

MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

MD (MICROBIOLOGY) DEGREE EXAMINATION – JULY 2006**SUBJECT: PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY**

Monday, July 03, 2006

Time: 3 Hrs.

Max. Marks: 100

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- ✍ **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 disinfectants. Discuss the mechanisms of action, uses and testing of disinfectants.
(25 marks)

2. Define and classify hypersensitivity. Describe immediate hypersensitivity reactions.
(25 marks)

3. Write short notes on:
 - 3A. Major Histocompatibility Complex.
 - 3B. ELISA.
 - 3C. Electron microscope.
 - 3D. Autoimmunity.
 - 3E. Bacterial capsule.

(10×5 = 50 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION

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MD (MICROBIOLOGY) DEGREE EXAMINATION – JULY 2006

SUBJECT: PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Tuesday, July 04, 2006

Time: 3 Hrs.

Max. Marks: 100

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- ✍ **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, laboratory diagnosis of infections with Group A Streptococcus.
(25 marks)

2. Discuss the pathogenesis and laboratory diagnosis of dermatophytoses.
(25 marks)

3. Write short notes on:
 - 3A. Botulism.
 - 3B. Aspergillosis.
 - 3C. Non-typhoidal Salmonellae.
 - 3D. Mycoplasma.
 - 3E. *Haemophilus ducreyi*.

(10×5 = 50 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

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MD (MICROBIOLOGY) DEGREE EXAMINATION – JULY 2006

SUBJECT: PAPER III: PARASITOLOGY AND VIROLOGY

Wednesday, July 05, 2006

Time: 3 Hrs.

Max. Marks: 100

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- ✍ **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 morphology, life cycle, pathogenesis and laboratory diagnosis of *Entamoeba histolytica*.

(25 marks)

2. Describe the oncogenic viruses and mechanisms of oncogenesis.

(25 marks)

3. Write short notes on:

3A. Slow virus infections.

3B. Larva migrans.

3C. Viral markers of Hepatitis B.

3D. Concentration techniques of stool for parasites.

3E. Congenital toxoplasmosis.

(10×5 = 50 marks)

MANIPAL ACADEMY OF HIGHER EDUCATION

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MD (MICROBIOLOGY) DEGREE EXAMINATION – JULY 2006**SUBJECT: PAPER IV: APPLIED MICROBIOLOGY AND RECENT ADVANCES**

Thursday, July 06, 2006

Time: 3 Hrs.

Max. Marks: 100

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- ✍ **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. Discuss the molecular biology techniques in the diagnosis of infectious diseases.
(25 marks)

2. Describe the pathogenesis and molecular determinants of virulence in *Mycobacterium tuberculosis*.
(25 marks)

3. Write short notes on:
 - 3A. Hepatitis C virus infection in health care settings.
 - 3B. Probiotics.
 - 3C. Disposal of infectious waste.
 - 3D. MRSA.
 - 3E. Recent advances in malarial vaccine.

(10×5 = 50 marks)

Reg. No.									
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MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

MD (MICROBIOLOGY) DEGREE EXAMINATION – DECEMBER 2006

SUBJECT: PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Monday, December 04, 2006

Time: 3 Hrs.

Max. Marks: 100

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- ✍ **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. Define and classify Immunity. Describe in detail the innate defense mechanism.
(25 marks)

2. Discuss polymerase chain reaction and its applications.
(25 marks)

3. Write short notes on:
 - 3A. Robert Koch.
 - 3B. Bacterial conjugation.
 - 3C. Outer membrane proteins.
 - 3D. Autoimmunity.
 - 3E. Graft versus Host reaction.

(10×5 = 50 marks)

Reg. No.									
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MD (MICROBIOLOGY) DEGREE EXAMINATION – DECEMBER 2006

SUBJECT: PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Tuesday, December 05, 2006

Time: 3 Hrs.

Max. Marks: 100

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- ✍ **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, laboratory diagnosis and prophylaxis of diphtheria. (25 marks)

2. Discuss the laboratory diagnosis of fungal infections. (25 marks)

3. Write short notes on:

3A. Enterococci.

3B. Halophilic vibrios.

3C. Mycotoxins.

3D. Diarrhoeagenic *Escherichia coli*.

3E. Bacterial vaginosis.

(10×5 = 50 marks)

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MD (MICROBIOLOGY) DEGREE EXAMINATION – DECEMBER 2006**SUBJECT: PAPER III: PARASITOLOGY AND VIROLOGY**

Wednesday, December 06, 2006

Time: 3 Hrs.

Max. Marks: 100

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- ✍ **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 nematodes. Describe the morphology, life cycle, pathogenicity and laboratory diagnosis of *Ancylostoma duodenale*.
(25 marks)

2. Enumerate the viruses causing hepatitis. Describe the characteristics, pathogenesis and laboratory diagnosis of Hepatitis B infection. Add a note on its prevention.
(25 marks)

3. Write short notes on:

3A. *Schistosoma haematobium*

3B. Cytomegalovirus

3C. Laboratory diagnosis of toxoplasmosis

3D. MMR vaccine

3E. *Hymenolepis nana*.

(10×5 = 50 marks)

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MD (MICROBIOLOGY) DEGREE EXAMINATION – DECEMBER 2006

SUBJECT: PAPER IV: APPLIED MICROBIOLOGY AND RECENT ADVANCES

Thursday, December 07, 2006

Time: 3 Hrs.

Max. Marks: 100

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- ✍ 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. Discuss the aetiology and laboratory diagnosis of bacterial food poisoning. Add a note on methods of tracing the source of infection.

(25 marks)

2. Describe the quality control in diagnostic microbiology.

(25 marks)

3. Write short notes on:

3A. Avian influenza.

3B. Flow cytometry.

3C. Multidrug resistant tuberculosis.

3D. *Penicillium marneffeii*.

3E. Microarray assay.

(10×5 = 50 marks)

