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

Time: 180 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 ***2X10 =20 Marks***

1. A 10 year old boy complains of pain in the major joints. On examination, he had skin rash and a cardiac murmur. He also gives history of sore throat in the past 2 weeks duration.
   a) What is your diagnosis?
   b) Name the causative agent responsible for this condition
   c) Describe the pathogenesis of the above condition
   d) Enumerate the laboratory diagnostic methods
   e) How do you prevent this infection? (1+1+4+2+2)
2. List the human Herpes viruses and the diseases caused by them. Describe the pathogenesis of Herpes zoster. (3+3+4)

Short Essay ***12X5=60 Marks***

3. Describe different sources of infection with example for each. (2.5+2.5)
4. Describe the working principle of Autoclave with a diagram. List the sterilization controls used. (2+2+1)
5. Explain the principle of transfer of Resistance transfer factor with a diagram. (3+2)
6. Describe the structure, properties and functions of IgE (2+1+2)
7. Describe the pathogenesis and complications of Falciparum malaria. (3+2)
8. Describe the life cycle of Wuchereria bancrofti.
9. Describe the pathogenesis of Amoebic liver abscess.
10. Describe the laboratory diagnosis of Enteric fever.
11. Mention the source, serovars involved and clinical manifestations of Salmonella food poisoning. (1+2+2)
12. Mention the causative agent and describe the pathogenesis of Hyperinfection syndrome. (1+4)
13. Describe the pathogenesis, clinical manifestations of Toxic shock syndrome. (3+2)
14. Define Autonomy, Beneficence and Nonmaleficence. Describe autonomy during end of Life.

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Microbiology Paper II
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Long Essay ***2 X 10 = 20 Marks***

1. Describe the pathogenesis and laboratory diagnosis of Rabies encephalitis (5+5)
2. A 22-year-old man presented to STD clinic with history of purulent urethral discharge. Gram stain of the pus showed plenty of pus cells with intracellular gram-negative diplococci.
   a) What is the most likely causative agent?
   b) Describe the pathogenesis and complications of the above clinical condition
   c) Describe the laboratory diagnosis of the above clinical condition. (1+5+4)

Short Essay ***12 X 5 = 60 Marks***

3. Describe the pathogenesis and laboratory diagnosis of Primary amoebic meningoencephalitis. (3+2)
4. Describe the laboratory diagnosis and prophylaxis of pneumococcal pneumonia. (2.5+2.5)
5. Describe the clinical features and laboratory diagnosis of Paragonimiasis. (2+3).
6. A 32-year-old woman presented with cough, low grade fever, shortness of breath. She was a known HIV positive. On examination febrile, increased respiratory rate was found. Chest x-ray showed a bilateral interstitial infiltrate with ground glass appearance. Bronchoalveolar lavage stained by Gomori methamine silver stain showed a black coloured ping -pong ball.
   A. What is the probable clinical diagnosis.
   B. What is the etiological agent. Describe the laboratory diagnosis. (1+1+3)
7. Describe the clinical manifestations and laboratory diagnosis of Respiratory syncytial virus. (2.5+2.5)
8. Describe vaccine prophylaxis against Tuberculosis. (5)
9. Describe the mode of transmission, clinical manifestations and prevention of Human Papiloma virus infection. (1+2+2)
10. Describe the pathogenesis and laboratory diagnosis of Bubonic plague (3+2).
11. Describe the clinical manifestations and laboratory diagnosis of Cryptococcosis (2+3)
12. Describe the predisposing factors and preventive measures for Surgical site infection (2+3)
13. Describe general immunoprophylactic and chemoprophylactic measures used in the national programs related to infectious diseases. (2.5+2.5)
14. A tissue biopsy sample was taken and sent for culture and sensitivity. The sample was rejected by the laboratory mentioning that it was received in formalin. There is no sample for culture.
    Describe the rejection criteria in the given case. Describe the specimen rejection criteria. (1+4)

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Microbiology Paper I
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Long Essay ***2X 10= 20 Marks***

1. Define agglutination. Describe the different types of agglutination reactions and their diagnostic applications. (1+4+5)
2. Enumerate any four protozoa causing gastroenteritis. Describe the pathogenesis and laboratory diagnosis of amoebic dysentery. (2+4+4)

Short Essay ***12 X 5 = 60 Marks***

3. Describe different sources of infection with example for each. (2.5+2.5)
4. Enumerate Aldehydes used in disinfection. Describe the mechanism of action and uses of Aldehydes. (1+1+3)
5. Describe the pathogenesis and laboratory diagnosis of Acute rheumatic fever (3+2)
6. Describe the pathogenesis and laboratory diagnosis of occult filariasis. (3+2)
7. Describe the pathogenesis of Parvovirus B19.
8. Describe the mode of transmission, pathogenesis and complications of Dengue fever. (1+2+2)
9. Describe the pathogenesis and laboratory diagnosis of Giardiasis. (3+2)
10. Typhoid carriers: Describe the types, methods of detection and treatment. (2+2+1)
11. Describe the clinical manifestations and prophylaxis of tetanus. (2+3)
12. Describe the laboratory diagnosis of Dermatophytosis and name any two antifungal agents. (4+1)
13. Describe the agent, it's transmission and lesion of cutaneous leishmaniasis. (1+1+3)
14. Discuss the confidentiality in testing and reporting HIV.

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Microbiology Paper II
QP CODE: C2054

Your answer should be specific to the question asked
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Long Essay ***2 X 10 = 20 Marks***

1. The CSF analysis of a patient with meningitis is as follows: Cell count 400 cells /mm3 predominantly polymorphonuclear cells. Gram stain showed pus cells with Gram positive lanceolate shaped cocci in pairs. Colonies on Blood agar showed alpha haemolysis
a) What is the most likely causative agent.
b) Enumerate four most common bacteria causing pyogenic meningitis.
c) Describe the pathogenesis of the above clinical condition.
d) How do you confirm the isolate? (1+2+3+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. Describe the pathogenesis of rabies Encephalitis

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 clinical manifestations and laboratory diagnosis of Paracoccidioidomycosis (2.5+2.5)

6. Classify non-tuberculous mycobacteria. Describe the laboratory diagnosis of Atypical mycobacteria. (2+3)

7. A 30-year-old man presented with a painless, indurated circumscribed, superficially ulcerated lesion on the genitalia
a. What is the probable diagnosis?
b. Name the methods of laboratory diagnosis of the disease in various stages. (1+4)

8. Mention causative agent, pathogenesis and laboratory diagnosis of chancroid. (1+2+2)

9. Describe the laboratory diagnosis of urinary tract infection.

10. Describe the clinical manifestations and laboratory diagnosis of Cryptococcosis (2+3)

11. Describe the clinical manifestations and complications of SARS COV 2 infection (3+2)

12. Enumerate the predisposing factors and describe the preventive measures for Ventilator associated pneumonia

13. Describe Biomedical waste segregation with 2 examples for each. (5)

14. Describe the goals of the various National Health programs in the prevention of common infectious disease.