Reg. No.										

MANIPAL UNIVERSITY

MD (MICROBIOLOGY) DEGREE EXAMINATION – OCTOBER 2017

SUBJECT: PAPER I: GENERAL MICROBIOLOGY AND IMMUNOLOGY

Tuesday, October 03, 2017

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

✍ **Answer ALL questions.**

✍ **Long Essays:**

1. Discuss the principle, methodology of antibiotic sensitivity testing. Add a note on Quality control in Antibiotic sensitivity testing.

(15 marks)

2. Describe the structure of immunoglobulin and compare the properties of different class of Immunoglobulins.

(15 marks)

3. **Write short notes on:**

3A. Filamentous appendages of bacteria
3B. Autoclave
3C. Immune surveillance to malignancy
3D. Ligase chain reaction
3E. Mechanisms of Autoimmunity
3F. Carriers
3G. Genotypic and phenotypic variations
3H. Role of T cells in immune response
3I. Preservation of cultures
3J. Complement deficiency disorders

(7 marks × 10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (MICROBIOLOGY) DEGREE EXAMINATION – OCTOBER 2017

SUBJECT: PAPER II: BACTERIOLOGY AND MYCOLOGY

Wednesday, October 04, 2017

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

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Discuss the virulence factors and infections caused by *Staphylococcus aureus*. Add a note on drug resistance of *Staphylococcus aureus*.

(15 marks)

2. Enumerate the etiological agents of Pharyngitis. Discuss the pathogenesis and Laboratory Diagnosis of Diphtheria.

(15 marks)

3. **Write short notes on:**

3A. Classification of fungi
3B. Laboratory diagnosis of anaerobic infections
3C. Zygomycosis
3D. Chromoblastomycosis
3E. Prevention and control of enteric fever
3F. Laboratory diagnosis of Dermatophytes
3G. *Mycoplasma pneumoniae*
3H. VDRL test
3I. Halophilic vibrios
3J. *Penicillium marneffei*

(7 marks × 10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (MICROBIOLOGY) DEGREE EXAMINATION – OCTOBER 2017

SUBJECT: PAPER III: VIROLOGY AND PARASITOLOGY

Thursday, October 05, 2017

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

✍ **Answer ALL questions.**

✍ **Long Essays:**

1. Classify Herpersviruses. Discuss the pathogenesis, laboratory diagnosis and prophylaxis of infections caused by Herpes simplex virus.

(15 marks)

2. Describe the life cycle, pathogenesis and laboratory diagnosis of visceral leishmaniasis.

(15 marks)

3. **Write short notes on:**

3A. Inclusion bodies
3B. Phage typing
3C. Briefly discuss the present global status of small pox
3D. Antigenic varations in influenza virus and their significance
3E. Strategies of HIV testing
3F. MMR vaccine
3G. Cysticercus cellulosae
3H. Larva migrans
3I. Microfilaria
3J. Extraintestinal amoebiasis

(7 marks × 10 = 70 marks)

Reg. No.										

MANIPAL UNIVERSITY

MD (MICROBIOLOGY) DEGREE EXAMINATION – OCTOBER 2017

SUBJECT: PAPER IV: APPLIED MICROBIOLOGY & RECENT ADVANCES

Friday, October 06, 2017

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

- **Answer ALL the questions.**
- **Draw diagrams wherever necessary.**

- **Long Essays:**

1. Define and classify transplantation. Describe the immunological mechanisms of graft rejection.

(15 marks)

2. Discuss quality assurance in Microbiology laboratory.

(15 marks)

3. **Write short notes on:**

3A. Immunodiagnosis of parasitic diseases
3B. *Burkholderia pseudomallei*
3C. Rhinisporidiosis
3D. Cryptosporidium parvum
3E. Malarial vaccines
3F. Drug Resistance in Tuberculosis
3G. Coagulase negative Staphylococcus
3H. Atypical Mycobacteria
3I. Hepatitis C virus
3J. *Pneumocystis jerovecii*

(7 marks × 10 = 70 marks)