

**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**SECOND MBBS DEGREE EXAMINATION – JUNE 2022**

**SUBJECT: MICROBIOLOGY – PAPER I (ESSAY)**

(OLD REGULATION - 2018-19 BATCH - REPEATERS)

Friday, June 10, 2022

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

**✍ Essay questions:**

1. A 22 year old female complains of burning micturition since 2 days. Urine analysis of clean catch urine sample showed pyuria. Urine culture grew lactose fermenting, gram negative bacilli with a count of  $>10^5$  CFU/ml.

1A. What is the most probable diagnosis? List the etiological agents.

1B. Discuss the pathogenesis and clinical features of this condition.

1C. Discuss the laboratory diagnosis of this condition. Add a note on significant bacteriuria

(2+3+3+2 = 10 marks)

2. Define the terms “sterilization” and “disinfection”. Classify methods of sterilization. Discuss in detail sterilization by moist heat using autoclave.

(1+1+2+6 = 10 marks)

**3. Write Short notes on:**

3A. Koch’s postulates

3B. Non suppurative complications of *Streptococcus pyogenes* infection

3C. Draw a neat labelled diagram of “bacterial spore”.

3D. BCG vaccine

3E. IgM – Structure and function

3F. Plasmids

3G. Non gonococcal urethritis

3H. Scrub typhus

3I. Prophylaxis of tetanus

3J. Monoclonal antibodies

3K. Name four bacterial zoonotic diseases

3L. Heterophile antigens

3M. Graft versus host reaction

3N. *Clostridium difficile*

3O. Laboratory diagnosis of Enteric fever

(4 marks × 15 = 60 marks)



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**SUBJECT: MICROBIOLOGY – PAPER II (ESSAY)**

(OLD REGULATION - 2018-19 BATCH - REPEATERS)

Saturday, June 11, 2022

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

**✍ Essay questions.**

1. A 5 year old child comes to the OPD with complaints of breathlessness, anorexia and lethargy. Laboratory investigations showed decreased haemoglobin. Peripheral blood smear examination picture was that of microcytic, hypochromic anaemia. Stool wet mount showed the presence of non-bile stained eggs.

- 1A. What is the most probable diagnosis?
- 1B. Discuss the life cycle of this parasite.
- 1C. Discuss the laboratory diagnosis of this condition.
- 1D. What are the preventive measures to be taken?

(1+3+4+2 = 10 marks)

2. Discuss the pathogenesis, laboratory diagnosis, treatment and prevention of HIV infection.

(3+3+2+2 = 10 marks)

**3. Write Short notes on:**

- 3A. Amoebic liver abscess
- 3B. List the Arboviral infections in India
- 3C. Draw a neat labelled diagram of hydatid cyst.
- 3D. List the superficial mycotic infections with the causative agents.
- 3E. Giardiasis
- 3F. Microfilaria
- 3G. Chromoblastomycosis
- 3H. Epstein Barr virus
- 3I. Aspergillosis
- 3J. List four complications of Falciparum malaria.
- 3K. Hepatitis A virus
- 3L. *Enterobius vermicularis*
- 3M. Interferons
- 3N. Prophylaxis of Polio
- 3O. Give four examples of dimorphic fungi.

(4 marks × 15 = 60 marks)

