

Reg. No.

MANIPAL UNIVERSITY

MD (MICROBIOLOGY) DEGREE EXAMINATION – APRIL 2010

SUBJECT: PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Monday, April 05, 2010

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✍ **Answer ALL questions.**
- ✍ **Write answers that are brief, clear, relevant and legible.**
- ✍ **Illustrate your answers with neatly drawn and correctly labeled diagrams wherever appropriate.**

1. Describe the various methods of Antibiotic sensitivity testing in the laboratory. Add a note on quality control in carrying out the sensitivity tests.

(25 marks)

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2. Define immune response. Discuss the role of lymphocytes in immune response.

(25 marks)

3. Write short notes on:

3A. Mutation.

3B. Immunofluorescence.

3C. Monoclonal antibodies.

3D. Newer epidemiological typing methods.

3E. Preservation of stock culture.

(10×5 = 50 marks)

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MD (MICROBIOLOGY) DEGREE EXAMINATION – APRIL 2010

SUBJECT: PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Tuesday, April 06, 2010

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✍ Answer ALL questions.
- ✍ Write answers that are brief, clear, relevant and legible.
- ✍ Illustrate your answers with neatly drawn and correctly labeled diagrams wherever appropriate.

1. Describe the pathogenesis and laboratory diagnosis of anthrax.
(25 marks)

2. Describe the pathogenesis and laboratory diagnosis of actinomycosis. Add a note on the differences between actinomyces and nocardia.
(25 marks)

3. Write short notes on:
 - 3A. Superficial mycoses.
 - 3B. Chromoblastomycosis.
 - 3C. Non suppurative complications produced by *Streptococcus pyogenes*.
 - 3D. Aspergillosis.
 - 3E. Mycotoxins.

(10×5 = 50 marks)



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MD (MICROBIOLOGY) DEGREE EXAMINATION – APRIL 2010

SUBJECT: PAPER III: PARASITOLOGY AND VIROLOGY

Wednesday, April 07, 2010

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✍ Answer ALL questions.
- ✍ Write answers that are brief, clear, relevant and legible.
- ✍ Illustrate your answers with neatly drawn and correctly labeled diagrams wherever appropriate.

1. Classify Mastigophora. Discuss the life cycle, pathogenesis and laboratory diagnosis of *Leishmania donovani*.

(25 marks)

2. List Neurotropic viruses. Describe the pathogenesis, laboratory diagnosis and prophylaxis of human rabies.

(25 marks)

3. Write short notes on:

3A. Free living amoebae.

3B. SSPE.

3C. Post transfusion viral hepatitis.

3D. Larva migrans.

3E. Microfilaria.

(10×5 = 50 marks)

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MD (MICROBIOLOGY) DEGREE EXAMINATION – APRIL 2010
SUBJECT: PAPER IV: APPLIED MICROBIOLOGY AND RECENT ADVANCES

Thursday, April 08, 2010

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✍ Answer ALL questions.
- ✍ Write answers that are brief, clear, relevant and legible.
- ✍ Illustrate your answers with neatly drawn and correctly labeled diagrams wherever appropriate.

1. Describe the methods and interpretation of blood culture.

(25 marks)

2. Describe the pathogenesis and prevention of blood borne viral infections.

(25 marks)

3. Write short notes on:

3A. Antifungal susceptibility testing.

3B. Quality assurance.

3C. Graft versus host reaction.

3D. Malaria vaccines.

3E. Laboratory diagnosis of autoimmune diseases.

(10×5 = 50 marks)

