

MANIPAL UNIVERSITY

M. Sc. (FINAL) MICROBIOLOGY DEGREE EXAMINATION – FEBRUARY 2008

PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Monday, February 04, 2008

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.**

1. Define and classify sterilization. Describe the moist heat methods of sterilization.

(25 marks)

2. Describe the immunoserological methods of diagnosis of diseases.

(25 marks)

3. Write short notes on:

3A. Plasmids.

3B. Scanning electron microscopy.

3C. Bacterial capsule.

3D. Passive immunity.

3E. Natural killer cells.

(10×5 = 50 marks)

MANIPAL UNIVERSITY

M. Sc. (FINAL) MICROBIOLOGY DEGREE EXAMINATION – FEBRUARY 2008

PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Tuesday, February 05, 2008

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.**

1. Describe the pathogenesis, laboratory diagnosis and prevention of cholera.
(25 marks)

2. Enumerate yeasts of clinical importance. Describe the pathogenesis and laboratory diagnosis of cryptococcosis.
(25 marks)

3. Write short notes on:
 - 3A. Enterococci.
 - 3B. Prevention of enteric fever.
 - 3C. Chromoblastomycosis.
 - 3D. *Helicobacter pylori*.
 - 3E. Multidrug resistant tuberculosis.

(10×5 = 50 marks)

MANIPAL UNIVERSITY

M. Sc. (FINAL) MICROBIOLOGY DEGREE EXAMINATION – FEBRUARY 2008

PAPER III: PARASITOLOGY AND VIROLOGY

Wednesday, February 06, 2008

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.**

1. Classify Enteroviruses. Discuss the pathogenesis, laboratory diagnosis and prophylaxis of Poliomyelitis.

(25 marks)

2. Describe the life cycle, pathogenesis and laboratory diagnosis of *Toxoplasma gondii*.

(25 marks)

3. Write short notes on:

3A. Hydatid cyst.

3B. Hepatitis B markers.

3C. MMR vaccines.

3D. Microfilaria.

3E. Cultivation of *Leishmania donovani*.

(10×5 = 50 marks)

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MANIPAL UNIVERSITY

M. Sc. (FINAL) MICROBIOLOGY DEGREE EXAMINATION – AUGUST 2008

PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Monday, August 04, 2008

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.**

1. Describe noncultural methods for the diagnosis of infectious diseases.
(25 marks)
2. Define and enumerate Antigen- antibody reactions. Describe immunofluorescence.
(25 marks)
3. Write short notes on:
 - 3A. Cytoplasmic membrane.
 - 3B. Tyndallization.
 - 3C. HLA typing.
 - 3D. Complement.
 - 3E. Superantigens.

(10×5 = 50 marks)

MANIPAL UNIVERSITY**M. Sc. (FINAL) MICROBIOLOGY DEGREE EXAMINATION – AUGUST 2008****PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY**

Tuesday, August 05, 2008

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.**

1. Describe the pathogenesis and laboratory diagnosis of brucellosis.
(25 marks)
2. Describe the pathogenesis and laboratory diagnosis of diarrhoea caused by diarrhoeagenic *Escherichia coli*.
(25 marks)
3. Write short notes on:
 - 3A. Candidiasis.
 - 3B. *Histoplasma capsulatum*.
 - 3C. Zygomycosis.
 - 3D. Botulism.
 - 3E. *Haemophilus influenzae*.

(10×5 = 50 marks)

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Wednesday, August 06, 2008

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.**

1. Describe the pathogenesis, laboratory diagnosis and prophylaxis of Poliomyelitis. Add a note on pulse polio immunization.

(25 marks)

2. Discuss in detail the laboratory diagnosis of parasitic diseases.

(25 marks)

3. Write short notes on:

3A. Japanese encephalitis.

3B. Falciparum malaria.

3C. Laboratory diagnosis of hydatid disease.

3D. Rotavirus.

3E. Giardia lamblia.

(10×5 = 50 marks)