

MANIPAL UNIVERSITY

SECOND MBBS DEGREE EXAMINATION – MAY 2017

SUBJECT: MICROBIOLOGY – PAPER I (ESSAY)

Friday, May 05, 2017

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions.**

1. Classify Hypersensitivity. Write in detail about Type II and Type III hypersensitivity.
(2+ 4+4 = 10 marks)

2. A 5 year old child presents with high grade fever, headache, and altered sensorium. When brought to the hospital, he is unconscious and has neck rigidity and positive Kernig's sign. A lumbar puncture is performed and it demonstrates numerous pus cells and gram positive lanceolate cocci in pairs.

2A. What is the most probable diagnosis?

2B. What is the pathogenesis and laboratory diagnosis of the infection?

2C. Add a note on treatment and prophylaxis.

(1+7+2 = 10 marks)

3. **Write Short notes on:**

3A. Transduction

3B. Bacterial Capsule

3C. Hot air oven

3D. Immunofluorescence

3E. Draw a labelled diagram of Immunoglobulin G

3F. Principle, uses, and factors affecting Widal test

3G. BCG Vaccine

3H. Enumerate four etiological agents of Non gonococcal urethritis

3J. Graft Versus Host Reaction

3I. Differences between El Tor and Classical Vibrios

3K. Cytokines

3L. Malignant pustule

3M. Nosocomial Infection

3N. Enumerate any four etiological agents of UTI

3O. Pathogenesis of Diphtheria

(4 marks × 15 = 60 marks)



MANIPAL UNIVERSITY**SECOND MBBS DEGREE EXAMINATION – MAY 2017****SUBJECT: MICROBIOLOGY – PAPER II (ESSAY)**

Saturday, May 06, 2017

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

Answer ALL the questions.

1. A 10 year old boy presented with intermittent high fever, confusion, rigors, drenching sweats and abdominal pain for 3 days. He was drowsy, but without neck stiffness. He had hepatomegaly, mild icterus and hypoglycemia. His blood culture was sterile. Blood picture showed normocytic normochromic anaemia. Multiple ring forms in peripheral blood smear examination confirmed the diagnosis.
 - 1A. Name the most probable clinical condition and the etiological agent.
 - 1B. Describe the life cycle of the etiological agent in humans.
 - 1C. Explain the laboratory diagnosis of the above infection.

(2+3+5 = 10 marks)

2. Describe the pathogenesis and laboratory diagnosis of human rabies.

(5+5 = 10 marks)

3. **Write short notes on the following:**
 - 3A. Name four flaviviral diseases and the vectors responsible for disease transmission
 - 3B. Oncogenic DNA viruses
 - 3C. Life cycle of hookworm
 - 3D. Histoplasmosis
 - 3E. Mycotoxins
 - 3F. Name fungal agents causing skin infection. How do you diagnose tinea capitis?
 - 3G. Explain hydatid cyst with diagram
 - 3H. MMR vaccine
 - 3I. Name four parasitic opportunistic infections and write one important diagnostic test for each
 - 3J. Antibody detection tests for diagnosing HIV infection
 - 3K. Primary amoebic meningoencephalitis
 - 3L. Infectious mononucleosis
 - 3M. *Cysticercus cellulosae*
 - 3N. Laboratory diagnosis of cryptococcal meningitis
 - 3O. Name the causative agent, mode of transmission and four important laboratory tests for Kala-azar.

(4 marks × 15 = 60 marks)

