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## MANIPAL ACADEMY OF HIGHER EDUCATION

MELAKA MANIPAL MEDICAL COLLEGE (MANIPAL  
CAMPUS) MBBS PHASE - I STAGE - II DEGREE  
EXAMINATION - APRIL 2022 SUBJECT: MICROBIOLOGY -  
PART - I (MCQ)  
Monday, April 11, 2022

### Microbiology [M2MIC] - Essay

✓ Answer all the questions

✓ Draw diagrams wherever appropriate

1. A 35 year old, mason, presented to STD clinic with maculopapular rashes on his soles and palms. He gave a history of having painless genital ulcer three months back, which had healed without any treatment. He also revealed that he had multiple sexual partners. Physician suspected a spirochetal infection, asked for laboratory investigations and started him on penicillin.  
1A. What is the etiological agent in the aforesaid condition?  
1B. Name the stage of the disease in the case  
1C. Explain the laboratory diagnosis of the above condition.  

(1+1+6 = 8 marks)
2. A 22 year old man was brought to the medicine OPD with headache, fever, abdominal pain and constipation for the past 10 days. He reported to have consumed food from street vendors. His temperature was increasing in step ladder pattern and he was feeling extremely ill and delirious. On examination his temperature was 103° F and there were few rose spots over the trunk. He also had splenomegaly. The blood culture yielded gram negative enteric pathogen.  
2A. What is the clinical condition?  
2B. Describe its pathogenesis  
2C. Add a note on its prophylaxis  

(1+5+1 = 7 marks)
3. Explain the phases of bacterial growth curve with the help of a graph.  

(5 marks)
4. Describe the pathogenesis of bacillary dysentery. Write TWO differences between bacillary and amoebic dysentery.  

(3+2 = 5 marks)
5. Discuss the immunoprophylaxis of poliomyelitis.  

(5 marks)
6. With the help of a graph, discuss the significance of various seromarkers in the diagnosis of acute HBV infection.  

(5 marks)
7. Explain the pathogenesis and laboratory diagnosis of cryptococcal meningitis.  

(2+3 = 5 marks)

8. Explain the transmission and pathogenesis of varicella zoster virus infection. (5 marks)
9. Discuss the laboratory diagnosis of diphtheria. (5 marks)
10. Discuss the mechanism of classical complement activation pathway. (5 marks)
11. Explain the mechanism of type I hypersensitivity reaction. (5 marks)

