

MANIPAL UNIVERSITY

M. Sc. (FINAL) MICROBIOLOGY DEGREE EXAMINATION – AUGUST 2007

PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Wednesday, August 01, 2007

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 bacterial cell structure. (25 marks)
2. Describe the structure and function of immune system. (25 marks)
3. Write short notes on:
 - 3A. Minimum inhibitory concentration.
 - 3B. Bacterial mutation.
 - 3C. Anaphylaxis.
 - 3D. Autoimmunity.
 - 3E. Heterophile agglutination tests.(10×5 = 50 marks)

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PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Thursday, August 02, 2007

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 Spirochaetes. Describe the pathogenesis and laboratory diagnosis of syphilis.
(25 marks)

2. Enumerate dimorphic fungi. Describe the pathogenesis and laboratory diagnosis of primary systemic mycoses.
(25 marks)

3. Write short notes on:
 - 3A. Atypical Mycobacteria.
 - 3B. Q fever.
 - 3C. Aspergillosis.
 - 3D. Diarrhoeogenic *Escherichia coli*.
 - 3E. Melioidosis.

(10×5 = 50 marks)

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PAPER III: PARASITOLOGY AND VIROLOGY

Friday, August 03, 2007

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. List the blood and tissue protozoa. Describe the life cycle, pathogenicity and laboratory diagnosis of *Plasmodium vivax*.

(25 marks)

2. List neurotropic virus. Discuss the laboratory diagnosis and prophylaxis of Rabies.

(25 marks)

3. Write short notes on:

3A. *Hymenolepis nana*.

3B. Viral diarrhoea.

3C. Hepatitis E virus.

3D. Larva migrans.

3E. Kyasanur Forest Disease.

(10×5 = 50 marks)