

MANIPAL UNIVERSITY

SECOND MBBS DEGREE EXAMINATION – MAY 2016

SUBJECT: MICROBIOLOGY – PAPER I (ESSAY)

Thursday, May 05, 2016

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

✍ Answer ALL the questions.

1. A 15 year old boy came to the clinic with complaint of high fever and sore throat of two days duration. Throat swab was collected and subjected to gram staining and cultured on blood agar. The gram stain revealed plenty of pus cells and gram positive cocci in chains. The growth on blood agar showed colonies which were small, circular, semitransparent, low convex with an area of clear hemolysis. They were catalase negative and sensitive to bacitracin.

1A. What is the most probable diagnosis?

1B. What are the virulence factors of the organism responsible for this infection?

1C. What are the suppurative lesions produced by this organism?

1D. Enumerate the late complications produced and their differences.

1E. Name the organisms causing sore throat

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

2. Define and classify the methods of sterilization. Discuss the moist heat method of sterilization.

(1+2+7 = 10 marks)

3. Write short notes on:

3A. Diagram of bacterial flagella

3B. Chancroid

3C. Halophilic vibrios

3D. IgE

3E. Pathogenesis of typhoid fever

3F. Mechanism of autoimmunity

3G. Specific tests for syphilis

3H. Plasmids

3I. Prophylaxis of tetanus

3J. Enumerate contributions of Robert Koch

3K. Malignant pustule

3L. Cytokines

3M. Coagulase test

3N. Pathogenesis of diphtheria

3O. Delayed hypersensitivity

(4 marks × 15 = 60 marks)



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SECOND MBBS DEGREE EXAMINATION – MAY 2016

SUBJECT: MICROBIOLOGY – PAPER II (ESSAY)

Friday, May 06, 2016

Time: 10:20 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions.**

1. Enumerate the arboviral infections in India. Explain the pathogenesis and laboratory diagnosis of Dengue infections.

(2+5+3 = 10 marks)

2. A twenty five year old student came to the medicine OPD with history of high grade fever and chills of 2 days duration. On physical examination he had slight pallor and no other abnormality was detected. Laboratory investigations revealed lowered haemoglobin percentage and peripheral blood examination revealed presence of parasitic gametocytes.

- 2A. What is the diagnosis?
2B. Briefly give the life cycle of the infectious agent causing the disease.
2C. Describe the laboratory diagnosis of this case.
2D. Describe the prevention of this disease.

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

3. **Write short notes on:**

- 3A. *Giardia lamblia*
3B. *Hepatitis E virus*
3C. Rhinosporidiosis
3D. Hydatid cyst
3E. *Rota virus*
3F. Laboratory diagnosis of Dermatophytosis
3G. Enumerate four parasites causing anaemia
3H. Define definite host and intermediate host with examples
3I. Oral thrush
3J. Infections caused by *Epstein Barr virus*
3K. *Clonorchis sinensis*
3L. Immunoprophylaxis of Rabies infection
3M. Otomycosis
3N. Bacteriophage
3O. Draw labeled diagrams of fertilized and unfertilized eggs of *Ascaris lumbricoides*

(4 marks × 15 = 60 marks)

