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MANIPAL UNIVERSITY

M.Sc. MEDICAL (FINAL) MICROBIOLOGY DEGREE EXAMINATION – FEBRUARY 2016

PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Monday, February 01, 2016

Time: 14:00 – 17:00 Hrs.

Maximum Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Define and classify sterilization. Describe the sterilization method by steam under pressure.
(15 marks)
2. Define and classify immunity. Describe the mechanisms and significance of innate immunity.
(15 marks)

3. **Write short notes on:**

- 3A. Endotoxin
- 3B. T Lymphocytes
- 3C. Bacterial spores
- 3D. Anaerobic culture methods
- 3E. Anaphylaxis
- 3F. Transduction
- 3G. Types and functions of Cytokines
- 3H. Blotting techniques
- 3I. Fluorescent microscope
- 3J. Immunoglobulin A

(7 marks × 10 = 70 marks)



MANIPAL UNIVERSITY**M.Sc. MEDICAL (FINAL) MICROBIOLOGY DEGREE EXAMINATION – FEBRUARY 2016**
PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Tuesday, February 02, 2016

Time: 14:00 – 17:00 Hrs.

Maximum Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essay:**

1. Classify Clostridia of medical importance. Describe the pathogenesis, laboratory diagnosis and prophylaxis of tetanus.

(15 marks)

2. Describe the pathogenesis and laboratory diagnosis of Cholera.

(15 marks)

3. **Write short notes on:**

3A. Laboratory diagnosis of pyogenic meningitis

3B. Chromoblastomycoses

3C. Post Streptococcal Infections

3D. *Penicillium marneffe*

3E. MDR TB

3F. Laboratory diagnosis of Dermatophytosis

3G. Toxin mediated diseases caused by *Staphylococcus aureus*

3H. Aspergillosis

3I. Diarrhoeagenic *E.coli*

3J. Sexual and asexual spores of fungi

(7 marks × 10 = 70 marks)



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M.Sc. MEDICAL (FINAL) MICROBIOLOGY DEGREE EXAMINATION – FEBRUARY 2016

PAPER III: VIROLOGY AND PARASITOLOGY

Wednesday, February 03, 2016

Time: 14:00 – 17:00 Hrs.

Maximum Marks: 100

✍ Answer ALL the questions.

✍ Illustrate your answers with neat labeled diagram wherever necessary.

✍ Long Essay:

1. Describe the pathogenesis, clinical features and laboratory diagnosis of Human Immunodeficiency Virus.

(15 marks)

2. Classify Plasmodial parasites. Describe the life cycle, pathogenesis, clinical features and laboratory diagnosis of *Plasmodium falciparum*.

(15 marks)

3. Write short notes on:

3A. Human Papillomavirus

3B. *Schistosoma haematobium*

3C. Congenital viral infections

3D. Intestinal amoebiasis

3E. Influenza A virus

3F. Ebola virus

3G. Life cycle of *Strongyloides stercoralis*

3H. Infectious mononucleosis

3I. Laboratory diagnosis of Toxoplasmosis

3J. Viral vaccines

(7 marks × 10 = 70 marks)

