

Medical Microbiology - List of Questions

General bacteriology

1. Bacterial cell (morphology, staining reactions, classification of bacteria)
2. Anatomy of the bacterial cell I – contents of cytoplasm, cytoplasmic membrane
3. Anatomy of the bacterial cell II – cell wall, capsule, flagella, fimbriae, pili
4. Anatomy of the bacterial cell III – bacterial spores
5. Microbial growth, incl. conditions required
6. Microbial metabolism
7. Media for microbial growth - examples
8. Sterilization
9. Disinfection
10. Mechanisms of antimicrobial drug action
11. Inhibitors of bacterial cell wall synthesis
12. Inhibitors of bacterial protein synthesis
13. Inhibitors of bacterial nucleic acid synthesis
14. The strategy of antimicrobial chemotherapy
15. Bacterial genetics
16. Pathogenicity & virulence
17. Colonization & invasion
18. Avoidance of host defence mechanisms
19. Bacterial toxins & aggressins
20. Antigens, incl. antigen recognition & examples of bacterial antigens
21. Immunoglobulins
22. Antibody function in infection
23. Immune system
24. Innate immunity - characteristics & humoral mechanisms
25. Innate immunity - barriers & cell-mediated mechanisms
26. Acquired immunity - general characteristics
27. Acquired immunity - humoral immunity
28. Acquired immunity - cell-mediated immunity
29. Immunodeficiency
30. Immunity in bacterial infections
31. Passive immunization
32. Active immunization

Special bacteriology

1. *Staphylococcus aureus*
2. Coagulase-negative staphylococci
3. *Streptococcus pyogenes*
4. Beta-haemolytic streptococci other than *Streptococcus pyogenes*
5. *Streptococcus pneumoniae*
6. Enterococci & alpha-haemolytic streptococci other than *Streptococcus pneumoniae*
7. *Corynebacterium*
8. *Listeria monocytogenes*
9. *Mycobacterium tuberculosis*
10. *Mycobacterium leprae*
11. Atypical mycobacteria
12. *Actinomyces* & *Nocardia*
13. *Bacillus*

14. *Clostridium botulinum*
15. *Clostridium tetani*
16. Clostridia other than *Clostridium botulinum* & *Clostridium tetani*
17. *Neisseria gonorrhoeae*
18. *Neisseria meningitidis*
19. *Salmonella* Typhi
20. Salmonellae other than *Salmonella* Typhi
21. *Shigella*
22. *Escherichia coli*
23. Facultative pathogenic *Enterobacteriaceae* (other than *Escherichia coli*)
24. *Pseudomonas aeruginosa*
25. *Pseudomonas mallei* & *Pseudomonas pseudomallei*
26. *Campylobacter*
27. *Helicobacter pylori*
28. *Vibrio*
29. *Haemophilus*
30. *Bordetella*
31. *Legionella*
32. *Brucella*
33. *Yersinia*
34. *Francisella tularensis*
35. *Bacteroides* & other non-sporing anaerobes
36. *Treponema pallidum*
37. *Borrelia*
38. *Leptospira*
39. *Chlamydia*
40. *Rickettsia*, *Coxiella* & *Ehrlichia*
41. *Mycoplasma pneumoniae*
42. Urogenital mycoplasmas

Virology

1. Composition of viruses
2. Virus–cell interactions
3. Antiviral agents
4. Interferons
5. Humoral immunity to viral infections
6. Cell-mediated immunity to viral infections
7. Immunopathology in viral infections
8. Adenoviruses
9. Herpes simplex virus
10. Varicella-zoster virus
11. Epstein-Barr virus
12. Cytomegalovirus
13. Poxviruses
14. Papillomaviruses
15. Hepatitis B virus
16. Non-A, non-B hepatitis viruses
17. Parvoviruses
18. Poliovirus

19. Enteroviruses other than poliovirus
20. Hepatitis A virus
21. Orthomyxoviruses
22. Respiratory syncytial virus & parainfluenza viruses
23. Mumps virus
24. Measles virus
25. Arboviruses: alphaviruses
26. Arboviruses: flaviviruses
27. Arboviruses: bunyaviruses
28. Rubella virus
29. Arenaviruses
30. Filoviruses
31. Reoviruses & rotaviruses
32. Human immunodeficiency virus & other retroviruses
33. Caliciviruses, astroviruses & "small round structured" viruses
34. Coronaviruses
35. Rhabdoviruses
36. Agents of spongiform encephalopathies (prions)

Mycology & parasitology

1. Fungi & fungal diseases of man
2. Dermatophytes & ringworm infections
3. Superficial mycoses other than ringworm & candidosis
4. Subcutaneous mycoses
5. Coccidioidomycosis, histoplasmosis, blastomycosis & paracoccidioidomycosis
6. Cryptococcosis, aspergillosis, systemic candidosis & zygomycosis
7. Antifungal drugs
8. *Candida*
9. *Pneumocystis carinii*
10. Malaria parasites
11. *Toxoplasma gondii* & *Cryptosporidium parvum*
12. *Entamoeba histolytica*
13. *Giardia lamblia*
14. *Trichomonas vaginalis*
15. *Trypanosoma*
16. *Leishmania*
17. *Ascaris lumbricoides* & other intestinal nematodes
18. Tissue nematodes
19. Trematodes
20. Cestodes

Clinical microbiology

1. Etiology and laboratory diagnosis of upper respiratory tract infections
2. Etiology and laboratory diagnosis of pneumonias
3. Etiology and laboratory diagnosis of ear infections
4. Etiology and laboratory diagnosis of eye infections
5. Etiology and laboratory diagnosis of gastro-intestinal infections
6. Etiology and laboratory diagnosis of food poisoning
7. Etiology and laboratory diagnosis of liver infections
8. Etiology and laboratory diagnosis of acute purulent meningitis

9. Etiology and laboratory diagnosis of acute aseptic meningitis
10. Etiology and laboratory diagnosis of chronic meningitis & brain abscesses
11. Etiology and laboratory diagnosis of urinary tract infections
12. Etiology and laboratory diagnosis of traditional venereal diseases
13. Etiology and laboratory diagnosis of non-specific sexually transmitted diseases
14. Etiology and laboratory diagnosis of wound infections
15. Etiology and laboratory diagnosis of sepsis
16. Etiology and laboratory diagnosis of bone & joint infections
17. Etiology and laboratory diagnosis of skin infections
18. Etiology and laboratory diagnosis of immunodeficiencies & opportune infections
19. Etiology and laboratory diagnosis of congenital & neonatal infections
20. Etiology and laboratory diagnosis of nosocomial (hospital) infections