

SYLLABUS OF QUESTIONS FOR EXAMINATION OF GENERAL MICROBIOLOGY

1. Characterization of procaryotic cells, their shape, size, and arrangement. Spores.
2. Internal structure in bacteria (nucleoid, plasma, cell membrane,mesosomes).
3. Cell wall of bacteria.
4. Surface structures of bacteria.
5. Morphology and multiplication of viruses.
6. Chemical structure of microorganisms.
7. Metabolism of bacteria. Autotrophic and heterotrophic microorganisms.
Tricarboxylic acid cycle.
8. Catabolism. Glycolytic cycle.
9. Enzymes in bacteria.
10. Reproduction of bacteria.
11. Genotype and phenotype. Mutation of bacteria.
12. Gene transfer. Conjugation, transformation, transduction. Lysogenic conversion.
13. Plasmids, transposons, and insertion sequences.
14. Pathogenicity and virulence of microorganisms.
15. Characterization of bacterial exotoxins and endotoxins.
16. Factors of bacterial invasivness.
17. Decontamination. Sterilization.
18. Disinfection.
19. Antibiotics. Effects, resistance, tests of susceptibility, danger of antibiotherapy.
20. Penicillins.
21. Cephalosporins and carbapenems.
22. Chloramphenicol and tetracyclines.
23. Macrolides and lincosamides.
24. Aminoglycosides and vancomycin.
25. Quinolones and antimycobacterial agents.
26. Antifungal agents.
- 27 Microorganisms in healthy humans. Endogenous and nosocomial infections.
28. Humoral mechanisms of immunity.
- 29 Cellular mechanisms of immunity.
30. Antigens and antibodies. Serologic reactions.
31. Active and passive immunization. Vaccines.
32. Classification of viruses. Virus-host cell interactions. Antiviral agents.

SYLLABUS OF QUESTIONS FOR EXAMINATION OF SPECIAL MICROBIOLOGY

1. Staphylococcus.
2. Streptococcus pneumoniae.
3. Streptococcus pyogenes.
4. Streptococcus agalactiae.
5. Viridans streptococci and Enterococcus.
6. Neisseria meningitidis.
7. Neisseria gonorrhoeae.
8. Escherichia coli.
9. Salmonella.
10. Shigella, Yersinia, Klebsiella, and Proteus.
11. Pseudomonas.
12. Vibrio.
13. Campylobacter.
14. Haemophilus.
15. Bordetella.
16. Francisella tularensis.
17. Brucella.
18. Legionella.
19. Bacteroides and Fusobacterium.
20. Bacillus.
21. Clostridium perfringens.
22. Clostridium tetani.
23. Clostridium botulinum and C. difficile.
24. Corynebacterium.
25. Listeria.
26. Actinomyces and Nocardia.
27. Mycobacterium.
28. Treponema.
29. Borrelia.
30. Leptospira.
31. Mycoplasma.
32. Rickettsia.
33. Chlamydia and Chlamydophila.
34. Superficial (cutaneous) mycoses.
35. Systemic mycoses.
36. Candida.
37. Amebae.
38. Giardia lamblia and Trichomonas vaginalis.
39. Plasmodium.
40. Toxoplasma gondii and Pneumocystis carinii.
41. Leishmania.
42. Trypanosoma.
43. Enterobius and Trichuris.
44. Ascaris and Toxocara.
45. Ancylostoma (Necator) and Trichinella.
46. Schistosoma.
47. Taenia.

48. Echinococcus.
49. Diphyllbothrium and Hymenolepis.
50. Adenoviruses.
51. Herpes simplex virus.
52. Varicella zoster virus.
53. Epstein - Barr virus.
54. Cytomegalovirus.
55. Poxvirus.
56. Papovaviruses.
57. Hepatitis A virus.
58. Hepatitis B virus and delta agent.
59. Influenza viruses.
60. Morbillivirus.
61. Parainfluenza viruses and mumps virus.
62. Enteroviruses.
63. Rotaviruses.
64. Filoviruses and arenaviruses.
65. Rubella virus.
66. Lyssavirus.
67. Retroviruses.
68. Prion agents.