# SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH

M B B S Phase II Supplementary Examinations, May 2024

Time: 180 Minutes Max Marks: 80 Marks

# Microbiology Paper I OP CODE: C2051

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

### Long Essay $10 \times 2 = 20$ Marks

- 1. Define agglutination. Describe the different types of agglutination reactions and their diagnostic applications. (1+4+5)
- 2. Describe the life cycle of Plasmodium falciparum in man and mosquito. Describe the laboratory diagnosis of falciparum malaria. (3+3+4)

# Short Essay $5 \times 12 = 60$ Marks

- 3. Describe the Biological effects of complement (5)
- 4. Describe the structure and function of MHC class II molecule. (3+2)
- 5. Describe the life cycle of hookworm.
- 6. Describe the pathogenesis of Parvovirus B19
- 7. Describe the pathogenesis of Amoebic liver abscess
- 8. Describe the laboratory diagnosis of Enteric fever.
- 9. Describe Staphylococcal food poisoning with relation to food items involved, pathogenesis and clinical manifestations. (1+2+2)
- 10. Describe the source, mode of transmission and life cycle of Ascaris lumbricoides. (1+1+3)
- 11. Discuss the laboratory diagnosis of Botulism
- 12. Mention the types of Madura foot with two causative agents and describe its laboratory diagnosis. (1+2+2)
- 13. List the differences between Chicken pox and Herpes zoster. Name two antiviral agents used in the treatment. (3+2)
- 14. Discuss the medical, ethical and socio-economical consideration of errors in sample collection and submission process.

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### Long Essay $10 \times 2 = 20$ 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. Define health care associated infection. Enumerate the causative agents, predisposing factors and Discuss the preventive measures for Surgical site infection (2+2+3+3)

#### Short Essay $5 \times 12 = 60$ Marks

- 3. Describe the laboratory diagnosis of rabies encephalitis
- 4. List the differences between Chicken pox and Herpes zoster. Name two antiviral agents used in the treatment. (3+2)
- 5. Describe the pathogenesis and laboratory diagnosis of Pneumococcal pneumoniae (2.5+2.5)
- 6. Describe the laboratory diagnosis and prophylaxis of Influenza (2+3)
- 7. 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 xray showed a bilateral interstitial infiltrate with groung glass appearence. Bronchoalveolar lavage stained by Gomori methamine silver stain showed a black coloured ping -pong ball. A . What is the propable clinical diagnosis.B. What is the etiological agent. Describe the laboratory diagnosis. (1+1+3)
- 8. Mention any 4 sites of Extra pulmonary tuberculosis and their laboratory diagnosis. (2+3)
- 9. Describe the principle, advantages and disadvantages of VDRL test. (1+2+2)
- 10. Describe the clinical manifestations and laboratory diagnosis of Granuloma inguinale. (3+2)
- 11. Describe the predisposing factors and laboratory diagnosis of Vulvovaginal candidiasis. (2+3)
- 12. Name the causative agent and describe the pathogenesis and laboratory diagnosis of Weil's disease (1+2+2)
- 13. Name the vector, hosts, clinical features and distribution of Kyasanur Forest Disease. (1+1+2+1)
- 14. Describe the mechanism of oncogenesis and prevention of Hepatitis B virus