

SRI DEVRAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

M.B.B.S Phase-II Degree Examination APRIL 2021

Time:3 hours

Max Marks:100

MICROBIOLOGY- PAPER 1

Your answer should be specific to the question asked Draw neat and labeled diagrams wherever necessary

LONG ESSAY

2 X 10 = 20 Marks

1. Name the pyogenic cocci. Describe the clinical features and the laboratory diagnosis of Staphylococcus aureus infections.(2+4+4).
2. Classify sterilization. Describe in detail the working principle of hot air oven with a diagram. List the sterilization controls used in the hot air oven. (4+4+2).

SHORT ESSAY

10 X 5 = 50 Marks

3. Describe the mechanism of conjugation with examples.(3+2)
4. Describe the diseases caused and methods of detection of Helicobacter pylori. (2+3)
5. Describe the pathogenesis and laboratory diagnosis of Pneumococcal meningitis (2+3)
6. Mention the causative agent, predisposing factors, laboratory diagnosis and antibiotic of choice of Pseudomembranous colitis.(1+1+2+1)
7. Describe the mechanism of action and methods of detection of Diphtheria toxin. (3+2)
8. Name the causative agent and describe the pathogenesis and laboratory diagnosis of Leptospirosis (1+2+2)
9. Enumerate the cells of Immune system. Describe the role of T cells in Immune response.(2+3)
10. Describe the mechanism of Type I Hypersensitivity reaction
11. A 40 year old man developed severe watery diarrhea and vomiting. The rice watery stool was sent for bacteriological analysis. What is the probable etiology and describe the pathogenesis (1+4)
12. Mention any 4 sites of Extra pulmonary tuberculosis and their laboratory diagnosis.(2+3)

SHORT ANSWERS

10 X 3 = 30 Marks

13. Name any three rickettsial infections and their causative agents
14. Name three antibiotics that inhibit protein synthesis in Bacteria
15. What is the principle and interpretation of ASLO test?
16. Mention three Biological functions of complement
17. Mention Spaulding classification of disinfectants with examples .
18. List any 3 Rapid growers among Atypical Mycobacteria.
19. Enumerate 3 infections caused by Escherichia coli.
20. Mention the types of Typhoid carriers and their detection .
21. Name three agents causing non gonococcal urethritis..
22. Name three T cell immunodeficiency disorders



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MICROBIOLOGY- PAPER 2

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LONG ESSAY

2 X 10 = 20 Marks

1. Enumerate the viruses causing Hepatitis and their mode of transmission. Describe the structure of Hepatitis B virus and laboratory diagnosis of Hepatitis B virus infection. (3+3+4)
2. Enumerate the protozoa found in blood. Describe the life cycle of Leishmania donovani and pathogenesis of Kala azar. (2+4+4)

SHORT ESSAY

10 X 5 = 50 Marks

3. Describe the mode of transmission, pathogenesis and complications of Dengue fever. (1+2+2)
4. Name the aetiological agent and describe the pathogenesis and laboratory diagnosis of Histoplasmosis (1+2+2)
5. Describe the morphology, pathogenesis and clinical features of Rabies Virus (2+1+2)
6. Describe the agents, microscopic morphology and treatment of Zygomycoses. (2+2+1)
7. Mention the types of Viral inclusion bodies with examples and their diagnostic importance. (2+2+1)
8. Describe the microscopic morphology of three Aspergillus species and their clinical manifestations. (3+2)
9. Enumerate the agents causing Malaria. Describe the laboratory diagnosis of cerebral malaria. (2+3)
10. Describe the clinical manifestations and laboratory diagnosis of Cryptococcosis (2+3)
11. Describe the laboratory diagnosis of Dermatophytosis and name any two antifungal agents. (4+1)
12. Describe the pathogenesis and clinical features of Varicella zoster virus (2+3)

SHORT ANSWERS

10 X 3 = 30 Marks

13. Name three Arboviruses causing haemorrhagic fever.
14. List three agents causing oculomycosis .
15. Enumerate 3 oncogenic Viruses and the disease caused.
16. Define definitive host and intermediate host with appropriate examples
17. Draw a labelled diagram of the trophozoite of Entamoeba histolytica
18. What are ectothrix and endothrix infections of the hair?
19. Name three enveloped viruses
20. List three killed viral vaccines with route of administration
21. Draw a neat diagram of Human immunodeficiency virus and label the parts
22. Enumerate three fungi causing mycetoma



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MICROBIOLOGY- PAPER 1

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LONG ESSAY (Answer any 2)

2 X 10 = 20 Marks

1. Define hypersensitivity, Classify hypersensitivity reactions. Describe the mechanism of type I hypersensitivity and its clinical features (1+3+ 4+2).
2. Describe the pathogenesis and laboratory diagnosis of Pulmonary Tuberculosis (4+6).
3. Enumerate the agents causing watery diarrhoea. Describe the pathogenesis and laboratory diagnosis of Cholera (2+4+4).

SHORT ESSAY (Answer any 10)

10 X 5 = 50 Marks

4. Describe the laboratory diagnosis of Pneumococcal pneumonia
5. Name the antigens used in Weil felix test. Describe the principle and interpretation Weil felix test.(1+2+2)
6. Describe the mechanism and implications of mutation in Bacteria. (2+3)
7. Mention causative agent, pathogenesis and laboratory diagnosis of syphilis.(1+2+2)
8. Describe the Structure and biological functions of IgG. (2+3)
9. Describe Toxin mediated diseases of Staphylococcus aureus.
10. Describe the mechanisms of innate immunity.
11. Describe the laboratory diagnosis of gonorrhoea
12. Explain the mechanism and applications of Agglutination reactions. (2+3)
13. Describe the laboratory diagnosis of enteric fever.
14. Describe the Bacterial capsule in relation to its chemical nature, role in pathogenicity and methods of demonstration. (1+2+2)
15. Enumerate Aldehydes used in disinfection. Describe the mechanism of action and uses of Aldehydes. (1+2+2)

SHORT ANSWERS (No choices)

10 X 3 = 30 Marks

16. Name three Atypical Mycobacteria producing skin lesions.
17. Enumerate 3 bacteria causing Urinary tract infection.
18. Enumerate 3 autoimmune disorders
19. Tetanus toxoid is given to a pregnant woman to prevent neonatal tetanus. Describe the type of immunity involved.
20. List three differences between prokaryotic and eukaryotic cells.
21. Name three Enriched media with their enriching substances
22. Name three complement activation pathways
23. Name three B cell immunodeficiency disorders
24. List 3 complications of diphtheria
25. Mention the mode of action and uses of Sodium hypochlorite in the hospital .



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MICROBIOLOGY- PAPER 2

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LONG ESSAY (Answer any 2)

2 X 10 = 20 Marks

1. Describe the morphology, pathogenesis & laboratory diagnosis of Human Immunodeficiency Virus.(2+4+4)
2. Enumerate the mosquito borne parasite species.Describe the life cycle of Plasmodium vivax in man and mosquito with suitable diagrams. (3+4+3)
3. Enumerate the cestodes of medical importance. Describe the life cycle and pathogenesis of Taenia solium. (2+4+4)

SHORT ESSAY (Answer any 10)

10 X 5 = 50 Marks

4. Describe the clinical features and laboratory diagnosis of Cryptococcal meningitis (2+3)
5. Describe the pathogenesis and clinical features of Varicella zoster virus (2+3)
6. Describe the life cycle of Toxoplasma gondii.
7. List the causative agents, pathogenesis and treatment of Mycotic mycetoma.(1+3+1)
8. Describe the morphology, pathogenesis and clinical features of Rabies Virus (2+1+2)
9. Describe the microscopic morphology of three Aspergillus species and their clinical manifestations. (3+2)
10. Describe the clinical manifestations and laboratory diagnosis of hookworm infection. (3+2)
11. Draw a neat labelled diagram of Hydatid cyst, its distribution and diagnosis. (3+2)
12. Name the aetiological agent and describe the pathogenesis and laboratory diagnosis of Histoplasmosis(1+2+2)
13. Describe the laboratory diagnosis of Dermatophytosis and name any two antifungal agents.(4+1)
14. Describe the prophylaxis of Poliomyelitis.
15. Describe the mode of transmission, pathogenesis and complications of Dengue fever. (1+2+2)

SHORT ANSWERS (No choices)

10 X 3 = 30 Marks

16. List three Live attenuated viral vaccines with route of administration
17. What is the duration and clinical significance of Window period in HIV.
18. Name three hemoflagellates and the diseases caused by them
19. Draw a labeled diagram of round worm egg.
20. Enumerate 3 opportunistic fungi and diseases caused
21. Name six DNA viruses
22. Draw a labelled diagram of trophozoite and cyst of Giardia lamblia
23. Enumerate 3 oncogenic Viruses and the diseases caused.
24. What is onychomycosis ? List three causative agents.
25. Name 3 fungi causing superficial mycosis

