

MANIPAL UNIVERSITY

M.Sc. MEDICAL (FINAL) MICROBIOLOGY DEGREE EXAMINATION – FEBRUARY 2013

PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Tuesday, February 05, 2013

Time: 14:00 – 17:00 Hrs.

Maximum Marks: 100

 **Answer ALL questions.**

1. Define sterilization. Discuss sterilization methods by moist heat. Discuss the application of sterilization in medical practices.

(25 marks)

2. Enumerate antigen-antibody reactions. Describe the principle, methodology and clinical applications of precipitation reactions with suitable examples.

(25 marks)

3. **Write short notes on:**

3A. Plasmids

3B. Bacterial growth curve

3C. Major histocompatibility complex

3D. Type III Hypersensitivity

3E. Cytokines

(10×5 = 50 marks)



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PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Wednesday, February 06, 2013

Time: 14:00 – 17:00 Hrs.

Maximum Marks: 100

✍ Answer ALL the questions.

1. Describe the pathogenesis and laboratory diagnosis of pulmonary tuberculosis. (25 marks)
2. Describe the pathogenesis and laboratory diagnosis of subcutaneous mycoses. (25 marks)
3. Write short notes on:
 - 3A. Typhoid vaccines
 - 3B. *Histoplasma capsulatum*
 - 3C. Enzymes and toxins of *Streptococcus pyogenes*
 - 3D. El Tor vibrios
 - 3E. Candidiasis(10×5 = 50 marks)



MANIPAL UNIVERSITY**M.Sc. MEDICAL (FINAL) MICROBIOLOGY DEGREE EXAMINATION – FEBRUARY 2013****PAPER III: PARASITOLOGY AND VIROLOGY**

Thursday, February 07, 2013

Time: 14:00 – 17:00 Hrs.

Maximum Marks: 100

✍ Answer ALL the questions.

1. Enumerate hepatitis viruses. Describe the pathogenesis and laboratory diagnosis of Hepatitis B virus infection.
(25 marks)
2. Classify Sporozoa. Describe the life cycle, pathogenesis and laboratory diagnosis of *Plasmodium vivax*.
(25 marks)
3. **Write short notes on:**
 - 3A. Prophylaxis of polio
 - 3B. Kyasanur Forest Disease
 - 3C. Varicella –Zoster virus
 - 3D. Hydatid cyst
 - 3E. Microfilaria

(10×5 = 50 marks)

