Reg. No.										

MANIPAL UNIVERSITY

M.Sc. MEDICAL (FINAL) MICROBIOLOGY DEGREE EXAMINATION – JULY 2015

PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Tuesday, July 14, 2015

Time: 14:00 – 17:00 Hrs. Maximum Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Describe the mechanisms and detection of drug resistance in bacteria with examples.

(15 marks)

2. List antigen – antibody reactions. Describe the principle, procedure and uses of Enzyme-linked immunosorbent assay.

(15 marks)

3. **Write short notes on:**

3A. Passive immunity

3B. Cytokines

3C. HLA typing

3D. Delayed hypersensitivity

3E. Bacterial capsule

3F. Chemical sterilants

3G. Bacterial growth curve

3H. Bacterial toxins

3I. Biomedical waste disposal

3J. Polymerase chain reaction

(7 marks × 10 = 70 marks)

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MANIPAL UNIVERSITY

M.Sc. MEDICAL (FINAL) MICROBIOLOGY DEGREE EXAMINATION – JULY 2015

PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Wednesday, July 15, 2015

Time: 14:00 – 17:00 Hrs. Maximum Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Describe the pathogenesis and laboratory diagnosis of typhoid fever.

(15 marks)

2. List opportunistic fungi. Describe the pathogenesis and laboratory diagnosis of cryptococcosis.

(15 marks)

3. **Write short notes on:**

3A. Halophilic vibrios

3B. *Histoplasma capsulatum*

3C. *Haemophilus influenze* type b

3D. Mycotoxins

3E. Serological tests for syphilis

3F. Group B streptococcus

3G. Laboratory diagnosis of human anthrax

3H. Non - sporing anaerobes

3I. Laboratory diagnosis of pulmonary tuberculosis

3J. Mycetoma

(7 marks × 10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

M.Sc. MEDICAL (FINAL) MICROBIOLOGY DEGREE EXAMINATION – JULY 2015

PAPER III: VIROLOGY AND PARASITOLOGY

Thursday, July 16, 2015

Time: 14:00 – 17:00 Hrs. Maximum Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Describe the pathogenesis, laboratory diagnosis and prophylaxis of human rabies.

(15 marks)

2. Describe the life cycle, pathogenicity and laboratory diagnosis of *Leishmania donovani.*

(15 marks)

3. **Write short notes on:**

3A. H1N1 influenza

3B. Viral gastroenteritis

3C. Life cycle of *Ancylostoma duodenale*

3D. Laboratory diagnosis of malaria

3E. Hepatitis C virus

3F. Laboratory diagnosis of HIV/AIDS

3G. Immunoprophylaxis of poliomyelitis

3H. Giardiasis

3I. Molluscum contagiosum

3J. Microfilaria

(7 marks × 10 = 70 marks)