EXAMINATION QUESTIONS - MICROBIOLOGY
GENERAL MEDICINE

I. GENERAL MICROBIOLOGY

1. Cytoplasmic membrane, cytoplasmic structures
2. Cell wall of G^+ bacteria
3. Cell wall of G^- bacteria
4. Capsule and glycocalyx
5. Flagella and Fimbriae
6. Endospores
7. Growth and cultivation of bacteria
8. Disinfection
9. Sterilisation
10. Sources of metabolic energy (fermentation, respiration, photosynthesis)
11. Prokaryotic Genome
12. Bacteriophage
13. Transfer of DNA - recombination
14. Mechanism gene transfer – conjugation
15. Mechanism of tene transfer – transduction
16. Mechanism of gene transfer – transformation
17. Mutations in bacteria
18. Antimicrobial Action
19. Resistance to Antimicrobials
20. Side effects of antibiotic
21. Antiviral chemotherapy
22. Bacterial Virulence Factors – Exotoxins
23. Bacterial Virulence Factors – Endotoxin
24. Bacterial Virulence Factors – Other
25. Antigenic structure of bacteria
26. Complement Fixation Reaction, E L I S A
27. Immunofluorescence, PCR
28. Immunity against bacteria
29. Immunity against viruses, yeasts and parasites
30. Prevention of infectious diseases
31. Normal microbial flora of human body

II. BACTERIOLOGY, MYCOLOGY, PARASITOLOGY

1. Streptococci
2. Staphylococci
3. Neisseria
4. Escherichia
5. Salmonellae, Shigellae
6. Other enterobacteriaceae
7. Vibrio, Aeromonas, Plesiomonas
8. Campylobacter, Helicobacter
9. Pseudomonas, Acinetobacter
10. Haemophilus
11. Bordetella, Legionella
12. Brucella, Yersinia, Pasteurella, Francisella
13. Non-sporulating anaerobic bacteria
14. Bacillus
15. Clostridium
16. Corynebacterium, Listeria
17. Chlamydia
18. Mycoplasma
19. Mycobacterium
20. Borrelia, Leptospira
21. Treponema
22. Ricketsia
23. Yeast organisms (Candida, Cryptococcus)
24. Dimorfic fungi (Blastomyces, Histoplasma, Coccidioides, Sporothrix)
25. Actinomycetes, Nocardia
26. Blood and tissue protozoa (Plasmodia, Toxoplasma, Pneumocystis)
27. Intestinal protozoa (Gardia, Entamoeba, Balantidium, Cryoptosporidium, Isospora)
28. Luminal protozoa (Trichomonas)
29. Nematodes – round worms (Ascaris, Trichinella, Trichuris, Enterobius)
30. Trematodes – flukes (Schistosomiasis, Fasciolopsis)
31. Cestodes – tape worms (Taenia, Diphyllobothrium, Hymenolepis, Echinococcus)

III. VIROLOGY AND CLINICAL MICROBIOLOGY

1. General properties of Viruses (structure, composition, cultivation, replicative cycle)
2. Classification of viruses
3. Adenoviruses, rhinoviruses
4. Herpesviruses (HSV-1, HSV-2)
5. Herpesviruses (Varicella-Zoster virus, Cytomegalovirus)
6. Herpesviruses (EB virus, HHV-6, HHV-7)
7. Poxviruses
8. Hepatitis viruses (HBV)
9. Hepatitis viruses (HAV)
10. Hepatitis viruses (HCV)
11. Hepatitis viruses HDV-delta virus, HEV, HGV)
12. Polioviruses
13. Coxsackieviruses
14. Reoviruses and rotaviruses
15. Encephalitis viruses
16. Hemorrhagic fever viruses
17. Orthomyxoviruses – influenza virus
18. Paramyxoviruses – parainfluenza virus, RS virus
19. Paramyxoviruses – Mumps virus, Measles virus
20. Rubella virus
21. Rabies virus
22. Slow and unconventional viruses
23. Oncoviruses (DNA and RNA tumor viruses)
24. Lentiviruses
25. Principles of Diagnostics in Medical Microbiology
26. Causative agents of respiratory tract infections (characterisation of the most important agents, principles of isolation and identification)
27. Causative agents of gastrointestinal infections (characterisation of the most important agents, principles of isolation and identification)
28. Causative agents of central nervous system diseases (characterisation of the most important agents, principles of isolation and identification)
29. Causative agents of septicemia (characterisation of the most important agents, principles of isolation and identification)
30. Causative agents of sexually-transmitted diseases (characterisation of the most important agents, principles of isolation and identification)
31. Causative agents of nosocomial infections (characterisation of the most important agents, principles of isolation and identification)