

Reg. No.

MANIPAL UNIVERSITY

SECOND MBBS DEGREE EXAMINATION – DECEMBER 2016

SUBJECT: MICROBIOLOGY – PAPER I (ESSAY)

Thursday, December 22, 2016

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

✍ Answer ALL the questions.

1. A diabetic patient was admitted with a history of complicated appendicitis. He was operated on emergency basis. After four days there was thick discharge from the surgical site wound. The pus collected showed numerous PMNL'S and gram positive cocci in clusters. The culture on routine bacteriological media showed large, convex, smooth, shiny, opaque colonies with golden yellow pigment.

- 1A. What is the most probable aetiological agent?
- 1B. Mention the toxins and enzymes produced by this organism.
- 1C. Mention the infections caused by above organism.
- 1D. Enumerate the pathogenicity tests used for confirmation of diagnosis.
- 1E. Discuss the drug resistance encountered in this organism.

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

2. Enumerate antigen- antibody reactions. Describe in detail agglutination reaction.

(2+8 = 10 marks)

3. Write short notes on:

- 3A. Nagler's reaction
- 3B. Enumerate complications of gonorrhoea
- 3C. Bacterial capsule
- 3D. Transduction
- 3E. Adjuvants
- 3F. TRIC agents
- 3G. Bacterial filters
- 3H. VDRL test
- 3I. Atopy
- 3J. Eltor vibrio
- 3K. Draw the diagram of IgG
- 3L. Atypical mycobacteria
- 3M. Satellitism
- 3N. Acquired immunity
- 3O. Lyme disease

(4 marks × 15 = 60 marks)



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SUBJECT: MICROBIOLOGY – PAPER II (ESSAY)

Friday, December 23, 2016

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

✍ Answer ALL the questions.

1. A 32 year man was admitted to the hospital with epileptic attacks. On MRI, there were multiple non-calcified cyst-like structures in the brain. On examination, there were multiple subcutaneous nodules as well. The patient had a history of eating uncooked pork for many years.

1A. What is the probable diagnosis? Name the causative organism.

1B. Describe briefly the life cycle of the pathogen.

1C. How do you diagnose the infection in the laboratory?

(2+4+4 = 10 marks)

2. Classify Picorna viruses. Describe the pathogenesis, laboratory diagnosis and prophylaxis of acute paralytic poliomyelitis.

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

3. Write short notes on:

3A. Laboratory diagnosis of Japanese B encephalitis

3B. Anti-rabies vaccines and post-exposure prophylaxis

3C. Any four infections caused by Adenovirus

3D. Serological markers for Hepatitis B virus infection and their role

3E. Viral inclusion bodies – name and importance

3F. Dermatophytes – Name and infections caused by them

3G. Sporotrichosis

3H. Laboratory diagnosis of Cryptococcosis

3I. Otomycosis

3J. Laboratory diagnosis of Kala-azar

3K. Giardiasis – Pathogenesis and laboratory diagnosis

3L. Differential features of gametocyte stage of *P. falciparum* and *P. vivax*

3M. Four differential features of microfilarial stage of *W. bancrofti* and *B. malayi*

3N. Laboratory diagnosis of *Strongyloides stercoralis* infection

3O. Laboratory diagnosis of lung fluke

(4 marks × 15 = 60 marks)

