

**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH**  
**(A Deemed to be University)**  
**MBBS Phase II Supplementary Examination October 2025**

**Time: 150 Minutes**

**Max Marks: 80 Marks**

**Microbiology Paper I**

**QP CODE: C2051**

*Your answer should be specific to the question asked  
Draw neat labelled diagrams wherever necessary*

**Long Essay**

**2 X 10 = 20 Marks**

1. Enumerate the protozoa found in blood. Describe the pathogenesis and laboratory diagnosis of Kala azar. (2+4+4)
2. Discuss the pathogenesis, laboratory diagnosis and treatment of pseudomembranous colitis (4+3+3)

**Short Essay**

**12 X 5 = 60 Marks**

3. Describe the Bacterial capsule in relation to its chemical nature, role in pathogenicity and methods of demonstration. (1+2+2)
4. Describe the Properties & biological effects of Bacterial toxins. (3+2)
5. Describe the Classical pathway of complement activation (5)
6. Describe the mechanism and clinical importance of Serum sickness. (3+2)
7. Describe the pathogenesis and laboratory diagnosis of Acute rheumatic fever (3+2)
8. Describe the pathogenesis of Parvovirus B19.
9. Describe the pathogenesis of Amoebic liver abscess
10. Describe the virulence factors and diseases caused by Helicobacter pylori. (3+2)
11. Enumerate the Sero markers of Hepatitis B virus and their clinical implications. (2+3)
12. Describe the source, mode of transmission and life cycle of Ascaris lumbricoides. (1+1+3)
13. Name the genera, microscopic morphology and diseases caused dermatophytes (1+2+2).
14. Discuss the medico-legal issues pertaining to refusal of care with respect to resuscitation and withdrawal of life support.

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**Microbiology Paper I**

**QP CODE: C2053**

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***Long Essay***

***2 X 10 = 20 Marks***

1. Describe different types of gene transfer in bacteria and their role in development of antibiotic resistance and virulence. (6+2+2)
2. Describe the life cycle, pathogenesis and laboratory diagnosis of round worm. (3+5+2)

***Short Essay***

***12 X 5 = 60 Marks***

3. Enumerate Aldehydes used in disinfection. Describe the mechanism of action and uses of Aldehydes. (1+1+3)
4. Describe the mechanism and clinical importance of Serum sickness. (3+2)
5. Describe the pathogenesis and laboratory diagnosis of Acute rheumatic fever (3+2)
6. Describe the pathogenesis and complications of Falciparum malaria. (3+2)
7. Describe the life cycle of hookworm.
8. Describe the laboratory diagnosis of Human Immunodeficiency Virus (HIV) infection.
9. Describe the laboratory diagnosis of Enteric fever.
10. Describe the virulence factors and diseases caused by Helicobacter pylori. (3+2)
11. Enumerate the causative agents of osteomyelitis and describe its laboratory diagnosis (2+3)
12. Name the genera, microscopic morphology and diseases caused dermatophytes (1+2+2).
13. Describe the pathogenesis and clinical features of Varicella zoster virus (2+3)
14. Discuss the medico-legal issues pertaining to refusal of care with respect to resuscitation and withdrawal of life support.

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**Microbiology Paper II**

**QP CODE: C2052**

*Your answer should be specific to the question asked*

*Draw neat labelled diagrams wherever necessary*

**Long Essay**

**2 X 10 = 20 Marks**

1. Enumerate the bacterial agents causing meningitis. Describe the pathogenesis and laboratory diagnosis of pneumococcal meningitis (2+4+4).
2. A seven-year-old unvaccinated boy presents with history of fever, sore throat and difficulty in swallowing food. On examination, a white membrane is seen over the tonsils, which bleeds on removal.
  - a) What are your differential diagnosis
  - b) What is the most likely causative agent?
  - c) Describe the pathogenesis of the above clinical condition,
  - d) Name the complications of the above disease
  - e) Describe the laboratory diagnosis of the above clinical condition
  - f) what is the prophylaxis of the disease? (2+1+2+2+2+1)

**Short Essay**

**12 X 5 = 60 Marks**

3. Name the causative agent, sources, lesions produced and treatment of Cryptococcosis. (1+1+2+1)
4. Describe the lesions caused by Herpes simplex virus 1 and name two drugs used to treat Herpes simplex virus 1 infections. (4+1)
5. Describe the laboratory diagnosis and prophylaxis of Influenza (2+3)
6. Describe about the drug resistance in Mycobacterium tuberculosis.
7. Describe the clinical manifestations and laboratory diagnosis of congenital toxoplasmosis (2.5+2.5)
8. What are Biological false positive (BFP) reactions in syphilis. List the three clinical conditions associated with it.
9. Describe the clinical manifestations and laboratory diagnosis of Herpes genitalis. (3+2)
10. Name the causative agent and describe the pathogenesis and laboratory diagnosis of Weil's disease (1+2+2)
11. Describe the life cycle of Toxoplasma gondii (5)
12. Enumerate fungal causes of opportunistic infections. Describe the clinical features and laboratory diagnosis of Candidiasis (2+1+2)
13. Enumerate the predisposing factors and describe the preventive measures for Ventilator associated pneumonia.
14. Discuss the rights and responsibility of laboratory with respect to confidentiality of laboratory results. (2.5+2.5)

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**Time: 180 Minutes**

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**Microbiology Paper II**

**QP CODE: C2054**

*Your answer should be specific to the question asked  
Draw neat labelled diagrams wherever necessary*

**Long Essay**

**2 X 10 = 20 Marks**

1. Describe the pathogenesis and laboratory diagnosis of rabies encephalitis (5+5)
2. Enumerate 3 bacterial agents causing Community acquired pneumonia. Describe the pathogenesis and laboratory diagnosis of Pneumococcal pneumonia. (3+2+4)

**Short Essay**

**12 X 5 = 60 Marks**

3. Enumerate the agents causing Malaria. Describe the laboratory diagnosis of cerebral malaria. (2+3)
4. Describe the differential diagnosis, pathogenesis and laboratory diagnosis of Diphtheria. (1+2+2)
5. Describe the pathogenesis and laboratory diagnosis of Mycoplasma pneumoniae infections (2.5 + 2.5)
6. Describe about the drug resistance in Mycobacterium tuberculosis.
7. Describe the clinical manifestations and laboratory diagnosis of congenital toxoplasmosis (2.5+2.5)
8. Mention causative agent, pathogenesis and laboratory diagnosis of chancroid. (1+2+2)
9. Describe the clinical manifestations and laboratory diagnosis of Herpes genitalis. (3+2)
10. Describe pathogenesis and clinical manifestations of Anthrax. (3+2)
11. Enumerate Oncogenic viruses. Describe the mechanisms of oncogenesis by EBV (2+3)
12. Classify the agents of bioterrorism with examples
13. Enumerate the components of standard precautions. Describe blood spill management. (2+3)
14. A patient with influenza like illness has come to the screening OPD. He had exposure to a confirmed case of COVID 19 5 days back. He wants to get tested and treated, he is anxious. However, he does not want to be quarantined or discriminated, and fear of social stigma.  
Describe the Sociocultural issues related to Covid 19.  
Describe the preventive measures to be followed to prevent the spread. (2+3)

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**M.B.B. S Phase-II Supplementary Examination October 2025**

**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. Describe different types of immunity. What is innate immunity? Describe the mechanisms of innate immunity. (3+2+5)
2. Classify Streptococci. Name the non suppurative lesions caused by Streptococcus pyogenes. Describe their pathogenesis and laboratory diagnosis. (3+2+5)

**SHORT ESSAY**

**10 X 5 = 50 Marks**

3. Describe the diseases caused and methods of detection of Helicobacter pylori. (2+3)
4. Describe Properties & biological effects of Bacterial toxins. (3+2)
5. Describe the mode of production and uses of Monoclonal antibodies. (3+2)
6. Describe the types and pathogenesis of diarrhegenic Escherichia coli. (2+3)
7. A 4-year-old child with high grade fever, toxic, pain in throat, inability to swallow attended the outpatient department. On examination of throat a white membrane was found in the fauces.
  - a. Describe how will you proceed in the microbiology lab for establishing the etiological diagnosis.
  - b. How will you tackle the emergency? (3+2)
8. Describe Staphylococcal food poisoning with relation to food items involved, pathogenesis and clinical manifestations. (1+2+2)
9. Mention the types, mechanism, methods of detection of drug resistant tuberculosis. (1+2+2)
10. Describe the mechanism and interpretation of Tuberculin test (3+2)
11. Describe the pathogenesis and laboratory diagnosis of Non suppurative complications of Streptococcus pyogenes infections. (3+2)
12. Explain the principle of Resistance transfer factor with a diagram. (3+2)

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

13. Enumerate three applications of Fluorescent microscope
14. What is the principle and interpretation of ASLO test?
15. What is Herd Immunity and its importance?
16. Name the causative agents, lesion and prevention of Wool sorters disease. (1+1+1)
17. Draw a neat labelled diagram of a gram stained smear prepared from pus of bubonic plague.
18. What is the pathogenesis of primary complex of pulmonary tuberculosis.
19. Name the causative agents and differential diagnosis of Vincent's angina.
20. Name the types of cholera vaccines and route of administration.
21. Mention three applications of Direct immunofluorescence test.
22. How do you disinfect bed pans, thermometers and cystoscopes?

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**MICROBIOLOGY- PAPER 2**

*Your answer should be specific to the question asked*

*Draw neat and labeled diagrams wherever necessary*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Enumerate the cestodes of medical importance. Describe the life cycle and pathogenesis of Taenia solium. (2+4+4)
2. Enumerate the mosquito borne parasite species. Describe the life cycle of Plasmodium falciparum in man and mosquito with suitable diagrams. (3+4+3)

**SHORT ESSAY**

**10 X 5 = 50 Marks**

3. Enumerate the characteristics of Slow viruses and the diseases caused by them in man (2+3)
4. Describe the laboratory diagnosis of Malaria.
5. Name the aetiological agent and describe the pathogenesis and laboratory diagnosis of Histoplasmosis (1+2+2)
6. Describe the laboratory diagnosis of Dermatophytosis and name any two antifungal agents. (4+1)
7. Describe the agent, its transmission and lesion of cutaneous leishmaniasis. (1+1+3)
8. Describe the types of cytopathic effects in cell culture.
9. Describe the microscopic morphology of any five opportunistic mycotic agents.
10. Describe the mode of infection and pathogenesis of Acanthamoeba. (2+3)
11. What are interferons? Describe their types, mechanism of action and clinical applications (1+1+1+2)
12. Describe the laboratory diagnosis of Human Immunodeficiency Virus (HIV) infection.

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

13. Define definitive host and intermediate host with appropriate examples.
14. What is the pH and composition of Sabourauds Dextrose agar?
15. Enumerate three latent viral infections.
16. Name any three standard precautions
17. Name three AIDS associated malignancies
18. List 3 agents causing oculomycosis.
19. What is Ventilator associated pneumonia? Name three causative agents.
20. Draw a neat labelled diagram of Trichomonas vaginalis.
21. What is Reynolds's - Braude phenomenon?
22. List clinical manifestations and laboratory diagnosis of Congenital Rubella syndrome.