

## MANIPAL UNIVERSITY

## MD (MICROBIOLOGY) DEGREE EXAMINATION – OCTOBER 2009

## SUBJECT: PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Monday, October 05, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- 
- ✍ Answer all questions.
  - ✍ Write answers that are brief, clear, relevant and legible.
  - ✍ Illustrate your answers with neatly drawn and correctly labeled diagrams wherever appropriate.

1. Describe the method of gene transfer in Prokaryotic cell. Add a note on R- Plasmid.  
(25 marks)

2. Define and classify Hypersensitivity. Describe in detail about type III hypersensitivity with suitable clinical examples.  
(25 marks)

3. Write short notes on:

- 3A. Bacterial Spore
- 3B. Immunoglobulins
- 3C. CSSD
- 3D. ELISA
- 3E. Acquired Immunity.

(10×5 = 50 marks)



## MANIPAL UNIVERSITY

MD (MICROBIOLOGY) DEGREE EXAMINATION – OCTOBER 2009

SUBJECT: PAPER II: SYSTEMATIC BACTERIOLOGY AND MYCOLOGY

Tuesday, October 06, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✗ Answer all questions.
- ✗ Write answers that are brief, clear, relevant and legible.
- ✗ Illustrate your answers with neatly drawn and correctly labeled diagrams wherever appropriate.

1. Describe the pathogenesis, laboratory diagnosis and prophylaxis of cholera.

(25 marks)

2. Describe dimorphic fungi.

(25 marks)

3. Write short notes on:

3A. Toxins and enzymes produced by *Staphylococcus aureus*.

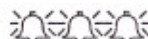
3B. Typhus fever.

3C. Prophylaxis of diphtheria.

3D. Rhinosporidiosis.

3E. Bacterial vaginosis.

(10×5 = 50 marks)



## MANIPAL UNIVERSITY

## MD (MICROBIOLOGY) DEGREE EXAMINATION – OCTOBER 2009

## SUBJECT: PAPER III: PARASITOLOGY AND VIROLOGY

Wednesday, October 07, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- 
- ✍ Answer all questions.
- ✍ Write answers that are brief, clear, relevant and legible.
- ✍ Illustrate your answers with neatly drawn and correctly labeled diagrams wherever appropriate.
1. Describe the life cycle, pathogenesis and laboratory diagnosis of Plasmodium Vivax. (25 marks)
2. Enumerate the viruses causing respiratory tract infections. Describe the pathogenesis and laboratory diagnosis of Influenza. Add a note on antigenic variations in influenza. (25 marks)
3. Write short notes on:
- 3A. Rapid diagnosis of viral infections.
- 3B. Neurocysticercosis.
- 3C. Varicella Zoster virus.
- 3D. Cell culture vaccines for Rabies.
- 3E. *Fasciola hepatica*.
- (10×5 = 50 marks)



Reg. No.

HEALTH SCIENCES LIBRARY

## MANIPAL UNIVERSITY

MD (MICROBIOLOGY) DEGREE EXAMINATION – OCTOBER 2009

SUBJECT: PAPER IV: APPLIED MICROBIOLOGY AND RECENT ADVANCES

Thursday, October 08, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- ✍ Answer all questions.
- ✍ Write answers that are brief, clear, relevant and legible.
- ✍ Illustrate your answers with neatly drawn and correctly labeled diagrams wherever appropriate.

1. Discuss epidemiology, clinical significance and detection of methicillin resistant staphylococcal infection in a hospital. Add a note on the mechanism of methicillin resistance in *Staphylococcus aureus*.

(25 marks)

2. Describe the pathogenesis and laboratory diagnosis of sepsis syndrome.

(25 marks)

3. Write short notes on:

- 3A. Strategies for eradication of Polio from India.
- 3B. Recent advances in leprosy vaccine.
- 3C. Maintenance of stock culture of bacteria.
- 3D. Antibiotic associated diarrhea.
- 3E. Opportunistic protozoa.

(10×5 = 50 marks)

