

- exclusively anaerobic bacteria
- + a mixture of aerobic and anaerobic bacteria from the oral cavity
- exclusively aerobic bacteria
- + the common agent are anaerobic streptococci
- + fusobacteria may also be involved
- + polymicrobial etiology is typical
- we can also isolate *Pseudomonas aeruginosa*

99. Collection of material for microbiological examination in dentoalveolar abscess:

- lavage of the lesion
- lavage the oral cavity
- + collection of aspirate into the anaerobic transport system
- collection of the swab from the lesion
- + it is appropriate to send the sample directly in a syringe with a needle inserted into a sterile rubber plug
- we can also send saliva
- we can send a dental plaque swab

100. Ludwig's angina is:

- inflammation caused by candidas
- + inflammation of the submandibular and sublingual area, most often after a tooth or salivary gland infection
- a complication of viral parotitis
- purulent tonsillitis
- + in most cases it is a progression of dentoalveolar infection
- + polymicrobial endogenous infection
- + caused mainly by non-sporulating anaerobic bacteria

101. Osteomyelitis of the jaws:

- it is caused by yeast
- + in case of periostitis and osteomyelitis, a bone necrosis may occur
- is usually a monoinfection caused exclusively by an anaerobic bacterium
- is usually caused by *Staphylococcus aureus*
- + it originates mostly on the basis of purulent dentoalveolar disease
- is a complication of viral parotitis
- the most common causative agent is *Staphylococcus epidermidis*

102. Possibilities of anti-infective therapy of osteomyelitis of the jaws:

- amphotericin-B and fluconazole
- framycocin
- + clindamycin
- + amoxicillin-clavulanate
- aminoglycosides

- oxacillin
- + cefoxitin

103. Acute purulent infections of the salivary glands are caused by:

- cytomegalovirus
- Candida albicans
- + Staphylococcus aureus
- morbillivirus
- + Actinomyces sp.
- + anaerobic streptococci
- coxsackievirus

104. Acute non-purulent infections of the salivary glands are caused by:

- HSV-1
- + parotitis virus
- Mycobacterium tuberculosis
- Staphylococcus aureus
- + coxsackievirus
- + CMV
- Streptococcus pyogenes

105. Factors predisposing to the development of oral candidiasis include:

- gender
- fluconazole therapy
- + Sjögren's syndrome
- + diabetes
- + therapy with broad-spectrum antibiotics
- metronidazole therapy
- + increase in glucose level

106. Pseudomembranous oral candidiasis:

- is treated with macrolides
- in patients with AIDS, it occurs only rarely and never spreads to the wall of the esophagus
- + it is characterized by a white coating
- can't be confirmed microbiologically
- + in immunocompromised patients it tends to have a chronic course
- we treat it with penicillin
- + we use local antifungal drugs for therapy

107. Erythematous oral candidiasis:

- is treated with amphotericin-B
- it doesn't progress into the chronic stage
- + it originates most often in connection with the wearing of dental prostheses
- it is characterized by a white coating
- + the characteristic manifestation is a lesion on the palate
- + local antifungal therapy is mainly used
- we prescribe metronidazole

108. Angular cheilitis is caused by:

- + primarily by yeast, in bacterial superinfection Staphylococcus aureus may be a participant

- Streptococcus salivarius and Streptococcus.mutans
- E.coli
- + yeasts
- + Streptococcus pyogenes
- Mucor sp.
- E. coli

109. In the therapy of oral candidiasis, it is important:

- administer acyclovir to the patient
- administer metronidazole to the patient
- + remove predisposing factors and administer antifungal therapy
- administer clindamycin to the patient
- + to modify eating habits
- + to restore oral microflora
- + prescribe topical antifungal drugs

110. Symptoms of infection in the oral cavity can be caused by these microbes:

- Chlamydia sp.
- Mycoplasma sp.
- + Candida albicans
- + Corynebacterium diptheriae
- Legionella sp.
- + Treponema pallidum
- + Mycobacterium tuberculosis

111. Manifestations in the oral cavity in case of systemic diseases can have the following infections:

- + HHV-8
- + AIDS
- toxoplasmosis
- typhoid fever
- sepsis caused by coagulase-negative staphylococci
- meningitis caused by Neisseria
- + syphilis

112. Blister-like lesions in the oral cavity are caused:

- cytomegalovirus
- EB-virus
- parotitis virus
- + HSV-1
- rotaviruses
- + coxsackie viruses
- HHV-8 and papillomaviruses

113. Coxsackieviruses:

- in the oral cavity they infect only the gingiva
- + can cause infectious exanthema with enanthema and herpangina
- cause ulcerative colitis
- they cause diseases with symptoms only in the oral cavity
- + they can cause generalized infections affecting multiple organs

- + cause herpangina
- + they can cause an exanthemic disease

114. Papillomavirus infections:

- are treated with acyclovir
- + they can cause infections on the lips, in the oral cavity
- + they can cause lesions on the larynx
- in diagnostics we use antibody proof as a standard
- they are not transmitted perinatally
- + they can cause sexually transmitted diseases
- + some serotypes are involved in the development of cervical cancer

115. Among the causative agents of nosocomial infections in the dentist's clinic belong:

- Chlamydia trachomatis
- Streptococcus salivarius
- + HBV, HCV
- + respiratory viruses
- Neisseria gonorrhoeae
- rotaviruses,
- adenoviruses, noroviruses

116. Prevention of nosocomial infections at the dentist's clinic:

- vaccination against legionellosis
- vaccination against hepatitis A and C
- + barrier technique
- rinsing the oral cavity with deionized water
- + using disinfectant solutions
- + following aseptic procedures
- + adherence to principles of prophylaxis