Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND MBBS DEGREE EXAMINATION – DECEMBER 2018

SUBJECT: MICROBIOLOGY – PAPER I (ESSAY)

Friday, December 21, 2018

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

- **Answer ALL the questions.**
- **Draw neat labeled diagram wherever necessary.**

1. Define and classify Immunity. Describe the mechanism of Innate Immunity

(1+2+ 7 = 10 marks)

2. A 50 year old male presented to the emergency department with lockjaw and opisthotonos. His physical examination showed that patient was unable to open the mouth more than 1 cm and there was pronounced arching of the back. The patient had no history of having any medication, history of alcohol or illicit drug use. He only had sustained a deep prick with rusty nail on his left toe about 3 weeks ago. Patient did not remember of receiving any prophylactic vaccination.

2A. What is the organism causing infection and what is the clinical condition?

2B. What is the virulence factor responsible for this clinical condition?

2C. Describe the pathogenesis and laboratory diagnosis of this disease?

2D. How to prevent this clinical condition?

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

3. **Write short notes on:**

3A. Bacterial growth curve

3B. Differences between T cells and B cells

3C. ELISA test – principle and application

3D. Laboratory diagnosis of enteric fever

3E. Laboratory diagnosis of Pulmonary tuberculosis

3F. Actinomycosis

3G. Nagler's reaction – principle, procedure and significance

3H. Elek's test – principle, procedure and significance

3I. Uses of HLA typing

3J. Koch's Postulates

3K. Transport Media

3L. Arthus Reaction

3M. Enumerate Treponemal tests for Syphilis

3N. Name four differences between *Streptococcus pneumoniae* and viridans streptococci

3O. List four pathogenic bacteria causing Acute Pyogenic meningitis

(4 marks × 15 = 60 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND MBBS DEGREE EXAMINATION – DECEMBER 2018

SUBJECT: MICROBIOLOGY – PAPER II (ESSAY)

Saturday, December 22, 2018

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

Answer ALL the questions.

1. Enumerate herpesviruses. Describe the pathogenesis and laboratory diagnosis of diseases caused by Herpes Simplex Virus.

(2+5+3 = 10 marks)

2. A 25-year-old man presented with hepatomegaly, pain and obstructive jaundice. Peripheral blood smear revealed eosinophilia. He had history of contact with dogs during his childhood. Ultrasound revealed a huge cystic mass in the liver. CT scan revealed a large cystic mass with septations that had almost completely replaced the right lobe of the liver. The cyst was removed by surgery and the fluid aspirated from the cyst showed many protoscolices.

2A. What is the diagnosis?

2B. Describe the life cycle of this parasite.

2C. Describe the pathogenesis of this disease.

2D. Describe prevention of this disease.

(1+5+3+1 = 10 marks)

3. **Write short notes on:**

3A. Microfilaria

3B. Prevention of hepatitis B

3C. *Trichomonas vaginalis*

3D. Laboratory diagnosis of Kala Azar

3E. Enumerate four protozoa that cause diarrohea in HIV infected patients

3F. Chikungunya

3G. Congenital toxoplasmosis

3H. Laboratory diagnosis of malaria

3I. Parvovirus B19

3J. Enumerate four primary deep mycoses

3K. Mycetoma

3L. Enumerate four opportunistic mycoses

3M. Post-exposure prophylaxis of human rabies

3N. Enumerate four diseases caused by adenoviruses

3O. Laboratory diagnosis of dermatophytoses

(4 marks × 15 = 60 marks)