

Question Paper

Exam Date & Time: 04-Mar-2020 (02:00 PM - 04:30 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

MELAKA MANIPAL MEDICAL COLLEGE (MANIPAL CAMPUS)
 MBBS PHASE - I STAGE - II DEGREE EXAMINATION - FEBRUARY/MARCH 2020
 Wednesday, March 04, 2020
 Microbiology [M2MIC] - PART - II (ESSAY)

Section Duration: 120 mins
 Max. Marks: 60

Answer all the questions

Draw diagrams wherever appropriate

1. Explain the process of viral replication. (5 marks)
2. Explain the mechanism of plasmid mediated gene transfer in bacteria. (3 marks)
- 3A. Classify hypersensitivity reactions. (2 marks)
- 3B. Explain the mechanism and mediators involved in IgE mediated hypersensitivity reactions. (5 marks)
4. A 35-year-old retropositive man was brought to the hospital with complaints of fever and progressively worsening headache for the past two weeks. On examination he had mild nuchal rigidity and diminished reflexes. An India ink preparation of CSF showed capsulated budding yeast cells.
 - 4A. Name the etiological agent.
 - 4B. Mention its reservoir host.
 - 4C. Discuss the laboratory diagnosis of the above infection. (1+1+3 = 5 marks)
5. Discuss the immunoprophylaxis of poliomyelitis. (4 marks)
6. Explain laboratory diagnosis of pulmonary tuberculosis. (6 marks)
7. A 38-year-old man working in a leather factory who was involved in carrying hides, developed few black colored ulcerative lesions on his back. Gram stained smear from the lesion revealed gram positive bacilli with spores.
 - 7A. Describe the virulence factors of the possible causative agent of this condition with special emphasis on their role in pathogenesis of the disease. (5 marks)

8. Describe the pathogenesis of bacillary dysentery. Write TWO differences between bacillary and amoebic dysentery. (3+2 = 5 marks)
9. Discuss the pathogenesis and laboratory diagnosis of ascariasis. (5 marks)
10. Discuss the clinical manifestations and prevention of congenital rubella infection. (3+2 = 5 marks)
11. A 20-year-old football player was brought to the hospital with severe necrotizing soft tissue lesion on his right lower limb. History revealed that there was no hospitalization in the past one-year period. The laboratory report of the exudate collected from the lesion confirmed a community associated strain of a gram positive cocci in clusters as the etiological agent.
- 11A. Identify the most probable etiology.
- 11B. Discuss the laboratory diagnosis of the above mentioned case. (1+4 = 5 marks)
12. Explain the laboratory diagnosis of syphilis. (5 marks)