**FINAL EXAM QUESTIONS OF MICROBIOLOGY**

1. Chemical composition of a bacterial cell (Water, Minerals, Protein, Nucleic Acids, Carbohydrates, Lipids).
2. The influence of environmental factors on microorganisms (physical, humidity, light, pressure).
3. Equipment necessary for microbiological research.
4. Mechanism of metabolism in microorganisms.
5. The influence of chemical factors on microorganisms.
6. Methods of sterilization of food media and containers.
7. Enzymes and their role in metabolism.
8. The influence of biological factors on microorganisms.
9. The structure of the MBR-1 microscope.
10. Protein metabolism in microorganisms.
11. Water microflora.
12. Preparation of live preparations of microorganisms.
13. Nutrition and respiration of microorganisms (catabolism, anabolism).
14. Soil microflora.
15. How the drug is prepared.
16. Nutrition of microorganisms.
17. Air microflora.
18. How to prepare a live preparation.
19. Properties of enzymes (Oxidoreductases, Transferases, Hydrolases, Lyases, Isomerases, Ligases).
20. Rhizosphere bacteria.
21. How to prepare a fixed stained preparation.
22. Carbon nutrition of microorganisms.
23. Mycorrhiza.
24. Describe the preparation of ointment.
25. Nitrogen nutrition of microorganisms.
26. The role of microorganisms in soil formation
27. What dyes are used to color preparations.
28. Morphology and structure of bacteria (Prokaryotes, Capsule, Cyst, Spore formation).
29. The cycle of sulfur in nature.
30. How to view a preparation under a microscope.
31. The process of chemosynthesis.
32. Thiobacteria.
33. What microorganism is used to prepare a live preparation of a microorganism?
34. Oxidation of fats with the participation of microorganisms.
35. Iron bacteria.
36. What types of microscopes are there?
37. Lactic acid and alcoholic fermentation using microorganisms.
38. Ammonification process and urea decomposition.
39. What are the methods for preparing preparations for dark-field, space-contrast and fluorescent microscopy?
40. Oleic acid fermentation.
41. Nitrification and denitrification processes nitrification process.
42. Explain what parts a microscope consists of.
43. Morphology of microorganisms (external structure, cocci, micrococci, diplococci, tetracocci, sarcina, staphylococci, rods, bacilli, vibrios).
44. Nodular bacteria.
45. What are the methods of preparing preparations for dark-field, space-contrast and fluorescent microscopy? 1. Fatty acid and acetone butyl fermentation (fermentation processes caused by bacteria of the genus Clostridium).
46. Bacterial fertilizers.
47. What are the types of incubation devices used in a microbiology laboratory and how do they work?
48. Photosynthesis (Autotrophic organisms, Heterotrophic organisms)
49. Other nitrogen-fixing microorganisms.
50. List the heat sterilization and related methods
51. A nutrient medium for microorganisms.
52. Nitrogen-fixing mycobacteria.
53. What refrigerants were used?
54. Systematics of prokaryotes.
55. The assimilation of atmospheric nitrogen by lichens.
56. What types of sterilization are there?
57. Heredity and variation in microorganisms
58. Bacterial fertilizers
59. List heat sterilization and related methods
60. Shape, groups and systematics of viruses.
61. Phosphorobacteria.
62. How sterilization is carried out using an autoclave
63. Chemical composition of viruses
64. Synthesis of amino acids, proteins, vitamins and other compounds in microorganisms
65. What equipment is included in incubation equipment and for what purpose is it used?
66. Classification of viruses.
67. Pathogenic microorganisms.
68. What is the structure of a thermostat?
69. Metabolism of bacteria (Saprophytes, Parasites, Growth factors)
70. Immune factors and mechanisms.
71. Describe spherical bacteria.
72. Transformation and transduction phenomena in microorganisms
73. Synthesis of amino acids, proteins, and compounds in microorganisms
74. What microorganisms serve as indicators in determining water purity?