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MANIPAL UNIVERSITY

MD (MICROBIOLOGY) DEGREE EXAMINATION – APRIL 2012

SUBJECT: PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Monday, April 02, 2012

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

Answer ALL questions.

1. Discuss various methods of Antimicrobial susceptibility testing. Add a note on quality control.

(25 marks)

2. Describe humoral immune response.

(25 marks)

3. **Write short notes on:**

3A. Bacterial filters

3B. Subunit vaccines

3C. Virulence determinants of bacteria

3D. Biological functions of Complement

3E. Antigen presenting cells

(10×5 = 50 marks)



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MANIPAL UNIVERSITY

MD (MICROBIOLOGY) DEGREE EXAMINATION – APRIL 2012

SUBJECT: PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Tuesday, April 03, 2012

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

1. Enumerate the etiology of Bacterial diarrhoea. Write in detail about the pathogenesis and laboratory diagnosis of Cholera.

(25 marks)

2. Discuss opportunistic mycoses with special reference to cryptococcosis.

(25 marks)

3. **Write short notes on:**

3A. Specific tests for syphilis

3B. Group B streptococci

3C. Melioidiosis

3D. Atypical pneumonia

3E. Halophilic Vibrios

(10×5 = 50 marks)



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MD (MICROBIOLOGY) DEGREE EXAMINATION – APRIL 2012

SUBJECT: PAPER III: PARASITOLOGY AND VIROLOGY

Wednesday, April 04, 2012

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

1. Discuss Vector Borne Viral Diseases in India and add a note on control.

(25 marks)

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

(25 marks)

3. **Write short notes on:**

3A. Oncogenic viruses

3B. Immunoprophylaxis of Polio

3C. Pathogenesis of HIV infections

3D. Larva migrans

3E. Occult filariasis

(10×5 = 50 marks)



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MANIPAL UNIVERSITY

MD (MICROBIOLOGY) DEGREE EXAMINATION – APRIL 2012

SUBJECT: PAPER IV: APPLIED MICROBIOLOGY AND RECENT ADVANCES

Thursday, April 05, 2012

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

Answer ALL questions.

1. Describe in detail Pyrexia of Unknown Origin.
(25 marks)
2. Describe complement pathway and complement dependent serological reactions.
(25 marks)
3. **Write short notes on:**
 - 3A. Super antigens
 - 3B. MDR TB
 - 3C. Micro array
 - 3D. Monoclonal Antibodies
 - 3E. Live viral vaccines

(10×5 = 50 marks)

