

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

M.B.B.S Phase-II Degree Examination November 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. Mention the sources and modes of transmission of syphilis. Describe the pathogenesis and laboratory diagnosis of Syphilis (1+2+3+4).
2. List the different classes of immunoglobulins. Describe the structure of IgM with a diagram and its biological properties. (2+4+4)

SHORT ESSAY

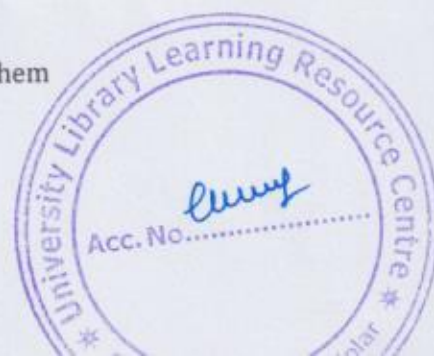
10 X 5 = 50 Marks

3. Mention causative agent, pathogenesis and laboratory diagnosis of chancroid. (1+2+2)
4. Mention any 4 sites of Extra pulmonary tuberculosis and their laboratory diagnosis. (2+3)
5. Name the causative agents of Trachoma. Describe the clinical manifestations and prevention of Trachoma. (1+2+2)
6. Enumerate Alcohols used in disinfection. Describe the mechanism of action and uses of Alcohols. (1+2+2)
7. Describe the mechanism of Type IV hypersensitivity reaction with examples. (3+2)
8. Name the antigens used in Weil felix test. Describe the principle and interpretation Weil felix test. (1+2+2)
9. Describe Transformation using Griffith's experiments.
10. Describe the Biological effects of complement
11. Describe the lesion, modes of transmission and laboratory diagnosis Cutaneous anthrax. (1+1+3)
12. Explain the mechanism and applications of Agglutination reactions. (2+3)

SHORT ANSWERS

10 X 3 = 30 Marks

13. Classify Streptococci based on their habitat
14. List any 3 Rapid growers among Atypical Mycobacteria.
15. Name three agents causing non gonococcal urethritis.
16. Name any three Nobel laureates from Microbiology and their contributions
17. Draw the diagram of HLA complex loci on chromosome
18. Define Anamnestic response, name conditions in which it is seen and how is it confirmed
19. Enumerate three applications of Fluorescent microscope
20. What are Acute phase proteins? Name 2 Acute phase proteins
21. Name three Anaerobic culture media
22. Enumerate 3 non sporing anaerobic organisms and the diseases caused by them



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MICROBIOLOGY- PAPER 2

*Your answer should be specific to the question asked
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LONG ESSAY

2 X 10 = 20 Marks

1. Describe the life cycle and pathogenesis of Leishmania donovani and laboratory diagnosis of Kala azar. (3+4+ 3)
2. Describe the morphology, pathogenesis, and laboratory diagnosis of Rabies. (2+3+5)

SHORT ESSAY

10 X 5 = 50 Marks

3. Describe the larval stages of Schistosomes.
4. Describe the laboratory diagnosis of Malaria.
5. Enlist any two causative agents of eumycotic mycetoma and describe its pathogenesis and laboratory diagnosis (1+2+2)
6. Mention the types of Viral inclusion bodies with examples and their diagnostic importance. (2+2+1)
7. Describe the life cycle of Echinococcus granulosus.
8. Describe the microscopic morphology and clinical manifestations of the three Aspergillus species. (3+2)
9. Describe the pathogenesis & laboratory diagnosis of Rubella fever. (3+2)
10. Mention the laboratory diagnosis of Cryptococcal meningitis
11. Mention the causative agent, clinical manifestations and treatment of Tropical pulmonary eosinophilia. (1+3+1)
12. Describe the mode of transmission, pathogenesis and complications of Dengue fever. (1+2+2)

SHORT ANSWERS

10 X 3 = 30 Marks

13. Draw a labelled diagram of the trophozoite of Entamoeba histolytica
14. What is visceral larva migrans and name two parasites causing it.
15. Classify fungi based on sexual spores.
16. Draw a neat labelled diagram of structure of Influenza virus.
17. Mention three differences between Ancylostoma duodenale and Necator americanus.
18. Mention the causative agent, clinical features of Tinea versicolor.
19. Mention the sample collection, staining and interpretation of Tzanck smear.
20. Define nosocomial infections. Name four types of Nosocomial infection.
21. Name three systemic mycotic infections
22. Mention the steps in the management of blood spills



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MICROBIOLOGY- PAPER 1

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LONG ESSAY (Answer any 2)

2 X 10 = 20 Marks

1. A 24 year old woman presents for an antenatal check up at 20 weeks of gestation. On examination, she has a maculopapular rash on the trunk, extremities and the anogenital area. VDRL test is reactive in 1:16. a)What is the provisional diagnosis?, b)Which test can confirm the diagnosis?, c)What are the modes of transmission of this disease?, d)Describe the clinical stages of the above clinical condition, e) Describe the laboratory diagnosis of the above clinical condition.(1+2+1+2+4)
2. Describe the mechanisms of innate immunity and explain the role of cells in innate immunity.(5+5)
3. Define and classify sterilization. Describe the methods of sterilization by moist heat. (2+3+5)

SHORT ESSAY (Answer any 10)

10 X 5 = 50 Marks

4. Describe the laboratory diagnosis of human brucellosis.
5. Mention the causative agent and mode of transmission of Granuloma inguinale. Describe the lesion and laboratory diagnosis of Granuloma inguinale. (1+1+1+2)
6. Mention causative agent, pathogenesis and laboratory diagnosis of chancroid.(1+2+2)
7. Describe the Biological effects of complement
8. Describe Toxin mediated diseases of Staphylococcus aureus.
9. Describe latex agglutination test with examples. (3+2)
10. Describe the mechanism and implications of mutation in Bacteria. (2+3)
11. The CSF analysis of a patient with meningitis and skin rash. Gram stain showed pus cells with intracellular gram negative diplococci. Colonies grown on culture were oxidase positive. a)What is the most likely causative agent? b) describe the pathogenesis of the above condition. (1+4)
12. Describe the Bacterial flagella with reference to structure, types and functions. (2+1+2)
13. Enumerate the cells of Immune system. Describe the role of B cells in Immune response. (2+3)
14. Describe Properties & biological effects of Bacterial toxins. (3+2)
15. Describe Graft versus host reaction.

SHORT ANSWERS (No choices)

10 X 3 = 30 Marks

16. What is the procedure and interpretation of CAMP test?
17. Enumerate three agents causing Atypical Pneumonia
18. Name 3 anaerobic organisms & the diseases caused by them
19. What is Prausnitz-Kustner reaction?
20. String of pearls appearance on the culture plate: name the organism and the media used and appearance in Gram stain.
21. What are Heterophile antigens and give two examples.
22. Name three Enriched media with their enriching substances
23. Name three combined immunodeficiency disorders
24. Draw a neat labelled diagram of a gram stained smear prepared from pus of bubonic plague.
25. Name the organism and the pigment producing blue pus.



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MICROBIOLOGY- PAPER 2

*Your answer should be specific to the question asked
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LONG ESSAY (Answer any 2)

2 X 10 = 20 Marks

1. Enumerate 4 zoonotic parasitic diseases. Describe the lifecycle, pathogenesis and laboratory diagnosis of Echinococcus granulosus (2+3+ 3+2)
2. Describe the morphology, pathogenesis & laboratory diagnosis of Human Immunodeficiency Virus.(2+4+4)
3. Describe the epidemiology, pathogenesis and laboratory diagnosis and prophylaxis of Japanese B encephalitis. (3+3+3+1)

SHORT ESSAY (Answer any 10)

10 X 5 = 50 Marks

4. Describe the morphology and life cycle of Giardia lamblia. (2+3)
5. Describe the laboratory diagnosis of Malaria.
6. Mention the types of Viral inclusion bodies with examples and their diagnostic importance. (2+2+1)
7. Describe the clinical manifestations and laboratory diagnosis of hookworm infection. (3+2)
8. Describe the prophylaxis of Poliomyelitis.
9. Describe the microscopic morphology and clinical manifestations of the three Aspergillus species. (3+2)
10. Describe the lifecycle of Entamoeba histolytica.
11. Describe the life cycle of Toxoplasma gondii.
12. Describe the pathogenesis and laboratory diagnosis of Rhinosporidiosis. (3+2)
13. Describe the predisposing factors, clinical manifestations, and laboratory diagnosis of candidosis (1+2+2)
14. Describe the clinical manifestations and laboratory diagnosis of round worm infection. (3+2)
15. Describe the laboratory diagnosis of Dermatophytosis and name any two antifungal agents.(4+1)

SHORT ANSWERS (No choices)

10 X 3 = 30 Marks

16. What is cysticercus cellulosae and name two common sites where it can be found in man.
17. What is Diethyl carbamazine (DEC) provocation test? Where it is used
18. Draw a neat labelled diagram of structure of Influenza virus.
19. Draw a neat labelled diagram of an egg of Trichuris trichura.
20. Draw a neat labelled diagram of embryonated egg and indicate sites of cultivation for different viruses
21. Name three systemic mycotic infections
22. How is the Bio Medical Waste segregated into colour coded containers
23. List six viruses causing diarrhoea
24. Define hospital acquired infections? list 3 important pathogens associated with it.
25. Mention the nature, schedule and route of administration of MMR vaccine.

