

MANIPAL ACADEMY OF HIGHER EDUCATION
SECOND MBBS DEGREE EXAMINATION – JANUARY 2022

SUBJECT: MICROBIOLOGY – PAPER I (ESSAY)

(2018-19 & Prior Batch - Regular/Repeater)

Thursday, January 06, 2022

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

✍ Essay questions.

1. Define cell mediated immune response. Explain the mechanism of cell mediated immune response. Add a note on cytokines.

(1+6+3 = 10 marks)

2. A 32 year old man presented with an ulcer on the glans penis of 3 days duration. He has history of high risk sexual exposure 6 weeks previously. The ulcer started as a small papule two weeks before which ulcerated. On examination there was a single ulcer on the prepuce, which was well circumscribed, painless, indurated and the inguinal lymph nodes were enlarged, discrete and hard. Dark ground microscopic examination of the exudate from the ulcer demonstrated the presence of motile spiral bacteria.

- 2A. What is the clinical diagnosis and the etiological agent?
2B. Briefly explain the pathogenesis and clinical stages in the above condition.
2C. What are the laboratory methods used in the diagnosis of the above condition?

(1+4+5 = 10 marks)

3. Write short notes on:

- 3A. Laboratory diagnosis of Enteric fever
3B. Draw a neat labelled diagram of bacterial endospore
3C. Principle and applications of ELISA
3D. Atypical mycobacteria
3E. DPT vaccine
3F. Sources of infection
3G. Plasmids
3H. Enumerate the toxins and enzymes produced by Staphylococcus aureus
3I. TRIC agents
3J. Non gonococcal urethritis
3K. Louis Pasteur
3L. Mechanism of Type I hypersensitivity
3M. Aetiology of Bacterial Food poisoning
3N. Infections caused by Group B Streptococcus
3O. Scrub typhus

(4 marks × 15 = 60 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
SECOND MBBS DEGREE EXAMINATION – JANUARY 2022

SUBJECT: MICROBIOLOGY – PAPER II (ESSAY)

(2018-19 & Prior Batch - Regular/Repeater)

Friday, January 07, 2022

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

✍ Essay questions.

1. A 4 month old male presented with fever & respiratory symptoms along with headache, stiff neck. It progressed to paralysis which started at the hip and then moved to the legs. On examination, the child was having asymmetrical descending type of flaccid paralysis. CSF analysis revealed lymphocytosis, glucose & protein concentration were normal. A Gram stain was negative for bacteria. CSF bacterial antigen test was negative. Faecal specimens were sent for isolation of the causative agent.

- 1A. What is your probable diagnosis?
- 1B. Describe the pathogenesis of this infection.
- 1C. What is the laboratory diagnosis of this infection?
- 1D. Discuss the treatment and prevention of this viral infection.

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

2. Enumerate the haemoflagellates. Discuss the life cycle, pathogenesis and laboratory diagnosis of *Leishmania donovani*.

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

3. Write Short notes on:

- 3A. Inclusion bodies
- 3B. Hydatid cyst
- 3C. Laboratory diagnosis of dermatophytosis
- 3D. MMR Vaccine
- 3E. Markers of Hepatitis B virus infection
- 3F. Larva migrans
- 3G. Mucormycosis
- 3H. Prophylaxis of Human rabies
- 3I. Primary amoebic meningoencephalitis
- 3J. Diagram of HIV
- 3K. *Microfilaria*
- 3L. List the etiological agents of Eumycotic mycetoma
- 3M. Giardiasis
- 3N. Classification of fungi based on morphology
- 3O. Complications of Falciparum malaria

(4 marks × 15 = 60 marks)

