

## MANIPAL UNIVERSITY

## SECOND MBBS DEGREE EXAMINATION – MAY 2014

## SUBJECT: MICROBIOLOGY – PAPER I (ESSAY)

Monday, May 05, 2014

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

**Answer ALL the questions.**

1. Define and Classify Sterilisation. Describe moist heat method of Sterilisation.  
(1+2+7 = 10 marks)

2. A 25 year old male patient was brought to emergency with high fever, headache, vomiting and severe dizziness. On physical examination showed petechial lesions all over the body. CSF protein was raised to 5.45g/L and had a decreased glucose level of 0.1mmol/L. CSF was turbid with predominating polymorphs, Gram stained smear of CSF showed Gram Negative diplococci.

2A. What is the etiology and clinical condition?

2B. Describe the pathogenesis of this organism.

2C. Write the laboratory diagnosis for this organism.

2D. Name 2 other bacteria which cause this type of clinical condition.

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

**3. Write short notes on.**

3A. Enumerate 4 biological effects of Complement

3B. Cytokines

3C. Serum Sickness

3D. Bacterial Flagella

3E. Laboratory diagnosis of *Vibrio cholerae*

3F. Pathogenesis of *Bacillus anthracis*

3G. Bacterial Transformation

3H. IgE

3I. Name 4 bacteria involved in zoonotic disease

3J. VDRL test

3K. Enriched media

3L. *Helicobacter pylori*

3M. List 4 infections produced by *Pseudomonas aeruginosa*

3N. Name 4 suppurative diseases caused by Group A streptococci

3O. Relapsing fever

(4 marks×15 = 60 marks)



## MANIPAL UNIVERSITY

## SECOND MBBS DEGREE EXAMINATION – MAY 2014

## SUBJECT: MICROBIOLOGY – PAPER II (ESSAY)

Tuesday, May 06, 2014

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions.**

1. A 15 year old girl who grew up in a farm with pigs has a 2 week history of headache and vomiting and a 3 day history of confusion and incoherent speech. MRI of the brain reveals multiple lesions bilaterally. The following day, she has a seizure and dies. On autopsy, the brain lesions consist of a cyst like sac containing a larva.
  - 1A. Which parasitic infection was the patient suffering from?
  - 1B. How is the infection transmitted?
  - 1C. Briefly explain the pathogenesis of this disease.
  - 1D. Describe the laboratory diagnosis of the above infection.
  - 1E. What are the methods for prevention of this infection?

(1+1+3+3+2 = 10 marks)
  
2. Describe the pathogenesis, clinical features and prophylaxis of polio viruses.
 

(3+3+4 = 10 marks)
  
3. **Write briefly on:**
  - 3A. Clinical manifestations of Candidiasis
  - 3B. Cell cultures for viral cultivation
  - 3C. *Enterobius vermicularis*
  - 3D. Laboratory diagnosis of kala-azar
  - 3E. Congenital toxoplasmosis
  - 3F. Pathogenesis of *Giardia lamblia*
  - 3G. List the intestinal nematodes
  - 3H. Antigenic variation in Influenza viruses
  - 3I. List the viruses associated with human cancers
  - 3J. List the Post Exposure Prophylactic measures for rabies
  - 3K. Define Mycotoxins with Examples
  - 3L. Draw a neat labeled diagram of Microfilaria
  - 3M. Pathogenesis of *Penicillium marneffi*
  - 3N. List the fungi causing Superficial mycoses
  - 3O. Serological diagnosis of HIV infection

(4×15 = 60 marks)

