Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND MBBS DEGREE EXAMINATION – DECEMBER 2022

SUBJECT: MICROBIOLOGY – PAPER I (ESSAY)

(OLD REGULATION - 2018-19 & PRIOR BATCH)

Saturday, December 10, 2022

Time: 10:20 – 13:00 Hrs. Maximum Marks: 80

- **Answer all the questions.**
- **Draw neat labelled diagrams wherever necessary.**

- **Essay questions:**

1. Define Sterilization. Classify Sterilization. Discuss the principle, working and applications of Autoclave.

(1+3+6 = 10 marks)

2. A 8 year old child is brought to pediatric emergency with history of 3-4 episodes of loose watery stools of 1 day duration. O/E signs of moderate dehydration was noted. On performing stool hanging drop, darting motile bacilli were seen.

2A. What is the likely diagnosis?
2B. Describe the pathogenesis of this infection.
2C. Discuss the laboratory diagnosis of this infection.
2D. How do you prevent this infection?

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

3. **Write briefly on:**

3A. Infections caused by *Staphylococcus aureus*
3B. Cytokines- four examples with function
3C. Bacterial Growth Curve- Phases and significance
3D. Labelled diagram of Immunoglobulin M molecule
3E. Virulence factors of Group A *Streptococcus*
3F. Laboratory diagnosis of gonorrhea
3G. *Bacillus cereus* food poisoning
3H. Laboratory testing methods in *M. tuberculosis*
3I. Widal Test: Principle & interpretation
3J. List four functions of Complement System
3K. A 10-year-old boy was brought to the emergency with history of bee sting. The child was breathless. What is the diagnosis? Explain the mechanism in brief for his condition.
3L. Role of CSSD in a hospital
3M. Explain four differences between Gram positive and Gram negative bacterial cell wall.
3N. Enumerate four bacterial causes of primary atypical pneumonia.
3O. Pseudomembranous colitis

(4 marks × 15 = 60 marks)

Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND MBBS DEGREE EXAMINATION – DECEMBER 2022

SUBJECT: MICROBIOLOGY – PAPER II (ESSAY)

(OLD REGULATION - 2018-19 & PRIOR BATCH)

Monday, December 12, 2022

Time: 10:20 – 13:00 Hrs. Maximum Marks: 80

✍ **Answer ALL the questions.**

✍ **Essay questions.**

1. A 26-year-old male presented with history of fever, malaise lethargy and yellowish discoloration of skin and eyes. He gives history of blood transfusion one month back. On examination there was icterus, elevated liver enzymes. HBsAg was positive in serum.

1A. List the viruses transmitted through blood and blood products.

1B. Explain pathogenesis and clinical features of Hepatitis B

1C. Describe the laboratory diagnosis Hepatitis B virus.

1D. Write a note on prevention of Hepatitis B.

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

2. Describe the life cycle, pathogenesis, lab diagnosis of *Wuchereria bancrofti*

(3+3+4 = 10 marks)

3. **Write short notes on:**

3A. Laboratory diagnosis of Malaria.

3B. Bacteriophage: structure and significance.

3C. Laboratory diagnosis of Histoplasmosis.

3D. Enumerate four parasites causing anemia.

3E. Postexposure prophylaxis for rabies.

3F. List any two etiological agents and laboratory diagnosis of Mucormycoses.

3G. Define definitive host and intermediate host with an example for each.

3H. Clinical manifestations and lab diagnosis of dengue fever.

3I. Laboratory diagnosis of dermatophytosis.

3J. Draw labelled diagram of fertilized and unfertilized egg of *Ascaris lumbricoides.*

3K. List four viruses causing gastroenteritis. Write a note on Rota virus.

3L. Enumerate four predisposing conditions for candidiasis.

3M. List two each intestinal nematode seen in small and large intestine.

3N. Pathogenesis and clinical features of Herpes simplex virus-I

3O. Explain pathogenesis of intestinal amoebiasis.

(4 marks × 15 = 60 marks)