

**PG Degree Regular/Supplementary Examinations in Microbiology (M.D)****Paper III – Clinical/Systemic Microbiology II****Time : Three Hours****Maximum : 100 Marks****Essay:****(20)**

1. A 30yr old previously healthy woman presented to Medicine OPD with malaise, low grade fever, nausea, vomiting, aversion to food, mild itching for one month. Serum showed elevated levels of AST and ALT and anti HCV antibody positive
  - a. Discuss the pathogenesis and laboratory diagnosis of this infection
  - b. Classify direct-acting antivirals and discuss in detail about the treatment of this condition

**Short Essays****(8 x10 = 80)**

2. Pathogenesis and laboratory diagnosis of Human papilloma virus infections. Add a note on HPV vaccines.
3. A 25-year-old male came to the Emergency department with complaints of upper abdominal discomfort, bloating sensation after having food, recurrent belching associated with gastro-oesophageal reflux (GERD). He was examined and was advised to perform a therapeutic upper GI endoscopy to rule out infective pathology associated with this condition. Endoscopy showed erosions in the duodenal mucosa.
  - a. What is the most likely bacterial causative agent
  - b. Discuss the pathogenesis of this infection
  - c. Describe in detail the laboratory diagnosis of this infection
  - d. Discuss the management protocol and add a note on drug resistance in this organism
4. A 21year old young adult, who was previously healthy was admitted to the hospital with a sudden and abrupt onset of severe persistent bifrontal or bitemporal headache. These symptoms are followed by nausea, projectile vomiting, fever, stiff neck, altered mental status and seizures. CSF examination revealed high white blood cell counts 20,000/ $\mu$ L, and elevated protein concentrations and low glucose levels. Blood and CSF culture were sterile. The patient died 3 days after being admitted to the hospital. Parents provided a H/O swimming in a hotel swimming pool four days prior to the onset of the symptoms  
Discuss the epidemiology, Laboratory diagnosis and treatment of this clinical condition

5. Eumycotic mycetoma
6. Antifungal drug sensitivity testing.
7. A 35-year-old male patient came to OP with generalised itchy rashes all over the body. He gives a history of healed ulcer on the penis six months back. Discuss the diagnosis and laboratory confirmation of the condition.
8. Laboratory diagnosis and treatment protocol of Latent TB infection
9. Enumerate, describe mechanisms of action and documented resistance in Antiparasitic agents

Model OP