

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MICROBIOLOGY) EXAMINATION
JANUARY, 1993

Date: 18th January 1993

Time: 1.30 p.m. - 4.30 p.m.

PAPER I

Answer all questions.

Each question to be answered in a separate book.

1. Discuss the epidemiology of shigellosis in the Southeast Asia region and its control.
2. Write briefly on :
 - a) Legionella pneumophila
 - b) Phage typing
 - c) Bacterial vaginosis
3. Write on each of the following :
 - a) Bio-safety measures in a microbiology laboratory
 - b) Hospital infection control committee
4. Discuss the currently employed rapid diagnostic methods in the diagnosis of bacterial infection giving appropriate examples.
5. Write on :
 - a) role of a typical mycobacteria in human disease
 - b) Enterohaemorrhagic Ecoli

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD MICROBIOLOGY EXAMINATION
JANUARY, 1993

Date: 19th January 1993

Time: 9.00 a.m. - 12.00 noon

PAPER II

Answer all 5 questions.

Each question to be answered in a separate book.

1. Discuss the role of the macrophage in the immune reaction.
2. Write on :
 - a) polymerase chain reaction
 - b) HLA antigen
3. Write briefly on :
 - a) significance of bacterial capsules
 - b) Epitopes
 - c) Quinolones
4. Write on :
 - a) Detection of immune complexes
 - b) Transduction
 - c) Bacterial filters
5. Write briefly on :
 - a) C reactive proteins
 - b) leptospirosis in Sri Lanka
 - c) Typhoid vaccine

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 1994

Date: 10th January 1994

Time: 2.00 p.m. -5.00 p.m.

PAPER I

Answer all questions.

Each Question to be answered in a separate book.

1.
 - (a) How would you classify the streptococci? (25)
 - (b) What diseases do these streptococci cause in humans? (25)
 - (c) Describe the various pathogenetic mechanisms in these streptococcal diseases of humans' (50)

2. Some large cities in Western Industrialized countries, notably the U.S., have experienced a large rise in the incidence of tuberculosis in recent years. What explanations can you give for this rise ? (100)

3. Discuss the need for quality control in a Microbiology Laboratory serving a general hospital and describe what you would consider to be a suitable programme of quality control. (100)

4. Write on
 - (a) Aminoglycoside modifying enzymes (25)
 - (b) Interferon (25)
 - (c) Reverse transcriptase (25)
 - (d) Graft Vs host reaction (25)

5. Discuss the significance in clinical Bacteriology of the 'normal bacterial flora' of the human body. (100)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 1994

Date: - 11th January 1994

Time: 9.00 a.m. -12.00 noon

PAPER II

Answer all questions.

Each question to be answered in a separate book.

1. Write on:
 - (a) Bacterial fimbriae (50)
 - (b) Transferable drug resistance (50)

2. Discuss briefly giving examples antibody mediated tissue injury in relation to the immune mechanisms operating in these reactions. (100)

3. How does *Clostridium tetani* cause disease in Man ?
Discuss the epidemiology of tetanus, its diagnosis, treatment and prevention. (100)

4. How do T and B lymphocytes collaborate against external microbe ? (100)

5. Discuss critically the emergence of Non O1 *Vibrio cholerae* as the cause of outbreaks of cholera. (100)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
SEPTEMBER, 1994

Date: 12th September 1994

Time: 2.00 p.m. - 5.00 p.m.

PAPER I

Answer all questions.

Each question to be answered in a separate book.

SYSTEMATIC BACTERIOLOGY

1. An outbreak of suspected Legionnaires disease has occurred in a tourist hotel situated on the West Coast of Sri Lanka.
Describe the measures you would adopt to confirm the diagnosis, trace the source of infection, control the outbreak and prevent future recurrences.

2. Write on
 - A. Necrotising fasciitis
 - B. Pseudobadteraemia
 - C. Gallstone associated bacteria

3. Discuss critically the use of prophylactic antibiotics in infective diseases.

4. Write an essay on human anaerobic infections.

5. Discuss the role of mycobacteria in human disease and briefly describe recent advances in laboratory diagnosis of infections caused by mycobacterium tuberculosis.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MICROBIOLOGY) EXAMINATION
SEPTEMBER, 1994

Date: 12th September, 1994

Time: 2.00 p.m.- 5.00p.m.

PAPER I

Answer all 5 (Five) questions.
Each question to be answered in a separate book.

SYSTEMATIC PARASITOLOGY

1. What factors play a role in sustaining endemicity in bancroftian filariasis? What are the main problems associated with strategies currently available for the control of this infection?
2. The majority of malaria infections give rise to uncomplicated disease. Discuss.
3. Write an essay on "Parasitic infections in the Acquired Immunodeficiency Syndrome (AIDS)".
4. What are the main morphological features, which distinguish platyhelminths from nematodes? Discuss how the major characteristics of EITHER trematodes OR cestodes enable the parasites to adapt to their environment.
5. Discuss the use of anti-parasitic drugs in pregnancy in the Sri Lankan setting.

POST GRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MICROBIOLOGY) EXAMINATION
SEPTEMBER, 1994

Date: 12th September, 1994

Time: 2 .00 p.m. - 5.00 p.m.

PAPER I

Answer all questions.

Answer each question in a separate book

SYSTEMATIC VIROLOGY

1. Discuss in brief the aetiological diagnosis of viruses transmitted in blood.
2. Describe the consequences of maternal rubella at successive stages of pregnancy. Discuss the Sri Lankan situation in relation to rubella and measures you would recommend to minimize the consequences of rubella infection.
3. Write on any three of the following :
 - a) Chronic fatigue syndrome
 - b) Rotaviruses
 - c) Antigenic drift and antigenic shift
 - d) Rabies immunoglobulin and its use in post exposure therapy.
4. Write an essay on viral haemorrhagic fevers with particular reference to Sri Lanka.
5. Discuss the role of the virology laboratory in the polio eradication programme.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
SEPTEMBER, 1994

Date: 13th September, 1994

Time:9.00 a.m. -12.00 noon

PAPER II

Each question to be answered in a separate book.
Answer ONE question as specified.

PART A

1.

1.1

BACTERIOLOGY

What do you understand by the term quality assurance as applied to a microbiology laboratory? Discuss critically its application to the microbiology laboratory service in Sri Lanka.

1.2

VIROLOGY

Describe the replication of RNA viruses.

1.3

PARASITOLOGY

Discuss the importance of parasitic zoonoses in Sri Lanka.

PART B

(Answer both questions.)

2. Write on ANY TWO of the following.

2.1 Interleukins

2.2 Interferons

2.3 Antibody dependent cell cytotoxicity.

3. Outline the immunological basis of anti-microbial vaccine development. Discuss, giving examples, the immunological issues, which may hinder their successful development.

PART C

(Answer any TWO questions.)

4. Discuss the potential impact of irrigation schemes on vector-borne disease.
5. Describe the role of the polymerase chain reaction (PCR) in modern medicine.
6. Discuss "Universal precautions" in the prevention of hospital acquired infections in Sri Lanka.
7. Outline your working plan to design and organize a microbiology laboratory for a 1500-bed tertiary care hospital (keeping financial constraints in mind).

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MICROBIOLOGY) PART II CATEGORY A EXAMINATION
SEPTEMBER, 1996

Date: 2nd September 1996

Time: 2.00 p.m. - 5.00 p.m.

PAPER I

Answer all questions (Five)
Answer each PART in a separate book.

SYSTEMATIC VIROLOGY

PART A

1. Describe the pathogenesis of HIV/AIDS. Discuss why it is difficult to develop a vaccine against this disease.
2. Describe the pathogenesis, transmission, clinical features and laboratory diagnosis of Herpes simplex virus infections.

PART B

3. Describe the epidemiology, clinical features, laboratory diagnosis and prevention of dengue virus infections in Sri Lanka.
4. Write on any two of the following
 - 4.1 Hepatitis C
 - 4.2 Laboratory diagnosis of rabies
 - 4.3 Polio eradication strategies

PART C

5. Write an essay on bovine spongiform encephalopathy (B.S.E) and human health. What steps should be taken to prevent infectious material coming into Sri Lanka.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MICROBIOLOGY) PART II CATEGORY A EXAMINATION
SEPTEMBER, 1996

Date: 2nd September, 1996

Time: 2.00 p.m.-5.00 p.m.

PAPER I

Answer all questions.

Answer each PART in a separate book.

SYSTEMATIC BACTERIOLOGY

PART D

1. Enumerate the pulmonary infections associated with Human immuno deficiency Virus (HIV) infection.
Discuss their microbiological investigation and management.

PART E

2. Discuss the aetiology, laboratory diagnosis and management of infective endocarditis.
3. Discuss the role of third generation cephalosporins in the management of sepsis.

PART F

4. Write notes on:
 - (a) Chlamydia pneumoniae (TWAR)
 - (b) Phenolic disinfectants
 - (c) Management of nasopharyngeal carriers during an outbreak of meningococcal meningitis.
 - (d) Pathogenicity of Listeria monocytogenes.
5. Discuss the chemotherapy of
 - (a) Pulmonary infections in-patients with cystic fibrosis.
 - (b) Atypical mycobacterial infections
 - (c) Methicillin Resistant Staphylococcus aureus (MRSA) infections.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
SEPTEMBER, 1996

Date: 3rd September, 1996

Time: 9.00 a.m.-12.00 noon

PAPER II

Answer relevant questions
Answer each question in a separate book.

PART X

BACTERIOLOGY

1.
 - 1.1. Discuss the mechanisms of bacterial food poisoning giving examples. Describe the clinical features and laboratory diagnosis.

VIROLOGY

- 1.2. Describe the mechanisms of antiviral drug action. Critically evaluate the clinical usefulness of existing antiviral drugs.

PART Y

(Answer both questions)

2. Describe the cell-mediated immune responses against microbial infections.
3. Write on any three of the following:
 - 3.1. IgM capture ELISA
 - 3.2. Diseases associated with defects in phagocytosis
 - 3.3. Anamnestic antibody response
 - 3.4. Passive immunization

PART Z

(Answer two questions)

4. Discuss the aetiology of 3 common device associated hospital infections. Describe the preventive measures you would adopt to prevent such infection.
5. Write an essay entitled; "Diagnostic microbiology in the 21st century", in a developing country.
6. Describe the principles of the following techniques and critically evaluate their value in diagnostic microbiology.
 - 6.1. Nucleic acid hybridization
 - 6.2. Polymerase chain reaction (PCR)
 - 6.3. Western blot
7. Discuss the control of water borne microbial diseases with particular reference to Sri Lanka.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) PART II EXAMINATION
MARCH, 1997

Date: 10th March 1997

Time: 2.00 p.m. - 5.00 p.m.

PAPER I

Answer all Five questions.
Answer each question in a separate book.

SYSTEMATIC BACTERIOLOGY

1. Write on:
 - (a) Multidrug resistant tuberculosis (MDR TB)
 - (b) Use of hyperbaric oxygen in treatment of sepsis
 - (c) Carbapenems

2. Discuss in detail:
 - (a) the mechanisms of pathogenesis in escherichia coli diarrheas,
 - (b) the laboratory evidence in support of such mechanisms.

3. Discuss the factors that determine the choice of antibiotics and chemotherapeutic agents in the treatment of human infections.

4. Describe the etiology and pathogenesis of microbial causes of bone and joint diseases.
Discuss the use of antimicrobials in their treatment and prevention.

5. Discuss the criteria that are used for assessing the quality of a microbiological test procedure.
Describe the control measures you would adopt to ensure the quality of culture media in a diagnostic laboratory.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) PART II EXAMINATION
MARCH, 1997

Date: 10th March 1997

Time: - 2.00 p.m. - 5.00 p.m.

PAPER I

Answer all questions (Five)
Answer each question in a-separate book.

SYSTEMATIC PARASITOLOGY

1. Discuss the role of molecular approaches in the study of mosquito vectors.

2. Indigenous cases of cutaneous leishmaniasis have occurred recently in Sri Lanka. Write an account of how you would investigate the epidemiology of this disease in the local environment.

3. Discuss critically the current options available for the control of bancroftian filariasis.

4. The current armed conflict in Sri Lanka has resulted in displaced populations living in refugee camps. Discuss the risk of parasitic diseases spreading among these refugees, and outline the measures that may be taken to minimize these health risks.

5. Early diagnosis and treatment of malaria infections is a principal strategy in the control of this disease. Discuss the rationale of this method and the problems encountered in implementing this strategy in Sri Lanka.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) PART 11 EXAMINATION
MARCH, 1997

Date: 10th March, 1997

Time :- 2.00 p.m.- 5.00 p.m.

PAPER I

Answer all questions (Five).
Answer each PART in a separate book.

SYSTEMATIC VIROLOGY

PART A

1. Discuss the role played by the following when a patient less than 15 years of age is admitted to a hospital with acute flaccid paralysis (AFP).
 - 1.1 The Pediatrician or Clinician
 - 1.2 The Epidemiologist
 - 1.3 The Virologist
2. Discuss the immunoprophylaxis of rabies

PART B

3. A young adult develops jaundice among other symptoms. On investigation, levels of unconjugated bilirubin are raised in blood and urine. Liver enzymes are raised.
 - 3.1. What aetiological factors should be borne in mind ?
 - 3.2. Describe the investigations available in Sri Lanka, which will help in establishing a diagnosis.
 - 3.3. Give brief descriptions of viral agents that cannot be detected in Sri Lanka.

4. Write on :
 - 4.1. Laboratory diagnosis of viral infections of the respiratory tract.
 - 4.2. DNA viruses and cancer.

PART C

5. Enumerate the causative agents of sexually transmitted microbial infections. Discuss the Pathogenesis, laboratory diagnosis, prevention and management of a sexually transmitted viral disease.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
MARCH 1997

Date: 12th March 1997

Time: 9.00 a.m. - 12.00 noon

PAPER II

Answer relevant questions
Answer each question in a separate book.

PART X

BACTERIOLOGY

1.
 - 1.1 Describe the various cytoplasmic organelles of microbes seen with the electron microscope. Outline their respective functions.

VIROLOGY

- 1.2(a) Discuss how viruses spread in the body and the factors that influence this spread
 - 1.2(b) Discuss viral tropism (the ability to selectively infect cells).

PARASITOLOGY

- 1.3 What methods are currently available for the routine diagnosis of gastrointestinal parasites in humans?
What problems do these methods present to laboratories in developing countries and what feasible solutions might be considered?

PART Y

(Answer both questions)

2. Describe the major histocompatibility complex, and discuss the role it plays in the induction and expression of the immunological response

3. (a) Write on
 - 1) TH1 and TH2
 - 2) Naked DNA
 - 3) Role of tumor necrosis factors in any one systemic infection.

OR

- (b) Amplification is a common theme of the immune response.

PART Z

(Answer two questions)

4. Discuss the strategies and procedures you would adopt to ensure a high degree of infection control in a tertiary care hospital.

5. Write on:
 - a) DNA amplification
 - b) Gene therapy
 - c) Molecular typing

6. Discuss the global resurgence of arboviral diseases.

7. Write an account of prophylaxis against infections and parasitic diseases of travelers.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) PART II EXAMINATION
JANUARY, 1998

Date: 19th January 1998

Time: 2.00 p.m. - 5.00 p.m.

PAPER I

Answer all Five questions.

Answer each question in a separate book.

(SYSTEMIC BACTERIOLOGY)

1. Discuss the epidemiology, laboratory diagnosis and prevention of meningococcal meningitis.
2. Discuss the pathophysiology and management of septic shock.
3. Critically evaluate antibiotic-testing methods in common use (locally and internationally), and state with reasons the methods you would establish in a General Hospital Laboratory in Sri Lanka.
4. Discuss the role of the Microbiologist in the diagnosis and management of pyrexia of unknown origin.
5. Write on the pathogenesis and epidemiology of :
 - (a) Leptospirosis
 - (b) Non venereal syphilis
 - (c) Pasteurella multocida infection

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) PART II EXAMINATION
JANUARY, 1998

Date: 19th January 1998

Time: - 2.00 p.m.- 5.00 p.m.

PAPER I

Answer all five questions.

Answer each question in a separate book.

(SYSTEMIC PARASITOLOGY)

1. Discuss the different mechanisms and modes of transmission of human pathogens by arthropods
2. A survey on intestinal parasites in a Sri Lankan community showed the following overall prevalence rates: *Ascaris lumbricoides* 24%, hookworm 11%, *Trichuris trichiura* 20%, *Strongyloides* spp. 1%, *Entamoeba histolytica* 0.8%, *E.Coli* 10% and *Giardia intestinalis* 8%
Discuss the epidemiological factors, which could be responsible for this differential prevalence pattern.
Indicate the limitations in the interpretation of these results.
3.
 - 3.1. In what ways would an individual living in an area endemic for bancroftian filariasis respond to repeated mosquito bites with infective *Wuchereria bancrofti* larvae?
 - 3.2. What are the merits and disadvantages of currently available diagnostic tests in establishing definite filarial aetiology in each of these responses?
4. Discuss the following statement. "Age and locality targeted chemotherapy is a useful strategy in the control of intestinal nematode parasitic infections".
5. Write on :
 - 5.1. Childhood cestode infections in Sri Lanka.
 - 5.2. Pathogenesis of cerebral malaria.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) PART II EXAMINATION
JANUARY, 1998

Date: 21st January, 1998

Time: 9.00 a.m.-12.00 noon

PAPER II

Answer each question in a separate book.

PART A

(Answer one question)

1. Give an account of the virulence mechanisms of bacterial pathogens in relation to human disease.
2. Write an account on the transmission of zoonotic infections to man in the domestic environs in Sri Lanka.

PART B

(Answer both questions)

3. Describe the interactions involved between cells of the immune system in the immune response.
4. Write an account on the role of hypersensitivity in the pathogenesis of infective diseases.

PART C

(Answer two questions)

5. Write on three of the following
 - 5.1. Gene therapy
 - 5.2. Biological warfare
 - 5.3. Gene probes
 - 5.4. Polymerase chain reaction

6. State the risks of improper disposal of hospital waste and describe how you would set up a waste disposal programme for a provincial hospital in Sri Lanka.

7. Discuss the use of chemotherapeutic agents in the control of vector borne diseases in Sri Lanka.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JULY 1999

Date: 12th July 1999

Time: 2.00 p.m. - 5.00 p.m.

PAPER I

Answer all FIVE (5) questions

Answer each question in a separate book

1. Write an account of coagulase negative staphylococcal infections in man.
2. Discuss the epidemiology, pathogenesis and laboratory diagnosis of rickettsial infections.
3. The laboratory diagnosis of viral encephalitis in Sri Lanka could be improved: Discuss.
4.
 - 4.1 Describe the mechanisms involved in the causation of infection by the fungus *Aspergillus fumigatus*.
 - 4.2 Describe the different varieties of human infection caused by this fungus and discuss the techniques you would adopt to diagnose such infections.
5. Write on:
 - 5.1 Culture negative bacterial endocarditis
 - 5.2 Counting of air borne bacteria
 - 5.3 *Chlamydia pneumoniae*

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JULY 1999

Date: 13th July 1999

Time: 9.00 a.m. - 12 noon

PAPER II

Answer any FIVE (5) questions

Answer each question in a separate book

1. Discuss the factors, which influence the emergence and re-emergence of an infective disease.
2. Define the terms 'antiseptic' and 'disinfectant'.
Discuss the use of antiseptics and disinfectants in hospital and laboratory practice, with special reference to their mechanisms of action and limitations in application.
3. Write a critical account of the role of the microbiology laboratory in the control of congenital and neonatal infections.
4. Describe the microbial aetiological agents, pathogenesis, laboratory diagnosis and management of septic arthritis.
5. A new dialysis and renal transplant unit is being set up in the General Hospital in which you work.
 - 5.1 Describe the role of the microbiologist from the planning stage on ward.
 - 5.2 Discuss critically the implications for the microbiology diagnostic service.
6. 'Despite the availability of many new antibiotics, the mortality in serious bacterial sepsis remains high'. Discuss.
7. Write on:
 - 7.1 Extended spectrum B-lactamases
 - 7.2 Use of hyperimmune globulin
 - 7.3 Biotherapy

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
MARCH, 2000

Date: 14th March, 2000

Time: 9.00 a.m. - 12.00 noon

PAPER I

Answer all five (5) questions

Answer each question in a separate book.

1. Describe strategies used to develop vaccines in the past. Critically discuss the role of immunization in the control of infective diseases in the 21st century.
2. Write an essay on the role of mycoplasma in human disease. Discuss critically the laboratory methods available for the diagnosis of mycoplasma infection.
3. Write on the viral aetiology of
 - 3.1 heart disease
 - 3.2 cancer
4. What are the factors, which could lead to opportunistic fungal infection? Describe the common opportunistic mycoses, their mode of infection and disease entities caused by them.
5. Write on :
 - 5.1 *Stenotrophomonas maltiphila*
 - 5.2 fluoroquinolones
 - 5.3 microbiological diagnosis of prostatitis

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
MARCH, 2000

Date: 15th March, 2000

Time: 9.00 a.m.- 12.00 noon

PAPER II

Answer any five- (5) questions.

Answer each question in a separate book.

1. Discuss
 - 1.1 The modes of transmission of Hepatitis C virus (HCV)
 - 1.2 The currently available methods of diagnosing HCV infection and the drawbacks of these methods.
2. Pediatricians responsible for the neonatal unit in a tertiary referral hospital in Sri Lanka complain of a continuing problem of 'septic babies' over the past four months in the Unit.
Describe the steps you would take to investigate this complaint and discuss what remedial measures may be required to resolve the problem.
3. What is an antibiotic policy?
Discuss, stating advantages and disadvantages, how you would develop and monitor an antibiotic policy for use in a General Hospital in Sri Lanka.
4. Describe briefly the clinical presentation of superficial and cutaneous fungal infections. Discuss the factors, which determine the distribution of dermatophytoses in a community.
5. Write on
 - 5.1 prozone phenomenon
 - 5.2 Clostridium botulinum
 - 5.3 Drug resistant Mycobacterium tuberculosis
6. Give an account of the epidemiology, clinical features and laboratory diagnosis of Q fever.
7. What measures would you take to prevent laboratory-acquired infection in a hospital based microbiology laboratory?

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2001

Date :- 15th January, 2001

Time: - 2.00 p.m. - 5.00p.m.

PAPER 1

Answer all five (5) questions.

Answer each question in a separate book.

- 1 . Discuss the application of developments in immunological methods in the last two decades, to diagnostic microbiology.

2. Discuss the laboratory diagnosis and management of the following conditions, with emphasis on the practical difficulties faced in Sri Lanka.
 - 2.1 Onychomycosis
 - 2.2 Disseminated candidiasis
 - 2.3 Mucormycosis

3. Discuss the epidemiology, pathogenesis and laboratory diagnosis of human brucellosis

4. Describe the extent of the global problem of Hepatitis B infection. Discuss the various control strategies being used.

5. Critically evaluate the methods available for typing organisms responsible for nosocomial infections.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2001

Date :- 16th January, 2001

Time :- 9.30 a.m. - 12.30 p.m.

PAPER II

Answer any five (5) questions.

Answer each question in a separate book.

- 1 . Write an essay on factors that contribute to virus survival.
2. Discuss the clinical spectrum and laboratory diagnosis of four (4) opportunistic Infections associated with human immunodeficiency virus (HIV) infection.
3. Discuss the part played by non sporing anaerobes in human disease
4. Discuss how you would curtail the spread of an outbreak of Methicillin resistant Staphylococcus aureus (MRSA) in an intensive care unit.
5. Write on
 - 5.1. Ehrlichiosis
 - 5.2. Pathogenesis of Pseudomonas aeruginosa
 - 5.3. Post Antibiotic Effect (PAE)
6. As a newly appointed Consultant Microbiologist to a General Hospital in Sri Lanka, discuss the measures you would take to develop the laboratory for the purpose of accreditation.
7. Write on
 - 7.1. The role of the microbiologist in commissioning of an operating theatre
 - 7.2. Current advances in antibiotic therapy of MULTIRESISTANT Gram positive cocci.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2002

Date :- 7th January, 2002

Time :- 1.30 p.m. - 4.30 p.m.

PAPER I

Answer all five (5) questions.

Answer each question in a separate book.

1. You have been appointed a Consultant Microbiologist to a Provincial Teaching Hospital where laboratory diagnosis of fungal infections is non existent.
 - 1.1. What mycology services can be offered to different specialities in the hospital ?
 - 1.2. How would you organize the laboratory to provide these services ?
2. How does immunosuppression influence the management of infections ?
3. Write an account of the epidemiology, pathogenesis, laboratory diagnosis of human anthrax and outline current strategies for prevention.
4. Discuss the use of selective media in a diagnostic laboratory. How would you ensure the quality of their performance ?
5. Critically appraise the control of dengue infection in Sri Lanka.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2002

Date :- 8th January, 2002

Time :- 9.00 a.m. - 12.00 noon

PAPER II

Answer any five (5) questions.

Answer each question in a separate book.

1. Discuss the role of the Microbiologist in the diagnosis and prevention of tuberculosis in Sri Lanka.
2. Write notes on :
 - 2.1. Macrolide antibiotics
 - 2.2. Naked DNA vaccine
 - 2.3. Clostridial myonecrosis
3. Discuss the role of microscopy in the diagnosis of sexually transmitted infections.
4. How would you investigate a report of several cases of diarrhoea in the intensive care unit.
5. Review the use of vaccines in pregnancy
6. Write notes on :
 - 6.1. Non-typhoidal salmonellae
 - ~ 6.2. The role of automation in diagnostic microbiology laboratories
7. Write on the -use of antivirals in the treatment of herpes simplex, hepatitis B and HIV infection.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2003

Date. 20th January, 2003

Time. 1.30 p.m. - 4.30 pm

PAPER 1

Answer all five (5) questions.
Answer each question in a separate book.

1. Discuss the indications for disinfectant use in a General Hospital. Describe how you would develop and monitor a disinfectant policy for your hospital.
2.
 - 2.1 Give a brief account of latent viral infections.
 - 2.2 Write a critical account of the use and limitations of the immuno-Fluorescence test in viral infections.
3. Discuss critically factors affecting the zone of inhibition in antibiotic susceptibility testing by disc diffusion.
4. Describe the pathogenesis of pulmonary infections caused by fungi in an immuno compromised patient. Discuss the limitations of laboratory diagnosis of these infections in Sri Lanka.
5. Describe microbial evasion of the immune system and discuss its relevance to vaccine development.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2003

Date. 21st January 2003

Time. 900 a.m. - 1200 noon

PAPER II

Answer any five (5) questions.

Answer each question in a separate book

1. In the year 2004 you are in charge of the microbiology laboratory in a major maternity hospital in the Western Province in Sri Lanka. You have been asked to set up hepatitis viral diagnostic services for the hospital and you are allowed resources to use five viral markers. Giving reasons, discuss your choice of the viral markers.
2. Write notes on :
 - a) Diagnosis of chlamydial infection
 - b) Acinetobacter species
 - c) Vancomycin resistant enterococci.
3. Critically evaluate the microbiological diagnosis of urinary tract infections in the state and private sector in Sri Lanka. Prepare guidelines to improve this service.
4. Discuss the prophylactic use of antibiotics in surgery.
5. Write an account of non-tuberculous mycobacteria.
6. Write notes on :
 - a) New antifungal agents
 - b) Interferons
 - c) Post -antibiotic effect
7. Discuss briefly the role of the Consultant Microbiologist in
 - a) the management of patients in a general intensive care unit of a provincial hospital.
 - b) commissioning of an operating theatre.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2004

Date: 19th January 2004

Time: 1.30 p.m. - 4.30 p.m.

PAPER I

Answer all five (5) questions.

Answer each question in a separate book.

1. Discuss the aetiology, diagnosis, antimicrobial management and prevention of ventilator associated pneumonia.
2. What is meant by the term Quality Assurance ?
Describe how Quality Assurance is implemented in a microbiology laboratory.
3. Outline the principles of virus diagnosis and discuss the applications and merits of different tests that are available.
4. Discuss the risk factors, diagnosis and management of candidaemia.
5.
 - 5.1. Discuss the role of the spleen in host defence.
 - 5.2. Outline infections commonly seen in splenectomised individuals and describe preventive measures taken in patients undergoing splenectomy.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2004

Date: 20th January 2004

Time: 9.00 a.m. -12.00 noon

PAPER II

Answer any five (5) questions.

Answer each question in a separate book.

1. A patient presents with a history of dog bite. What infections is the patient at risk of acquiring from this and how may they be prevented.
2. Discuss the pathogenesis: diagnosis and prevention of intravascular catheter associated infection.
3. Describe the pathogenesis and consequences of human herpes virus infections.
4. Discuss the current antibiotic options against glycopeptide insensitive staphylococci and penicillin resistant pneumococci.
5. Write on
 - (a) fungal sinusitis
 - (b) epidemiology of cryptococcal infection
 - (c) clinical use of triazoles
6. Discuss measures you would take to investigate and control an outbreak of diarrhoea and vomiting in a general medical ward.
7. Write on :
 - (a) containment level 3 facility
 - (b) clinical waste disposal
 - (c) management of occupational exposure to Hepatitis B

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2005

Date: 3rd January, 2005

Time: 1.30 p.m. - 4.30 p.m.

PAPER 1

Answer all Five (5) questions.

Answer each question in a separate book.

1. Describe the diseases caused by Lancefield Group B haemolytic streptococci. How may they be prevented, diagnosed and treated ?
2. Discuss the role of the health care worker as a source of transmission of viral infections.
3. Review the procedures in a microbiology laboratory for diagnosis of lower respiratory tract infections. Discuss their limitations in the context of a laboratory in a teaching hospital in Sri Lanka.
4. Discuss the methods available for laboratory evaluation of Immune competence and their limitations in clinical practice.
5. Outline the predisposing factors and pathogenesis of fungal endocarditis and discuss its diagnosis and management.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2005

Date: 4th January, 2005 .

Time: 9.00 a.m. - 12.00 noon

PAPER II

Answer any Five (5) questions.

Answer each question in a separate book.

1. Describe the pathogenesis of tuberculosis.
2. Write on
 - a) Severe Acute Respiratory Syndrome (SARS)
 - b) Bioterrorism
3. Discuss the laboratory diagnosis of dengue virus infection, its challenges, and recent advances.
4. Critically evaluate the laboratory techniques available to support the diagnosis of
 - a) invasive aspergillosis
 - b) Cryptococcal meningitis
 - c) Pneumocystis carinii pneumonia
5. What are the infections that may arise among people living in a refugee camp, following the recent disaster in Asia. Discuss the role of the microbiologist in the control and prevention of such infections.
6. Discuss the clinical use of fluoroquinolones.
7. Write on :
 - a) Typhus fever as an emerging infection in Sri Lanka
 - b) Strategies to improve compliance with hand hygiene.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2006

Date :- 16th January 2006

Time :- 1.30 p.m. - 4.30 p.m.

PAPER I

Answer all five (5) questions.

Answer each question in a separate book.

1. Discuss the factors which contribute to the pathogenesis of respiratory tract infections.
2. List the most likely aetiological agents and describe the laboratory based evidence to arrive at a diagnosis in the following clinical scenarios
 - 2.1. An erythematous scaly pruritic rash of one month duration in the axilla of a young female.
 - 2.2. A 4 week history of moist itchy lesions in the toe web spaces (3rd /4th) of a soldier in active service.
 - 2.3. Multiple chronic ulcerative warty lesions of one year duration on the leg of a gardener.
3. Discuss the strategies adopted for the prevention of congenital viral infections.
4. Write notes on
 - 4.1. Immune modulation in the treatment of human disease.
 - 4.2. The role of nucleic acid amplification for the detection of microbial pathogens in Sri Lanka.
5. Evaluate critically the use of "single-use" items in the Sri Lankan health care system.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY, 2006

Date :- 17th January 2006

Time : 9.00 a.m. -12.00 noon

PAPER II

Answer any five (5) questions.

Answer each question in a separate book.

1. Describe the range of clinical syndromes associated with acute bacterial infections of the skin and adjacent soft tissues. Discuss their aetiology, laboratory diagnosis and management.
2. Outline the classification of the medically important Chlamydia species. What are the principal methods that are available for the laboratory diagnosis of infections caused by these organisms? Discuss briefly the advantages and disadvantages of these methods in routine laboratory practice.
3. A 31 year old male presented with a short history of fever and confusion which progressed to coma in 24 hours. After preliminary investigations a diagnosis of acute viral encephalomyelitis was made. Describe how you would assist the clinician to arrive at a specific aetiological diagnosis.
4. Describe how you would investigate a probable outbreak of sepsis in a special care baby unit of a teaching hospital in Sri Lanka.
5. Write notes on
 - 5.1. Extended spectrum beta lactamases
 - 5.2. Clinical use of amphotericin
6. Discuss the impact of current immunization programmes on the health status of people in Sri Lanka.
7. Discuss with examples, factors which may have contributed to the emergence of "new" pathogens in the past two decades. Outline measures which may be helpful in prevention of diseases due to such emerging pathogens.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY 2007

Date: 16th January 2007

Time: 1.00 pm - 4.00 pm

PAPER 1

Answer all five (5) questions.

Answer each question in a separate book.

1. What is sepsis ? Describe the pathogenesis and principles of management of sepsis.
2.
 - 2.1 Describe the infective complications after renal transplantation.
 - 2.2 What prophylactic measures would you take to prevent such infections? (Section 2.2 will carry 30% marks allocated to this question)
3. Discuss the aims, principles of development and effectiveness of antibiotic policies in a hospital setting.
4.
 - 4.1 List the respiratory viruses which have the potential to undergo significant genetic variation.
 - 4.2 Describe the mechanisms of such genetic variations and its effects on susceptible human populations taking examples from the recent pandemics of respiratory diseases.
 - 4.3 Outline the preventive strategies against such evolving respiratory pathogens.
5. "Systemic infections by non albicans candida are on the increase and treatment and prevention of such infections are complicated". Discuss this statement.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY 2007

Date: 17th January 2007

Time: 9 am - 12 noon

PAPER 11

Answer any five (5) questions.

Answer each question in a separate book.

1. Discuss the diagnostic tests performed on cerebrospinal fluid and their interpretation to determine the bacterial aetiology of meningitis.
2. Write on
 - 2.1 The diagnosis and treatment of drug resistant tuberculosis
 - 2.2 Once daily dosing of aminoglycosides
3. Discuss the initiatives you would take in a tertiary care hospital to prevent surgical site infections.
4. Write on
 - 4.1 The pathogenesis and laboratory diagnosis of leptospirosis.
 - 4.2 The laboratory diagnosis and treatment of fungal infections of scalp and hair.
5.
 - 5.1 Describe the current strategies adopted by Sri Lanka in its effort to eradicate poliomyelitis.
 - 5.2 Discuss the obstacles and future challenges in achieving a polio free world.
6.
 - 6.1 Discuss the role of Complement in maintaining health.
 - 6.2 Describe the clinical features of patients with Complement deficiency.
 - 6.3 Describe **briefly** how you would manage patients with Complement deficiency.
7. Discuss the role of a Reference Laboratory and its limitations in a developing country.

POSTGRADUATE' INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY 2008

Date :- 23rd January 2008

Time :- 1.00 p.m. - 4.00 p.m.

PAPER I

Answer all five (5) questions.

Answer each question in a separate book.

1. You have been asked to prepare a plan of action to prevent infectious diseases amongst military personnel working in the operational area in Sri Lanka. Discuss the strategies that you would adopt to achieve this.
2. Medical microbiology relies heavily on qualitative techniques for diagnosis of infections. Quantitative methods are less commonly used.
 - 2.1. What quantitative or semi quantitative methods are regularly used in large diagnostic laboratories ?
 - 2.2. Critically discuss the value of quantitative techniques in diagnostic microbiology using examples of methods you are familiar with.
 - 2.3. Explain how quantitative controls differ from qualitative controls.
 - 2.4. Based on your recent experience, predict how quantitative methods might improve the quality of your laboratory's results.
3. Describe the role of the World Health Organization in strengthening the laboratories of developing countries in viral disease surveillance. Illustrate your answer giving examples.
4. Discuss the role of infections in the development of hypersensitivity.
5. List the aetiological agents, clinical presentations of mucormycosis and describe its pathogenesis. What are the factors that limit effective laboratory diagnosis and management of these conditions in Sri Lanka ?

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY 2008

Date : 24th January 2008

Time : 9.00 a.m. - 12.00 noon

PAPER II

Answer any five (5) questions.

Answer each question in a separate book.

1.
 - 1.1 Describe the pharmacokinetic and pharmacodynamic parameters of antibacterials used in the treatment of infections.
 - 1.2 Application of these parameters may help minimize the emergence of bacterial resistance. Discuss critically.
2.
 - 2.1 Discuss the role of different types of diagnostic tests for Human Immunodeficiency Virus (HIV) in a National Blood Transfusion Service.
 - 2.2 What criteria would you pay attention to, when selecting a test to screen pregnant women for syphilis in a field setting ?
3.
 - 3.1 Discuss the limitations of vancomycin treatment in Staphylococcal infections.
 - 3.2 Describe the newer antibiotics for the treatment of vancomycin resistant *Staphylococcus aureus* infections
4. Discuss the role of molecular biological methods in the diagnosis of tuberculosis and critically assess their effect on the epidemiology of *Mycobacterium tuberculosis* infections.

5. As a Consultant Virologist how would you investigate an outbreak of fever and rash in the Gampaha district ? .

6.
 - 6.1 Give an account of infectious diseases transmitted by non human milk and milk products.

 - 6.2 As a Public Health Microbiologist what strategies would you adopt to minimize the occurrence of such infections ?

7. Write on
 - 7.1 Biofilms

 - 7.2 Echinocandins

 - 7.3 Role of intravenous immunoglobulins (IVIG) in the management of infections.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY 2009

Date : 19th January 2009

Time : 1.00 p.m. – 4.00 p.m.

PAPER I

Answer all five (05) questions.

Answer each question in a separate book.

1. Explain the term topical antibacterials and discuss their role in the prevention and management of infections. (100 marks)

2.
 - 2.1. Discuss the bacteriology and antibacterial treatment of peritonitis in continuous peritoneal dialysis. (70 marks)
 - 2.2. Outline the prevention of peritonitis in these patients. (30 marks)

3. As the consultant microbiologists you have been requested to establish a virological diagnostic service in a teaching hospital in Sri Lanka. Discuss how you would establish and provide this service on a priority basis for common viral infections. (100 marks)

4. Discuss the pathogenesis and management of candida infections resulting from indwelling medical devices. (100 marks)

5. A patient presents with an infection (or infections) which could be due to an underlying immune deficiency. Discuss how you would **immunologically** evaluate such a patient depending on the clinical presentation. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
FEBRUARY 2010

Date: 1st February 2010

Time : 1.00 p.m. 4.00 p. m

PAPER I

Answer all five (05) questions.

Answer each question in a separate book.

1. Discuss the factors responsible for treatment failure of infections in the absence of antibiotic resistance.

2. Outline how you would implement a hospital based programme of surveillance for health care associated infection within the constraints of available resources.

3. As a clinical microbiologist working in a general hospital, discuss the implementation of the strategies adopted by the Ministry of Health, Sri Lanka, for mitigation of pandemic flu.

4.
 - 4.1. Discuss the role of the third generation azoles in the treatment of systemic mycoses. (60 marks)
 - 4.2. Describe measures you would take to minimize contamination in a routine mycology laboratory in Sri Lanka. (40 marks)

5. At a management meeting of consultants in a tertiary care hospital in Sri Lanka, it was decided to set up immunology services in the hospital to cater to all disciplines. The Consultant Microbiologist was delegated to draw up a plan for this purpose. Provide a preliminary proposal for the next management meeting.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY 2011

Date : 17th January 2011

Time : 1.00 p.m – 4.00p.m.

PAPER I

Answer all five (05) questions.

Answer each question in a separate book.

1. What do you understand by the term "Antibiotic Stewardship" ? What is the role of a microbiologist in this programme ? (100 marks)

2. What is quality assurance and describe components of an ideal programme for quality assurance in Microbiology. (100 marks)

3. An unusually higher number of patients with Influenza-like Illness (ILI) are admitted to a teaching hospital and pandemic influenza is suspected. As the Consultant Microbiologist what is your role in managing this situation ? (100 marks)

4. Describe the host factors, clinical and microbiological criteria that would help in the diagnosis of invasive fungal infection. (100 marks)

5. Describe the role of immune manipulation in infectious diseases. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY 2012

Date : 16th January 2012

Time : 1.00 p.m – 4.00p.m.

PAPER I

Answer all five (05) questions.

Answer each question in a separate book.

1. Discuss the clinical and laboratory diagnosis of bacterial endocarditis, including culture negative endocarditis. (100 marks)

2. The Microbiology Laboratory of a teaching hospital in Sri Lanka has been asked to apply for accreditation in 5 years. Describe in detail how you would prepare for this event and recommend the infrastructure which would be needed for planning as well as implementing the project. (100 marks)

3.
 - 3.1. National surveillance programmes are carried out for a range of viral infections. Discuss how the data obtained are utilized. Illustrate your answer with examples. (50 marks)

 - 3.2. Write on the factors that need to be considered when drawing up a vaccination policy for a high risk population for Hepatitis B infection. (50 marks)

4. Outline the epidemiology and pathogenesis of cryptococcosis and discuss its laboratory diagnosis and management. (100 marks)

5. Discuss hypersensitivity reactions following administration of antibiotics. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY 2013

Date : 21st January 2013

Time : 1.00 p.m – 4.00p.m.

PAPER I

Answer all five (05) questions.

Answer each question in a separate book.

1. You have been appointed as the new off-site consultant microbiologist to a district general hospital where services of all four major specialities and specialities of eye, ENT and orthopaedic surgery are available. The medical superintendent of the hospital informs you that a wealthy donor is making arrangements to build a new theatre complex for the hospital and you were invited to get involved in the process. You have already encountered a number of defects in the existing theatre.

Discuss your role in the process of building a new theatre complex for the hospital and establishing its function. (100 marks)

2. In what way is antibiotic resistance in Gram negative bacteria an emerging problem globally ? Discuss strategies that can be used to counteract this problem. (100 marks)

3. You are the consultant microbiologist at the largest teaching hospital in a province in Sri Lanka. You have decided to establish a dengue diagnostic facility in the laboratory.

Discuss the factors you would consider in setting up this facility. (100 marks)

4. Discuss the opportunistic fungal infections in patients with haematological malignancies including risk factors , pathogens and their changing epidemiology, diagnosis and treatment options. (100 marks)

5. Discuss the immunization strategies in immune-compromised patients (excluding HIV / AIDS). (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION
JANUARY 2014

Date : 20th January 2014

Time : 1.00 p.m – 4.00p.m.

PAPER I

Answer all five (05) questions.

Answer each question in a separate book.

1. The hospital you are working in as the Consultant Microbiologist is planning to set up a kidney transplant unit. You are asked to advise on and coordinate activities for prevention of infection in this unit.

Discuss how you would organize these activities including practical problems and the limitations you are likely to experience. (100 marks)

2. 2.1. Discuss the epidemiology and pathogenesis of intra-vascular catheter related infection. (50 marks)

2.2. How would you apply this knowledge to reducing the risk of bacteraemia among patients on maintenance haemodialysis ? (50 marks)

3. “Depending on the kinetics of viral infections, different methods are available for diagnostic tests”

3.1. List the underlying principles these diagnostic tests are based. (10 marks)

3.2. Discuss their application, advantages, disadvantages and limitations giving examples. (80 marks)

3.3. Comment on new developments, considering the limitations in current diagnostic tools for viral infection. (10 marks)

4.
 - 4.1. Write on the pathogenesis of invasive aspergillosis. (30 marks)
 - 4.2. “ The laboratory plays a critical role in the diagnosis and management of invasive aspergillosis. ‘

Discuss this statement. (70 marks)

5.
 - 5.1. Describe the immunopathogenesis of sepsis. (70 marks)

 - 5.2. Discuss the potential targets for immune manipulation in the management of sepsis. (30 marks)