

MANIPAL ACADEMY OF HIGHER EDUCATION
(Deemed University)

M.Sc. (FINAL) MICROBIOLOGY DEGREE EXAMINATION – JULY 2003

PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Tuesday, July 01, 2003

Time available: 3 Hours

Maximum Marks: 100

- **Answer all the questions.**
 - **Write your answers that are brief, clear, relevant and legible.**
 - **Illustrate your answers with neatly drawn and correctly labelled diagrams wherever appropriate.**
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1. Classify the hypersensitivity reactions and discuss its mechanisms.

(35 Marks)

2. Discuss the principle, methodology and quality control of Antibiotic Susceptibility testing in vitro.

(35 Marks)

3. Write short notes on the following:

3A. Hot Air Oven

3B. Electron Microscopy

3C. Anaerobic culture methods.

(10 x 3 = 30 Marks)

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M.Sc. (FINAL) MICROBIOLOGY DEGREE EXAMINATION – JULY 2003

PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Wednesday, July 02, 2003

Time available: 3 Hours

Maximum Marks: 100

- **Answer all the questions.**
 - **Illustrate your answers with neatly drawn and correctly labelled diagrams wherever appropriate.**
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1. Mention the aetiology of food poisoning. Discuss the laboratory diagnosis and modes of tracing the source of infection.

(35 marks)

2. Describe the aetiology and laboratory diagnosis of cutaneous mycosis.

(35 marks)

3. Write short notes on:

(10x3 = 30 marks)

3A. Listeriosis

3B. Bacteroides

3C. TRIC agent.

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M.Sc. (FINAL) MICROBIOLOGY DEGREE EXAMINATION – JULY 2003

PAPER III: PARASITOLOGY AND VIROLOGY

Thursday, July 03, 2003

Time available: 3 Hours

Maximum Marks: 100

- **Answer all the questions.**
 - **Write answers that are brief, clear, relevant and legible.**
 - **Illustrate your answers with neatly drawn and correctly labelled diagrams wherever appropriate.**
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1. Classify sporozoa. Describe the life cycle, pathogenecity, laboratory diagnosis of Plasmodium vivax.

(35 marks)

2. Enumerate the Hepatitis viruses. Describe the structure, pathogenesis and laboratory diagnosis of Hepatitis B infection.

(35 marks)

3. Write short notes on:

(10x3 = 30 marks)

3A. Strongyloides stercoralis

3B. Varicella-zoster virus

3C. Cultivation of Leishmania donovani

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M. Sc. (FINAL) MICROBIOLOGY DEGREE EXAMINATION – DECEMBER 2003

PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Monday, December 01, 2003

Time available: 3 Hours

Maximum Marks: 100

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- **Answer all the questions.**
 - **Write your answers that are brief, clear, relevant and legible.**
 - **Illustrate your answers with neatly drawn and correctly labelled diagrams wherever appropriate.**
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1. Discuss the molecular methods for the clinical microbiology laboratory.

(35 Marks)

2. Classify disinfectants. Discuss the evaluation and mechanism of action of disinfectants.

(35 Marks)

3. Write short notes on:

3A. Bacterial filters

3B. Helper T cells

3C. HLA typing.

(10 × 3 = 30 Marks)

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PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Tuesday, December 02, 2003

Time available: 3 Hours

Maximum Marks: 100

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- **Answer all the questions.**
 - **Illustrate your answers with neatly drawn and correctly labelled diagrams wherever appropriate.**
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1. Name different species of *Corynebacterium*. Describe the pathogenesis and laboratory diagnosis of diphtheria. Add a note on prophylaxis.

(35 marks)

2. Classify Enterobacteriaceae. Describe the pathogenesis and laboratory diagnosis of Enteric fever. Add a note on multi-drug resistance in *Salmonella* Serotypes.

(35 marks)

3. Write briefly on:

3A. Opportunistic fungal infections

3B. Mycetoma

3C. Mycotoxins.

(10 × 3 = 30 marks)

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1. Classify the medically important Arbo-viruses. Describe the epidemiology and laboratory diagnosis of Japanese encephalitis.

(35 marks)

2. Classify nematodes. Describe the morphology, life cycle and laboratory diagnosis of *Ancylostoma duodenale*.

(35 marks)

3. Write short notes on:

3A. Free living Amoeba

3B. Larva migrans

3C. Onchogenic viruses.

(10 × 3 = 30 marks)