Reg. No.										

MANIPAL UNIVERSITY

SECOND MBBS DEGREE EXAMINATION – NOV/DEC 2013

SUBJECT: MICROBIOLOGY – PAPER I (ESSAY)

(NEW REGULATION)

Thursday, November 28, 2013

Time: 10:20 – 13:00 Hrs. Maximum Marks: 80

1. Enumerate the mechanisms of Gene Transfer in Bacteria. Write in detail about Conjugation.

(2+8 = 10 marks)

2. A 5 year old child with no history of immunization presents with fever, sore throat and cervical lymphadenopathy. The tonsils and posterior pharyngeal wall are covered with gray, thick adherent pseudomembrane. Throat swab smear stained by Albert's stain revealed green bacilli arranged in Chinese letter pattern with metachromatic granules.

2A. What is the diagnosis?

2B. Write in detail about the pathogenesis of this disease

2C. Describe the Laboratory Diagnosis of this disease

2D. Add a note on Prophylaxis

(1+3+3+3 = 10 marks)

3. Write short notes on:

3A. Transport Media

3B. Draw a labeled diagram of Gram negative Bacterial Cell wall

3C. Tyndallisation

3D. Mechanism of Type I Hypersensitivity

3E. ELISA

3F. Enumerate Methods of Transmission of Infection

3G. Live attenuated Vaccine

3H. Enumerate the etiological agents of Acute Bacterial Meningitis

3I. Pathogenesis of Enteric Fever

3J. Laboratory Diagnosis of Secondary Syphilis

3K. Define and list four Non Sporing Anaerobes

3L. Halophilic Vibrios

3M. Actinomycosis

3N. Enumerate four infections caused by *Staphylococcus aureus*

3O. Significant Bacteriuria

(4×15 = 60 marks)

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MANIPAL UNIVERSITY

SECOND MBBS DEGREE EXAMINATION – NOV/DEC 2013

SUBJECT: MICROBIOLOGY - PAPER II (ESSAY)

Friday, November 29, 2013

Time: 10:20 – 13:00 Hrs. Maximum Marks: 80

1. A 4-year-old boy was admitted with high fever, hepatosplenomegaly and pancytopenia. Investigations revealed the child to be emaciated with a dry, rough, dark skin, elevated serum ferritin, low fibrinogen levels and bone-marrow histiocytic hyperplasia. Leishman staining of bone marrow aspirate revealed presence of numerous LD bodies within mononuclear cells.

1A. What is the probable diagnosis?

1B. What is the mode of transmission of this infection?

1C. What is the pathogenesis of this infection?

1D. How is the lab diagnosis of this disease done?

(1+1+4+4 = 10 marks)

2. Describe the pathogenesis, laboratory diagnosis and prophylaxis of human rabies.

(4+2+4 = 10 marks)

3. Write short notes on:

3A. Primary amoebic meningo-encephalitis

3B. Life cycle of *Plasmodium vivax*

3C. Hydatid cyst

3D. List the types of Larva migrans with etiology of each type

3E. Enumerate the intestinal nematodes

3F. Microfilaria

3G. List the viruses causing sexually transmitted diseases

3H. Describe the lab diagnosis of HIV infection

3I. Prion diseases

3J. List the arboviral infections seen in India

3K. MMR vaccine

3L. Enumerate the various sub-cutaneous mycoses with their etiology

3M. Laboratory diagnosis of Candidiasis

3N. Aspergillosis

3O. *Pneumocystis jirovecii*

(4×15 = 60 marks)