

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY, 1990

Date: 16th July 1990

Time :2.00 - 4.00p.m.

PAPER I

**Candidate are requested to answer one question from each Part.
Answer Part A and B in one book and Part C and D in another book .**

ANATOMY

PART A

1. Give an account of the cervical pleura and its relations.
2. Give an account of the blood supply and lymphatic drainage of the thyroid gland. Describe the relations of the blood vessels and indicate features of clinical interest.

PART B

3. Describe the origin, course and distribution of the coronary vessels.
4. Describe the relations of the intrathoracic part of the trachea and the right and left principal bronchi.

PART C

5. Give an account of the duodenum and its relations. What developmental anomalies are associated with the duodenum ?
6. Give an account of the inferior mesenteric vessels and their branches.

PART D

7. Give a brief account of the anatomy of the elbow joint and a detailed description of its relations.
8. Give an account of the arterial supply of the lower limb and indicate anatomical features of clinical interest.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY, 1990

Date: 17th July 1990

Time: 9.00a.m. - 11.00a.m.

PAPER II

Answer question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Given an account of the physiological basis for the changes that may take place in the colour of the skin.
2. Describe the physiological basis of the bodily changes that may take place in dysfunction of the parathyroid glands.
3. Give an account of the blood pressure at different points in the circulatory system.

PART B
PATHOLOGY

Answer question 4 and one other.

Answer each question in a separate answer book.

4. Discuss the etiology and pathology of calf vein thrombosis and its complications.
5. Write notes on :
 - 5.1 The pathological criteria available for assessing the degree of malignancy of a tumour.
 - 5.2 Chemical carcinogenesis.
6. Discuss the pathological changes which result from delayed hypersensitivity reactions, citing one clinical example. Explain briefly how such changes arise.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
MARCH, 1991

Date: 25th March, 1991

Time: 2.00-4.00 p.m.

PAPER I

Candidate should answer one question from each Part.
Answer Part A & B in one book and Part C & D in another book.

ANATOMY

PART A

1. Give an account of the scalenus anterior muscle and its relations. Indicate features of surgical interest.
2. Describe the anatomy of the submandibular gland and its relations.

PART B

3. Give an account of the posterior mediastinum and its contents.
4. Describe the arch of the aorta and give its relations.

PART C

5. Describe the blood supply and lymphatic drainage of the stomach. What is its surgical significance ?
6. Give an account of the left psoas major muscle and its relation.

PART D

7. Give the course and distribution of the median nerve. What are the effects of compression of the median nerve in the carpal tunnel ?
8. Describe the ligaments of the knee joint. Discuss the movements and the factors affecting its stability.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
MARCH, 1991

Date : 26th March, 1991

Time : 9.00 a.m. – 11.00 a.m.

PAPER II

Answer question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Discuss the functions of the respiratory system.
2. Give a brief account of bilirubin metabolism, and the pathophysiology of jaundice.
Give the laboratory tests used in the differential diagnosis of jaundice.
3. Describe the metabolic consequences of uncontrolled and copious vomiting.
Give the physiological principles of management in such a patient.

Answer question 4 and one other.

Answer each question in a separate answer book.

PART B
PATHOLOGY

4. Discuss the etiology, effects and complications of stone formation.
5. Discuss giving examples the different pathological changes that lead to softening of tissues.
6. Write notes *oni*
 - 6.1 Sequelae of venous thrombosis.
 - 6.2 Role of the macrophage in chronic inflammation.
 - 6.3 Tumour markers.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY , 1991

Date: 22nd July 1991

Time: 2.00-4.00p.m.

PAPER I

Candidates should answer-one question from each Part

ANATOMY

PART A

1. Describe the venous drainage of the brain.
2. Describe the parotid gland and its relations.

PART B

3. Describe the anatomy of the thoracic duct.
4. Describe the anatomy of the diaphragm. Add a note on its development.

PART C

5. Give an account of the development, the relations and the blood supply of the pancreas.
6. Describe the anatomy of the anal canal . Indicate features of surgical interest.

PART D

7. Describe the hip joint. Add a note on the congenital abnormalities of the hip joint.
8. Give an account of the intrinsic muscles of the hand including their nerve supply and actions.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY , 1991

Date: 23rd July 1991

Time: 9.00a.m. - 11.00a.m.

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Write an account of digestion and absorption (including that of water, minerals and vitamins) in the human stomach and small intestine.
2. Discuss the physiological basis for a reduction in the urine output to less than 400ml during the first 24 hours after a major surgical operation.
3. Write an essay on "Prostaglandins: Derivatives of Arachidonic Acid of Importance in Medicine".

Answer Question 4 and one other.

Answer each question in a separate answer book.

PART B
PATHOLOGY

4. Describe the cells that are found in a tissue with chronic inflammation. Explain how such cells move into chronic inflammatory tissue and discuss their functions.
5. What is a cyst ? Discuss the mechanisms of cyst formation and their complications.
6. Explain the criteria for autoimmune disease. Illustrate your answer with one example in detail.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY , 1992

Date :20th July 1992

Time: 2.00p.m. - 4.00p.m.

PAPER I

Candidates should answer one question from each part.

ANATOMY

PART A

1. Write an account of the out flow of the parasympathetic nervous system from the floor of the 4th ventricle.
2. Write an account of the hyoglossus muscle, its relationships and development.

PART B

3. Discuss the anatomy of the hilum of the right lung.
4. Describe the intrathoracic course and relationships of the oesophagus.

PART C

5. Describe the anatomy and relationships of the left kidney. Add a note on its development.
6. Describe the anatomy, blood supply and relationships of the rectum.

PART D

7. Outline the origin and course of the radial nerve.
Explain the consequences of damage to it by a fracture of the mid-shaft of the humerus.
8. Write an account of the deep fascia of the thigh.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY , 1992

PAPER II

Date : 21st July 1992

Time : 9.00 a.m.-11.00 a.m.

PART A
PHYSIOLOGY

Answer Question 1 and one other.

Answer each question in a separate answer book.

1. Give the physiological basis for two early signs or symptoms, of each of the following:
 - a. Cardiac failure
 - b. Peripheral circulatory failure
 - c. Respiratory failure.
2. Describe and explain the results of interruption of the nervous pathways to and from the urinary bladder.
3. Discuss the process of ageing in humans.

Answer Question 4 and one other

Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss the etiology and effects of atheroma.
5. Discuss tumour metastasis and factors affecting this process.
6. Write notes on :
 - 6.1 Propagation of a venous thrombus
 - 6.2 Wound hormones
 - 6.3 Intracranial aneurysms

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY 1993

Date : 19th July 1993

Time :- 2.00 p.m. - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a "separate book/s.**

ANATOMY

PART A

1. Describe the cavernous sinus and discuss its relations.
2. Give an account of the thyroid gland and its relations.
Add a note on its development.

PART B

3. Describe the anatomy of the left first rib and give its relations.
4. Give an account of the sympathetic trunk in the thorax.

PART C

5. Describe the anatomy and give the relations of the duodenum.
6. Discuss the anatomy and relations of the prostate gland.

PART D

7. List the muscles responsible for movements of the knee and give their actions and nerve supply.
Describe the factors responsible for the stability of the knee joint.
8. Give the course and distribution of the ulnar nerve.
What are the effects of transecting the ulnar nerve at (a)the elbow (b)the wrist.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY 1993

Date : 20th July, 1993

Time :- 9.00 a.m. -11 .00 a.m.

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Discuss the complications and physiological adaptations that occur DURING laparotomy for massive haemorrhage from a peptic ulcer, in an adult patient who has failed to respond to conservative measures.
2. What is meant by the terms
(a) .osteomalacia and (b) osteoporosis ?
Discuss the pathophysiology and investigation of each condition.
3. Write an account of the functions of the healthy adult human liver.
Discuss how you would assess liver function in a patient awaiting a major elective surgical operation.

Answer Question 4 and one other.

Answer each question in a separate book.

PART B
PATHOLOGY

4. What are the predisposing factors that may lead to

(a) thrombosis in the femoral artery ?
(b) thrombosis in the femoral vein ?

Describe the possible sequelae in one of these.
5. Describe the pathological features of healing of a simple fracture.
Explain how delay in fracture healing and non-union occur.
6. Discuss the pathological features of the sequelae and complications of cronic suppurative inflammation.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY 1994

Date: 18th July, 1994

Time :- 2.00 p.m - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book/s.**

ANATOMY

PART A

1. Describe the anatomy of the tongue including an account of its nerve supply and lymphatic drainage.
2. Describe the motor and sensory nerve supply of the face.

PART B

3. Give an account of the breast including its relations, arterial supply and lymphatic drainage.
4. Describe the anatomy, relations and innervation of the diaphragm .
Add a note on its development.

PART C

5. Give an account of the anatomy of the extrahepatic biliary system.
6. Describe the anatomy of the lesser sac (omental bursa) .

PART D

7. Describe the venous drainage of the lower limb.
8. Give an account of the anatomy of the shoulder joint and of the movements and muscles involved in raising the arm above the head.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY 1994

Date: 19th July, 1994

Time :- 9.00 a.m -11.00 a..m.

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Outline the physiological mechanisms which regulate gastrointestinal digestive secretions, including bile and exocrine pancreatic secretion.
2. Describe the metabolism of calcium in man. Give an account of the functions of calcium in the body.
3. Describe the physiology of thermoregulation in the adult.
Give an account of the pathophysiology of fever and heat cramp.

Answer question 4 and one other.

Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss the pathological consequences of strangulated inguinal hernia.
5. Discuss the pathology of the complications of diverticular disease of the large bowel.
6. Discuss the pathogenesis of the causes of unilateral enlargement of a leg in a 20 year old patient.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY 1995

Date: 17th July, 1995

Time :- 2.00 p.m - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANATOMY

PART A

- 1 . Describe the origin, course and distribution of the hypoglossal nerve.
2. Write an account of the palate including its development. How does it function during swallowing ?

PART B

- 3 . Write an account of the superior mediastinum.
- 4 . Give an account of the anatomy of the phrenic nerves.

PART C

5. Describe the anatomy of the left suprarenal gland.
Add a note on its development.
6. Describe the inguinal canal and its clinical significance with regard to inguinal herniae.

PART D

7. What structures may be damaged in decompressing the carpal tunnel ?
What are the clinical effects of these ?
8. Describe the anatomy of the popliteal fossa.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY 1995

Date: 18th July, 1995

Time :- 9.00 a.m -11.00 a..m.

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

- 1 . Discuss the regulation of systemic arterial blood pressure in a healthy adult.
2. Discuss the synthesis and regulation of thyroid hormones in health and disease.
3. Write the physiological basis of EACH of the following :-
 - (a) metabolic acidaemia
 - (b) bile salt metabolism and function
 - (c) fibrinolysis

Answer question 4 and one other.

Answer each question in a separate book.

PART B
PATHOLOGY

- 4 . What are the methods of preventing wound infection in surgical patients ?
5. Write an essay on carcinogenesis giving examples that may have significance in human neoplasia.
6. Write short notes on :
 - (a) Biopsy
 - (b) Granulocytes
 - (c) Heterotopic calcification

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JANUARY 1996

Date: 15th January, 1996

Time :- 2.00 p.m - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANA TOMY

PART A

1. Describe the course, distribution and relations of the facial nerve after it leaves the stylomastoid foramen. Include its clinical significance in operations on the face.
2. Describe the tongue, with reference to the arrangement of its muscles and nerve supply. Add a note on its development.

PART B

3. Write an account of the left scalenus anterior muscle and its relations. Include a discussion of the surgical importance of its relations.
4. Write an account of the diaphragm, with special reference to its relationship with the pleura, pericardium and peritoneum. Add a note on its development.

PART C

5. Describe the relations of the right kidney. Add a note on its development.
6. Write an account of the extrahepatic biliary system.

PART D

7. Write an account of the shoulder joint, emphasising how free mobility is achieved while retaining stability.
8. Write an account of the venous drainage of the lower limb. Include its clinical significance.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JANUARY 1996

Date: 16th January, 1996

Time :- 9.00 a.m - 11.00 a.m.

PAPER II

**In each part answer question No.1 and one other.
Answer each question in a separate answer book.**

PART A
PHYSIOLOGY

1. Discuss how the body maintains acid - base balance.
2. Discuss the physiological basis of the different methods of pain control.
3. Write notes on:
 - a. Regulation of gastric acid secretion
 - b. Glucagon
 - c. Cyanosis

PART B
PATHOLOGY

1. Discuss giving examples, the pathological consequences of thrombosis of the veins of the lower limb
2. Write short notes on:
 - a. Free radicals in cell injury
 - b. Fine needle aspiration cytology
 - c. Factors determining the localisation of infection
3. Discuss the pathological changes in a patient with Tuberculous lymphadenitis.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JANUARY 1997

Date: 6th January, 1997

Time :- 2.00 p.m - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANATOMY

PART A

- 1 . Describe the relations of the thyroid gland and their clinical significance.
- 2 . Describe the organisation and distribution of the sympathetic nerves in the Head and Neck region.

PART B

3. Describe the anatomy of the coronary arteries indicating the main sites of occlusion.
- 4 . Describe the lymphatic drainage of the upper limb and chest wall of an adult female.

PART C

5. Describe the muscles controlling defaecation.
6. Describe the anatomy of the head of the pancreas. Add a note on the development of the pancreas.

PART D

7. Describe the anatomy of the hip joint with special reference to the blood supply of the head and neck of the femur.
8. Describe the course and distribution of the ulnar nerve in the forearm and hand.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JANUARY 1997

Date: 7th January, 1997

Time :- 9.00 a.m -11.00 a.m.

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Give an account of the mode of action, actions and the regulation of secretion of glucocorticoids and explain the variations of secretion encountered in surgical practice.
2. Describe the regulation of vomiting and discuss the consequences of vomiting.
3. Write a brief account on :
 - (a) role of platelets in haemostasis
 - (b) chemical control of breathing
 - (c) control of coronary blood flow

Answer Question 4 and one other.

Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss the role of prophylactic antibiotics in surgery.
5. Discuss the intracellular changes which promote tumour spread. Describe the ways by which metastases may occur.
6. Write short notes on :
 - (a) The complications of atheroma
 - (b) Fat embolism
 - (c) Dissecting aneurysm

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
AUGUST, 1997

Date: 19th August, 1997

Time :- 9.00 a.m –11.00 a.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANA TOMY

PART A

- 1 . Describe the carotid sheath and its relations giving their clinical significance.
2. Describe the anatomy of the maxillary sinus.

PART B

3. Describe the anatomy of the lower part of the oesophagus.
4. Describe the origin, course and distribution of the internal thoracic (internal mammary) artery.

PART C

5. Describe the anatomy of the left ureter. Add a note on its development.
- 6 . Describe the anatomy of the abdominal aorta.

PART D

- 7 . Describe the anatomy of the anterior aspect of the wrist.
8. Describe the emergence and distribution of the fifth lumbar nerve.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
AUGUST, 1997

Date: 19th August, 1997

Time :- 2.30 p.m - 4.30 p.m.

PAPER II

Answer Question 1 and one other.
Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Give a brief account of immune defence systems of the body and outline the defects in Acquired Immune Deficiency syndrome.
2. Write an account of gastro-intestinal motility.
3. Write a brief account on the physiological basis of EACH of the following:
 - (a) Goitre
 - (b) Increased catabolism and energy utilization in patients with severe burns.
 - (c) Symptoms and signs of spinal cord transection at C₈

Answer Question 4 and one other.
Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss the different methods of malignant transformation of cells (carcinogenesis)
5. Discuss the pathological basis of colonic bleeding.
6. Write short notes on :
 - (a) Apoptosis
 - (b) Clinical and pathological significance of Helicobacter Pylori infection.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JANUARY 1998

Date: - 19th January, 1998

Time: 2.00 p.m. 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANA TOMY

PART A

1. Describe the anatomy of the Parotid gland. What features of this gland are important..in surgery.
2. Describe the origin course and distribution of the vertebral artery.

PART B

3. Describe the Venous drainage of the thoracic cage.
4. Describe all the joints relating to the manubrium sterni.

I

PART C

5. Describe the supports of the uterus.
6. Describe the spleen and its anatomical relations.

PART D

7. Describe the arrangement of the Lymph nodes in the axilla and their relationships to the nerves and vessels.
8. What do you understand by the compartments of the leg ? How is this arrangement relevant in clinical practice ?

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JANUARY, 1998

Date: 20th January, 1998

Time :- 9.00 a.m – 11.00 a.m.

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Give an account of the physiology of neuromuscular transmission.
Discuss its importance in surgical practice.
2. Give an account of the physiological basis of haemostasis in surgery.
3. Write notes on :
 - 3.1 Heat stroke
 - 3.2 ErythropoietinPhysiology of acclimatization

Answer Question 4 and one other.

Answer each question in a separate answer book.

PART B
PATHOLOGY

4. Compare and contrast acute and chronic inflammation, Illustrate your answer with examples.
5. Discuss early malignant lesions and their significance in patient management.
6. Write short notes on the following.
 - a) AIDS related diseases
 - b) Pathological effects of pulmonary embolism
 - c) Cross - infection

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
AUGUST, 1998

Date: 17th August, 1998

Time :- 2.00 p.m –4.00 p.m.

PAPER I

Candidates should answer one question from each part.

ANA TOMY

PART A

- I. Describe the anatomy of the posterior triangle of the neck.
Give the clinical significance of the structures in it.
2. Describe the anatomy of swallowing.

PART B

3. Describe the muscles of the heart in relation to the functions of its chambers.
4. Describe the anatomy of the vagus nerves in the thorax.

PART C

5. Describe the anatomy of the penis.
6. Describe the anatomy of the portal vein. Add a note on its development.

PART D

7. Describe the muscular attachments of the scapula. State the innervation of the muscles.
8. Describe the origin, course, distribution and relations of the femoral nerve.
What are the clinical effects of a cut femoral nerve ?

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
AUGUST, 1998

Date: 18th August, 1998

Time :- 9.00 a.m – 11.00 a.m.

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1.
 - a) Write an account of the functions of the colon and rectum. Briefly describe how these organs are adapted to carry out the above functions.
 - b) What are the sequelae of malfunction of these organs ?

2. Give an account of the regulation of the following during moderate muscular exercise.
 - a) muscle blood flow
 - b) coronary blood flow

Explain on a physiological basis why exercise tolerance is limited in patients with ischaemic heart disease.

3.
 - a) What are the essential components of a balanced diet ?
 - b) Discuss the daily nutritional requirements of a 65 kg male.
 - c) Indicate the effects of increased or decreased intake of the above nutrients.

Answer Question 1 and one other.
Answer each question in a separate answer book.

PART B
PATHOLOGY

1. Write an account on the causes and pathological consequences of ischaemia.
2. Discuss the pathological features of amyloidosis.
3. Write short notes on :
 - a) The pathological changes in chronic pancreatitis.
 - b) Causes for rejection of transplanted tissues.
 - c) Granuloma.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 1999

Date: - 8th February, 1999

Time: 2.00 p.m. 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANATOMY

PART A

1. Describe the muscular attachments of the mandible.
State the innervation of the muscles
Name the mandibular movements and the muscles producing them.
2. Describe the anatomy of the thyroid gland.

PART B

3. Describe the anatomy of the thoracic inlet.
4. Describe the origins, relations and course of the thoracic duct.

PART C

5. Describe the normal anatomy of the inferior vena cava. Illustrate where variations may occur and the clinical significance.
6. Describe the cross.-sectional anatomy of the trunk at the transpyloric plane of Addison.

PART D

7. Describe the arterial supply of the lower limb, including the gluteal region posteriorly.
8. Describe the spaces of the hand and fingers relevant to infection.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 1999

Date: 9th February, 1999

Time :- 2.00 p.m – 4.00 p.m.

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Write an account on calcium homeostasis.
Briefly describe the role of calcium in signal transduction.
2. Describe the formation, composition and movement of lymph in the human body.
Explain in detail its role in the regulation of extra-cellular fluid (ECF) volume and the sequelae of malfunction.
3. Write notes on
 - 3.1. Cytokines
 - 3.2. Naturally occurring anticlotting mechanisms

Answer Question 4 and one other.

Answer each question in a separate answer book.

PART B
PATHOLOGY

4. Discuss the presentation and pathological effects of osteomyelitis.
5. Enumerate the different types of aneurysms.
Discuss their pathogenesis and complications.
6. Write short notes on ,
 - 6.1. Disseminated intravascular coagulation (D.I.C.)
 - 6.2. Non metastatic complications of malignancy.
 - 6.3. Tumour markers

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
AUGUST, 1999

Date: 9th August, 1999

Time :- 2.00 p.m –4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANATOMY

PART A

1. Give an account of the right subclavian artery. Add a note on its development.
2. Describe the paranasal sinuses.

PART B

3. Describe the oesophagus.
4. Describe the diaphragm and its development.

PART C

5. Describe the blood supply of the large bowel including the rectum.
6. Describe the male urethra, add a note on its development.

PART D

7. Describe the anatomy of the middle finger including its movements.
8. Describe the sensory supply of the lower limb below the knee.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
AUGUST, 1999

Date: 10th August, 1999

Time :- 9.00 a.m – 11.00 a.m.

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Give an account of how the normal body maintains water balance and outline briefly the mechanisms leading to the main disturbances occurring in surgical practice.
2. Write an account of the basal metabolic rate highlighting the variations occurring in surgical practice.
3. Write short notes on :-
 - (a) Gastro-oesophageal reflux
 - (b) Endocrine functions of the kidney
 - (c) Physiological basis of fever and its management

Answer Question 4 and one other.

Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss the aetiological causes important in the causation of gastro intestinal neoplasms.
5. Write short notes on :-
 - (a) Biopsy techniques
 - (b) Testicular neoplasms
 - (c) Salivary calculi
6. Describe the causes and discuss the consequences of atherosclerosis.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2000

Date: - 7th February, 2000

Time: 2.00 p.m. 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANA TOMY

PART A

1. Describe the anatomy of larynx including the relationship to surrounding structures.
2. Write an account on the mylohyoid muscle, its relationship and development.

PART B

3. Give an account of the anatomy of the dome of the pleura with special reference to its clinically important relationships.
4. Describe the blood supply of the heart with its surgical importance.

PART C

5. Describe the coeliac axis and its distribution with special reference to its clinical significance.
6. Describe the anatomy of the urinary bladder and its clinically significant developmental aspects.

PART D

7. Describe the origin and course of the sciatic nerve.
Explain the effect of injury to it.
8. Describe the immediate relationship of those nerves in proximity to the humerus.
What is the significance of injury to these nerves ?

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2000

Date :- 8th February, 2000

Time :- 9.30 a.m. -11.30 a.m.

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Discuss the regulation of cardiac output with emphasis on the physiological basis of adaptive mechanisms and management procedures in a patient with hypovolaemic shock.
2. Give an account of glucose homeostasis in the body and explain the physiological basis of signs and symptoms of diabetes mellitus.
3. Write short notes on :
 - (a) Regulation of gastric acid secretion and changes following antrectomy.
 - (b) Prolactin including its actions and regulation of secretion.

Answer Question 4 and one other.

Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss pathological basis of the treatment of thyroid lumps.
5. Write short notes on :
 - (a) Aetiology of hypercalcaemia associated with malignant disease
 - (b) Helicobacter pylori
 - (c) Bleeding disorders
6. Discuss the factors affecting gastrointestinal anastomotic breakdown.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY, 2000

Date : 24th July, 2000

Time: 2.00p.m. - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANATOMY

PART A

1. Describe the parasympathetic innervation of the head and neck region.
2. Describe the anatomy of the internal jugular vein.

PART B

3. Describe the anatomy of the azygos system of veins.
4. Describe the anatomy of the 12th rib.

PART C

5. Describe the anatomy of the inguofemoral region from a laparoscopic standpoint (when viewed from within the peritoneal cavity). Name the contents of the preperitoneal (extraperitoneal) space in the inguofemoral region.
6. Describe the similarities and differences in the morphology, vascularisation and relations of the right and left adrenal glands. state the characteristics that distinguish the adrenal gland from perirenal fat.

PART D

7. Describe the anatomy of the thumb including its movements.
8. Describe the intra-articular structures of the knee joint. Discuss the movements and the factors affecting its stability.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY, 2000

Date: 25th July, 2000

Time: 9. 30 a. m . - 11. 30 a. m .

PAPER II

Answer Question 1 and one other.

Answer each question in a separate answer book.

PART A
PHYSIOLOGY

1. Discuss the factors which influence the availability and supply of oxygen to tissues.
2. Give an account of the functions of hormones in growth and development.
3. Write a brief account of
 - a) the metabolism of vitamin B12 and its deficiency states
 - b) the pathophysiology and differential diagnosis of jaundice.

PART B
PATHOLOGY

4. Give an account on the factors that determine the prognosis of malignant tumours.
5. Describe the process of fracture healing. Discuss the complications of an injury to a long bone.
6. List the common causes of intestinal obstruction and describe the pathological (local and systemic) consequences.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2001

Date: 5th February, 2001

Time: 2.00 p.m. - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANATOMY

PART – A

1. Describe the anatomy of the muscles of mastication.
2. Describe the anatomy of the orbit **excluding** the eye ball.

PART-B

3. Describe the anatomy of the female breast with particular emphasis on its lymphatic drainage.
4. Describe the anatomy of the thoracic aorta_a note on its embryology.

PART – C

5. Describe the gross anatomy of the **excluding** its relations.
6. Describe the anatomy and development of the right testis and spermatic cord.
What is the surgical relevance of their embryology ?

PART – D

7. Describe the clinical manifestations resulting from compression of the median and ulnar nerve in the region of the elbow and wrist.
8. Describe the anatomy of the venous system of the lower limb.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMEO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2001

Date: 6th February, 2001

Time: 9.30 a.m. - 11.30 a.m..

PAPER II

Answer question 1 and one other.
Answer each question in a separate book.

PART A
PHYSIOLOGY

1. Describe the physiological mechanisms that regulate hydron (H⁺ ion) concentration in the blood.
2. Discuss the mechanisms that prevent reflux of gastric contents into the oesophagus.
3. Write briefly on,
 - i. blood flow to the myocardium
 - ii. iron absorption in the gastrointestinal tract
 - iii. surfactant.

Answer question 4 and one other.
Answer each question in a separate book.

PART B
PATHOLOGY

4. Write short notes on :
 - a) Metaplasia
 - b) Fine Needle Aspiration Cytology
 - c) Granuloma
5. Discuss the pathogenesis and complications of gall stones.
6. Discuss the factors that determine the outcome of infections.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOIVIBO

MS (SURGERY) PART I EXAMINATION
JULY, 2001

Date: 23rd July, 2001

Time: 2.00 p.m. - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANATOMY

PART A

1. Give an account of the intracranial venous sinuses.
2. Describe the anatomy of the submandibular glaqd, including its microscopic structure.

PART B

3. Describe the crura of the diaphragm and their relations.
4. Describe the trachea and its relations.

PART C

5. Describe the origin, course and distribution of the superior mesenteric artery.
6. Describe the anal canal. Give a brief account of its development.

PART D

7. Give an account of the bony configuration and the main figaments of the ankle joint.
Name the muscles involved in its movements.
8. Describe the nerves that are in close proximity, to the humerus. Give the clinical effects or injury to these nerves.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY, 2001.

Date: 24th July, 2001

Time: 9.30 a.m. - 11.30 a.m.

PAPER II

Answer question 1 and one other.
Answer each question in a separate book.

PART A
PHYSIOLOGY

1. Discuss how changes in environmental temperature affects the body.
2. Give the physiological basis of the following
 - a. Automatic bladder following spinal cord transection at T₈ level.
 - b. Megaloblastic anaemia following ileal resection
 - c. Pedal oedema seen in congestive cardiac failure.
3. Write a brief account on
 - a. Neuroendocrine cells
 - b. Water balance and disorders of water balance.
 - c. Pneumothorax

Answer question 4 and one other.
Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss factors affecting wound healing,
5. Write short notes on :
 - a) fat embolism.
 - b) types of necrosis.
6. What are the constituents of urinary calculi ?
Discuss the causation, effects and complications of urinary calculi .

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2002

Date: 11th February, 2002

Time: 2.00 p.m. - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Answer each question in a separate book.**

ANATOMY

PART – A

1. Give an account of the anatomy of the parotid gland.
2. Describe the anatomy of the tongue including its lymphatic drainage.

PART B

3. Describe the right 6th intercostal space and its clinical relevance
4. Describe the mediastinum and its contents. Which of these structures can be identified on a plain postero-anterior chest x-ray.

PART C

5. Describe the anatomy of the free edge of the lesser omentum. Foramen of Winslow and Calot's triangle.
6. Give an account of the right ureter.

PART D

7. Describe the carpal tunnel and its contents. What are the consequences of division of the median nerve at this level ?
8. Describe the femoral triangle and its contents.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2002

Date: 12th February, 2002

Time: 9.30 a.m. – 11.30 a.m.

PAPER 11

Answer question 1 and one other.
Answer each question in a separate book.

PART A
PHYSIOLOGY

1. Describe briefly the aetiology of hypoxaemia.
Give an account of the effects of hypoxaemia and the body's compensatory responses to hypoxaemia.
2. Give an account of the physiology and homeostasis of bone.
3. Write briefly on
 - a. Protein digestion and absorption.
 - b. Physiological basis of anaphylactic shock.
 - c. HCl secretion by the parietal cells in the stomach.

Answer question 4 and one other.
Answer each question in a separate book.

PART B
PATHOLOGY

4. Write an essay on the factors that determine the outcome of acute inflammation.
5. Explain the following terms and give examples of each ;
 - a. Hypertrophy
 - b. Hyperplasia
 - c. Metaplasia
 - d. Dysplasia
 - e. Neoplasia
6. What is a Tumour Marker ? List five tumour markers with a short description of the clinical significance of each of them.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY. 2002

Date: 22nd July, 2002

Time: 2.00 p.m. - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

PART – A

1. Describe the anatomy of the right ventricle including its blood supply. (70 marks)

Give the embryological basis of Fallot's tetralogy and patent ductus arteriosus. (30 marks)
2. Describe the relations of the thoracic oesophagus from the root of the neck to the oesophageal hiatus. (70 marks)
 - a) Add a note to its histology (10 marks)
 - b) Discuss the embryological basis of tracheo-oesophageal fistula (20 marks)

PART B

3. Describe the anatomy of the cavernous sinus and relate this to the clinical presentation of thrombosis of the sinus. (100 marks)
4. Describe the lymphatic drainage of the head and neck (excluding the brain) including the special structures in the region. (70 marks)

Explain how lymph node enlargement in the neck could signify disease in other regions of the body. (30 marks)

PART C

5. Describe the blood supply and the lymphatic drainage of the stomach. (70 marks)
Discuss their clinical importance ? (30 marks)
6. Give an account of the anatomy of the rectum. Emphasize its importance to the surgeon. (100 marks)

PART D

7. Compare and contrast the anatomy and functions of the shoulder joint with that of the hip joint. (100 marks)
8. Describe how the main artery of supply enters the upper limb. Trace its course to the hand. (60 marks)
- How are the associated anastomoses able to withstand major blockades ? (40 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY. 2002

Date: 23rd July, 2002

Time: 9.30 a.m. – 11.30 a.m.

PAPER 11

Answer question 1 and one other.

Answer each question in a separate book.

PART A
PHYSIOLOGY

1. Write brief account on the physiological actions and the feedback control of thyroid hormones.
2. Explain how an impulse is transmitted along a nerve fiber, when stimulated electrically and describe the steps involved in nerve regeneration in relation to a cut injury to the nerve axon.
3. Write short notes on the following:
 - 3.1. Unilateral pedal oedema.
 - 3.2. Tetany caused by hyperventilation.
 - 3.3. Enterohepatic circulation of bile salts.

Answer question 4 and one other.

Answer each question in a separate book.

PART B
PATHOLOGY

4. Describe premalignant lesions and premalignant conditions in the gastrointestinal tract.
Indicate the significance of these in clinical practice.
5. Discuss the pathogenesis of osteomyelitis.
6. List the pathological causes of acute ischaemia.
Describe the pathology of the conditions you mention.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2003

Date :- 10th February, 2003

Time :- 2.00 p.m. - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Answer each question in a separate book.**

ANATOMY

PART A

1. Describe the anatomy of the thyroid gland and give an account of the attachments of its investing fascia.
2. Describe the muscles of mastication.

PART B

3. Describe the structure and function of the thoracic cage.
4. Describe the anatomy of the oesophagus

PART C

5. Describe the anatomy of the adult male urinary bladder. How may its congenital abnormalities be explained by its embryological development ?
6. Describe the anatomy of the duodenum.

PART D

7. Describe the functional anatomy of the small muscles of the hand with particular reference to neurological injury.
8. Give an account of the anatomy of the knee joint and explain how stability is maintained.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2003

Date :- 11th February, 2003

Time :- 9.30 a.m. -11.30 a.m.

PAPER II

Answer question 1 and one other.
Answer each question in a separate book.

PART A
PHYSIOLOGY

1. Describe the role of the kidney in sodium balance of the body.
2. Describe the oxygen-haemoglobin dissociation curve.
3. Give the physiological basis of the following :
 - 3.1. Bradycardia following head injury
 - 3.2. Increased haemorrhagic tendency in obstructive jaundice
 - 3.3. Shock in severe acute pancreatitis

Answer question 4 and one other.
Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss the factors affecting wound healing
5. Write short notes on:
 - 5.1. Human Immunodeficiency virus (HIV)
 - 5.2. Fine needle aspiration cytology
 - 5.3. Diagnosis of Tuberculosis
6. Discuss factors that determine the prognosis of malignant tumours.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
AUGUST, 2003

Date :- 4th August, 2003

Time :- 2.00 p.m. - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Answer each question in a separate book.**

ANATOMY

PART A

1. Describe the scalene triangle.
What is the effect of a cervical rib on its contents ?
2. Describe the embryological basis of the innervation of the tongue.

PART B

3. Outline the structure and function of the diaphragm.
Give an account of the congenital defects that may occur in it.
4. Describe the embryology of the thymus.
Outline its anatomy and microscopic appearance in the adult.

PART C

5. Describe the blood supply of the rectum and anal canal.
Add a note on the anatomical basis for the development of haemorrhoids.
6. Describe the relations of the left renal artery.
Trace the course of a segmental artery within the kidney.

PART D

7. Describe the popliteal fossa.
8. Describe the course and distribution of the ulnar nerve in the hand.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
AUGUST, 2003

Date :- 5th August, 2003

Time :- 9.30 a.m. - 11.30 a.m.

PAPER II

Answer question 1 and one other.

Answer each question in a separate book

PART A
PHYSIOLOGY

1. Give an account of the compensatory mechanisms taking place in the body following a moderate haemorrhage.
2. Give an account of the endocrine responses of the body and their manifestations following trauma.
3. Write short notes on :
 - 3.1. Dietary restrictions in chronic renal disease.
 - 3.2. Muscle rigidity in basal ganglia disorders.
 - 3.3. Respiratory function tests before operations on the chest.

Answer question 4 and one other.

Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss with examples. the different causes, types and effects of necrosis.
5. Write short notes on :
 - 5.1. initiation and promotion cancer.
 - 5.2. oncogenic agents.
6. List the common causes of intestinal obstruction and describe its pathological consequences.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2004

Date :- 9th February, 2004

Time :- 2.00 p.m. - 4.00 p.m.

PAPER I

Candidates should answer one question from each part.
Answer each question in a separate book.

ANATOMY

PART A

1. Describe the course, relations and distribution of the recurrent laryngeal nerves. State the embryological basis of their anatomy.
2. Describe the gross anatomy of the left sternocleidomastoid muscle. What is the embryological basis of the congenital abnormalities that may be associated with this muscle ?

PART B

3. Describe the thoracic duct. Add a note on its significance in surgical practice.
4. Describe the posterior mediastinum including the applied anatomy.

PART C

5. Describe the rotation of the gut and its clinical significance.
6. Describe the anatomy of the anterior abdominal wall and its relevance to surgical incisions.

PART D

7. Describe the anatomy of the antecubital fossa. How is this important in clinical practice ?
8. Describe the anatomy, and importance in clinical practice, of the fascial compartments of the leg.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2004

Date :- 10th February, 2004

Time :- 9.30 a.m. -11.30 a.m.

PAPER II

Answer question 1 and one other.

Answer each question in a separate book.

PART A
PHYSIOLOGY

1. Give an account of the conditions that lead to excessive bleeding.
2. Write short notes on :
 - 2.1. Pain inhibitory pathway.
 - 2.2. Renin-angiotensin-aldosterone mechanism.
 - 2.3. Effects of resection of the distal ileum.
3. Discuss the disturbances in fluid and electrolyte balance in a man with second degree burns of his right upper and lower limbs.
How may such a patient be managed with regard to fluid and electrolyte balance ?

Answer question 4 and one other.

Answer each question in a separate book.

PART B
PATHOLOGY

4.
 - 4.1 Define the term embolism and list the different types of emboli.
 - 4.2 Discuss the causes and effects of any two of them common in surgical practice.
5. Discuss the complications of wound healing briefly mentioning the pathological basis behind them.
6. Write an account on the mechanism of invasion and metastasis of malignant tumours.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY, 2004

Date :- 19th July, 2004

Time :- 2.00 p.m. - 4.00 p.m.

PAPER I

Candidates should answer one question from each part.
Answer each question in a separate book.

ANATOMY

PART A

1. Describe how the knowledge of the anatomy of the trachea is helpful in clinical applications.
How does its microscopic appearance differ from a bronchiole.
Explain the embryological basis of tracheo-oesophageal fistulas.

2. Describe the anterior and posterior triangles of the neck and the clinical importance.

PART B

3. Describe the cervical dome of the left pleura and its clinical importance.

4.
 - 4.1 Describe the anatomy of the gastro-oesophageal junction.

 - 4.2 Give an account of the course and distribution of the vagi on the stomach and their actions.

PART C

5. Give an account of the levator ani muscle including its relations and action. Add a note on its clinical importance.
6.
 - 6.1 Give an account of the anatomy of the anal canal including its relations.
 - 6.2 Describe the development of the anal canal.
 - 6.3 Give the clinical applications in both paediatric and adult practice.

PART D

7. Write short notes on
 - A. the coracoid process
 - B. the vastus medialis muscle
 - C. the peroneal nerve
8. Give an account of the hip joint and the clinical relevance.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY. 2004

Date :- 20th July, 2004

Time :- 9.30 a.m. - 11.30 a.m.

PAPER II

Answer question 1 and one other.
Answer each question in a separate book.

PART A
PHYSIOLOGY

1. A patient develops a myocardial infarction leading to cardiogenic shock following abdominal surgery.
Discuss the compensatory responses activated in this patient.

2. Describe briefly the following:
 - 2.1 Compliance of the lungs in relation to pleural pressure and changes in lung Volumes.
 - 2.2 Pressures in the pulmonary vascular system
 - 2.3 Respiratory centre and its role in breathing

3. Discuss the physiological basis for the use of the concept of renal clearance in the measurement of glomerular filtration rate and renal blood flow.

Answer question 4 and one other
Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss briefly the differences between the following
 - 4.1 Hyperplasia and hypertrophy
 - 4.2 Dysplasia and metaplasia
 - 4.3 Acute and chronic inflammation

5. Describe the pathogenesis of atherosclerosis mentioning the role played by risk factors. Describe the complications of atherosclerosis.

6. Write short notes on
 - 6.1 Apoptosis
 - 6.2 Hypercalcaemia
 - 6.3 Proto-oncogenes and oncogenes

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2005

Date :- 7th February, 2005

Time :- 2.00 p.m. - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Answer each question in a separate book.**

ANATOMY

PART A

1. Describe the position, relations and blood supply of the thyroid gland.
Give the embryological basis of a thyroglossal cyst.
2. Describe the origin, course and distribution of the internal carotid artery.

PART B

3.
 - 3.1. Describe how the anatomy of the thoracic cage has been adapted to facilitate respiration.
 - 3.2. Describe the movements of the thoracic cage in respiration.
4.
 - 4.1. Describe the anatomy of the left ventricle.
 - 4.2. Describe the anatomy of the conducting system of the heart.

PART C

5. Describe the anatomy and contents of the adult inguinal canal and its important anatomical relations. Add notes of anatomical relevance to cases of hernia.
6.
 - 6.1. Describe the relations of the head of the pancreas.
Add a note on its development.
 - 6.2. Describe the microscopic anatomy of the secretory units of the pancreas.

PART D

7. Describe the intrinsic muscles of the hand including their nerve supply and their role in functions of the hand.
8. Describe the anatomy of the venous system of the lower limb.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2005

Date :- 8th February, 2005

Time :- 9.30 a.m. -11.30 a.m.

PAPER II

Answer question 1 and one other.
Answer each question in a separate book.

PART A
PHYSIOLOGY

1. Outline the synthesis and secretion of thyroxine and tri-iodothyronine from the thyroid gland. Give an account of the physiological basis of goitre.
2. Describe briefly the following:
 - 2.1. The physiological basis of anaemia in a patient with gastric mucosal atrophy
 - 2.2. The vasomotor centre and its role in the regulation of blood pressure
 - 2.3. The immune response against tumours
3. Describe the physiological mechanisms operating in a previously healthy young man presenting with profuse vomiting of three days duration.

Answer question 4 and one other.
Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss the tissue response to injury.
5. Write short notes on :
 - 5.1. Tumour markers
 - 5.2. Granulomata
 - 5.3. Ascites
6. Write short notes on :
 - 6.1. Pathogenesis of disseminated intravascular coagulation
 - 6.2: Thrombophilia
 - 6.3. Angiogenesis

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY, 2005

Date :- 18th July, 2005

Time :- 2.00 p.m. - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Answer each question in a separate book.**

ANATOMY

PART A

1. Describe the anatomy of the parotid gland.
2. Describe the anatomical relations and development of the parathyroid glands.

PART B

3. Describe the thoracic part of the oesophagus.
4. Describe the lymphatic drainage of the breast..

PART C

5. Give an account of the anatomy of the colon.
6. Discuss the clinical anatomy of the gall bladder and Calot's triangle.

PART D

7. Describe the anatomy of the compartments .of the leg.
8. Describe the small muscles of the hand.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY. 2005

Date :- 19th July, 2005

Time :- 9.30 a.m. - 11.30 a.m.

PAPER II

Answer question 1 and one other.
Answer each question in a separate book.

PART A
PHYSIOLOGY

1. Define 'shock'. Discuss the physiological basis for the symptoms and signs in a healthy young adult who has lost 30 - 40% of his total blood volume.

2. Write notes on the physiological basis for .
 - 2.1 methods used, in the relief of pain during the first 48 hours after laparotomy. (50 % of marks) ,
 - 2.2 tetany in hypocalcaemia. (25% of marks)
 - 2.3 tachypnoea (Kussmaul's breathing) in diabetic ketoacidosis. (25% of marks)

3. Discuss the Physiological basis for the clinical features of intestinal obstruction.

Answer question 4 and one other.
Answer each question in a separate book.

PART B
PATHOLOGY

4. Discuss the methods of spread of malignant tumours.

5. Define the term 'infarction'. Describe the basis on which infarcts are "classified:

6. Write notes on :
 - 6.1 Fat embolism
 - 6.2 Apoptosis
 - 6.3 Colonic polyps

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2006

Date: 6th February 2006

Time: 2.00 p.m. - 4.00 p.m.

PAPER I

ANATOMY

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

PART-A

1. Describe the gross anatomy of the coverings of the brain. (70%)
State their clinical significance in relation to intracranial haemorrhage. (30%)
2. Describe the anatomy of the root of the neck.

PART - B

3. Describe the anatomy of the diaphragm.
4. Describe the blood supply of the heart.

PART - C

5. Give an account of the gross anatomy of the spleen. (60%)
6. Describe the abdominal portal circulation.
Discuss the possible sites of porto-systemic anastomoses and their clinical significance. (40%)

PART-D

7. Describe the origin, course and the distribution of the median nerve.
8. Describe the anatomy of the ankle joint.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY, 2006

Date: 7th February 2006

Time: 9.30 a.m. - 11.30 a.m.

PAPER II

PART A
PHYSIOLOGY

Answer question 1 and one other.

Answer each question in a separate book.

1. Give an account of the regulation of secretion of bile.
Briefly state the derangements that occur following cholecystectomy.
2. What is malignant hypertension ?
Discuss the physiological basis of hypertension in
 - a) phaeochromocytoma.
 - b) renal artery stenosis.
 - c) Cushing's syndrome.
3. Write short notes on:
 - a) Central venous pressure.
 - b) Trace elements.
 - c) Incompatible blood transfusion.

PART B
PATHOLOGY

Answer question 4 and one other.

Answer each question in a separate book.

4. Define the terms "pre-malignant lesion" and "pre-malignant condition".
What is the clinical importance of recognizing these lesions and conditions ?
Give examples of these, indicating the malignancies associated with them.
5. Discuss the changes that occur in tissues/organs, as a result of obstruction to venous outflow.
6. Write notes on:
 - a) Cytological and tissue sampling for suspected malignant disease.
 - b) The complications of long-standing Diabetes Mellitus.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY 2006

Date: 17th July 2006

Time: 2.00 - 4.00 p.m.

PAPER I

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

ANA TOMY

PART – A

- I. Describe the blood supply of the brain.
2. Describe the anatomy of the submandibular gland.

PART-B

3. Describe the blood supply and the lymphatic drainage of the colon.(70 marks)
Add a note on their clinical significance.
4. Give an account of the extrahepatic biliary system. (30 marks)

PART-C

5. Describe the origin, course and distribution of the common peroneal nerve.
Give its clinical significance. (70 marks)
6. Describe the elbow joint including its applied anatomy. (30 marks)

PART – D

7. Describe the anatomy of the root of the right lung. (70 marks)
8. Describe the anatomy of the thoracic duct. (30 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART 1 EXAMINATION

JULY 2006

Date: 18th July 2006

Time: 9.30 - 11.30 a.m.

PAPER II

Answer question 1 and one other.

Answer each question in a separate book.

PART A
PHYSIOLOGY

1. Explain
 - 1.1. the mechanism of tissue fluid exchange in pulmonary capillary bed. (40 marks)
 - 1.2. the physiological basis of the maintenance of cerebral blood flow during hypovolaemic shock. (60 marks)
2. Outline the normal regulation of prolactin secretion and the physiological role of this hormone in the female. (70 marks)
Explain the physiological basis of galactorrhoea in a man following a head injury. (30 marks)
3. Write notes on;
 - 3.1. the immunological mechanisms of rejection following renal transplantation. (60 marks)
 - 3.2. the physiological basis of fever in bacterial infection. (40 marks)

PART B
PATHOLOGY

Answer question 4 and one other.

Answer each question in a separate book.

4. Define the different methods of laboratory diagnosis of cancer.
Discuss the benefits and drawbacks of each method.
5. Write an essay on the pathogenesis of clostridial infections.
6. Write notes on;
 - a) causes of pathological fractures
 - b) different types of necrosis
 - c) gastric ulceration.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART 1 EXAMINATION
FEBRUARY, 2007

Date : 5th February 2007

Time : 2.00 pm - 4.00 pm

PAPER I

ANATOMY

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

PART A

1. Discuss the relations of the carotid bifurcation. (100 marks)
2. Describe the deep fascia of the neck including its clinical significance. (100 marks)

PART B

1. Describe the arrangement and relations of the thoracic sympathetic trunk. (100 marks)
2.
 - 2.1 Describe the anatomy of the subclavian artery. (70 marks)
 - 2.2 Add notes on its clinical significance. (30 marks)

PART C

1.
 - 1.1 Describe the gross anatomy of the right kidney. (70 marks)
 - 1.2 Discuss its relevance to surgical practice. (30 marks)
2.
 - 2.1 Describe the gross anatomy of the prostate gland. (70 marks)
 - 2.2 Discuss the surgical applications of the above knowledge. (30 marks)

PART D

1.
 - 1.1 List the common nerve injuries associated with fractures of the upper limb bones. (20 marks)
 - 1.2 Describe the anatomical basis of the deformities / disabilities of such nerve injuries. (80 marks)
2. Discuss the main arterial supply of the lower limb. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART 1 EXAMINATION
FEBRUARY, 2007

Date : 6th February 2007

Time : 9.30 a.m. - 11.30 a.m.

PAPER II
PART A - PHYSIOLOGY

Answer question 1 and one other.

Answer each question in a separate book.

1.
 - 1.1 Describe the process of transport of oxygen in blood. (40 marks)
 - 1.2 How is oxygen transport affected in.
 - a) CO poisoning (20 marks)
 - b) Metabolic acidosis (20 marks)
 - c) Anaemia (20 marks)
2. Write short notes on the following.
 - 2.1 Clotting factor VII including its clinical applications (25 marks)
 - 2.2 Somatostatin and its clinical applications (25 marks)
 - 2.3 Physiological basis of Diabetic Ketoacidosis and its consequences (50 marks)
3.
 - 3.1 Describe the mechanism and the regulation of gastric acid secretion (70 marks)
 - 3.2 Briefly discuss the physiological rationale of various options available to treat peptic ulcers (30 marks)

PART B – PATHOLOGY

Answer question 4 and one other.

Answer each question in a separate book.

4. Write short notes on the following:
 - (a) Chemical carcinogenesis (30 marks)
 - (b) Pathological outcome of acute inflammation (30 marks)
 - (c) Pathological effects of bladder outflow obstruction (40 marks)
5. Discuss the pathogenesis and complications of intravascular thrombosis. (100 marks)
6. Describe the pathogenesis and complications of gallstones. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY, 2007

Date: 16th July 2007

Time : 2.00 p.m. - 4.00 p.m.

PAPER I

ANATOMY

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

PART A

1.
 - 1.1. Describe the fascial coverings, blood supply and the nerves that are related to the thyroid gland. (70 marks)
 - 1.2. Indicate the surgical importance of the nerves you mentioned in 1.1. (30 marks)

2.
 - 2.1. Describe the extra cranial course of the facial nerve. (60 marks)
 - 2.2. Add a note on its surgical importance. (40 marks)

PART B

1.
 - 1.1 Describe the anatomy of the diaphragm. (80 marks)
 - 1.2. Add a note on: its development. (20 marks)

2. Describe the nerves .that are related to the posterior abdominal wall and their clinical significance. (100 marks)

PART C

1. Describe the relations of the duodenum. (100 marks)

2.
 - 2.1. Describe the anatomy of the ischio-rectal fossa. (80 marks)
 - 2.2. Explain its clinical significance. (20 marks)

PART D

1.
 - 1.1. Describe the femoral triangle. (50 marks)
 - 1.2. State the surgical importance of the structures in the femoral triangle. (50 marks)

2. Describe the anatomy of the shoulder joint with special emphasis on the factors affecting its stability. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY, 2007

Date: 17th July 2007

Time: 9.30 a.m. -11.30 a.m.

PAPER II
PART A – PHYSIOLOGY

Answer question 1 and one other.

Answer each question in a separate book.

1.
 - 1.1. What is surgical stress ? (10 marks)
 - 1.2. Describe the mechanisms involved in surgical stress. (50 marks)
 - 1.3. Discuss the effect of surgical stress in a patient with uncontrolled diabetes mellitus. (40 marks)

2. Write short notes on
 - 2.1. vitamin K (30 marks)
 - 2.2. calcium in plasma (30 marks)
 - 2.3. acute renal failure in surgical practice. (40 marks)

3. Write short notes on
 - 3.1. mechanisms preventing gastro oesophageal reflux in a healthy individual. (20 marks)
 - 3.2. pupillary changes in a patient with right sided extradural haematoma. (40 marks)
 - 3.3. value of arterial blood gas analysis prior to major thoracic surgery. (40 marks)

PART B – PATHOLOGY

Answer question 4 and one other.

Answer each question in a separate book.

4. Discuss, with examples, the factors that determine whether healing occurs by resolution, regeneration or repair. (100 marks)

5. Write short notes on
 - 5.1. carcinoma-in-situ (40 marks)
 - 5.2. amyloidosis (30 marks)
 - 5.3. pathogenesis of acute pyogenic osteomyelitis (30 marks)

6. Discuss the measures taken to reduce nosocomial infections. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY 2008

Date : 11th February 2008

Time : 2.00 p.m. - 4.00 p.m.

PAPER I

ANATOMY

**Candidates should answer one question from each part.
Please answer each part in a separate book.**

PART A

1. Describe the arrangement of the lymphatics of the head and neck. (100 marks)

2.
 - 2.1. Describe the anatomy of the first cervical vertebra. (70 marks)
 - 2.2. Add a note on its clinical significance. (30 marks)

PART B

3.
 - 3.1. Describe the blood supply of the heart (70 marks)
 - 3.2. State its clinical significance. (30 marks)

4.
 - 4.1. Describe the right 6th intercostal space. (70 marks)
 - 4.2. Add a note on its clinical significance. (30 marks)

PART C

5. Describe the anatomy of the stomach. (100 marks)
6. Describe the *left* testis. (100 marks)

PART D

7.
 - 7.1. Describe the nerve supply of the hand. (60 marks)
 - 7.2. Explain the contribution of each nerve mentioned in maintaining a functional hand. (40 marks)

8. Describe the arches of the foot. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
FEBRUARY 2008

Date : 12th February 2008

Time : 9.30 a.m. - 11.30 a.m.

PAPER II

PART A - PHYSIOLOGY

Answer question 1 and one other.

Answer each question in a separate book.

1. A 60 year old patient had an emergency bowel surgery for intestinal obstruction. The following clinical parameters were recorded two hours after surgery.
 - Heart rate of 120/min
 - Blood pressure of 80/60 mmHg
 - Cold & clammy extremities
 - Urine output of 20 ml over the previous two hours
 - 1.1. Outline the physiological basis of the clinical parameters recorded. (50 marks)
 - 1.2. Discuss the physiological basis of the principles of management of this patient over the next few hours. (50 marks)

2. In a 25 year old male who has a severe crush injury to the thigh
 - 2.1. Describe the basis of the physiological changes which take place following the injury. (40 marks)
 - 2.2. Outline the physiological effects following reperfusion of the limb. (60 marks)

3. Write short notes on :
 - 3.1. The physiological effects of resection of the terminal ileum. (30 marks)
 - 3.2. Factors regulating cerebral blood flow indicating their clinical significance. (40 marks)
 - 3.3. Effects of long term steroid therapy in patients undergoing major surgery. (30 marks)

PART B – PATHOLOGY

Answer questions 4 and one other.

Answer each question in- a separate book.

4.
 - 4.1. Discuss the different modes of tumour spread. (50 marks)
 - 4.2. Briefly describe the non metastatic effects of malignant tumours on the host. (50 marks)

5. Write notes on :
 - 5.1. Methicillin-resistant Staphylococcus aureus (MRSA) (40 marks)
 - 5.2. Necrotizing fasciitis (30 marks)
 - 5.3. Pseudomembranous colitis (30 marks)

6. Discuss the pathogenesis and complications of oesophageal strictures. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY. 2008

Date: 14th July 2008

Time: 2.00pm. - 4.00pm.

PAPER I

ANATOMY

Candidate should answer one question from each part.
Please answer each part in a separate book.

PART A

1.
 - 1.1 Describe the scalenus anterior muscle and its relationships. (80 marks)
 - 1.2 What are the effects of a cervical rib on the structures mentioned above. (20 marks)
2.
 - 2.1. Describe the dural reflections of the skull with their relationships and the clinical relevance of these. (100 marks)

PART B

3.
 - 3.1 Describe the anatomy of the tracheal bifurcation and its clinical relevance. (70 marks)
 - 3.2 Outline the functional adaptations of the tracheobronchial tree. (30 marks)
4. Describe the anatomy and development of the thoracic aorta. (100 marks)

PART C

5. Describe the gross anatomy of the head and neck of the pancreas and its clinical relevance. (100 marks)
6.
 - 6.1 Describe the anatomy of the psoas major muscle and its relationships. (70 marks)
 - 6.2 Add a note on its clinical significance. (30 marks)

PART D

7. Describe the anatomy of the ankle joint with its clinical significance. (100 marks)
8. Describe the anatomy of the cubital fossa with its clinical relevance. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MS (SURGERY) PART I EXAMINATION
JULY 2008

Date: 15th July 2008

Time: 9.30am. - 11.30am.

PAPER II

PART A – PHYSIOLOGY

Answer question 1 and one other.

Answer each question in a separate book.

1. A 50 years old, known severe type II diabetic was admitted to the hospital and scheduled for a wound toilet.

Pre operatively his

Respiratory rate was 40/min (tachypnoea).

Urine output was 10 mls per hour over the last 2 hours.

Serum K⁺ - 3.0 mmol/l

Blood sugar - 350 mg/dl

Prior to surgery, he was treated with

Soluble insulin IV

Potassium Chloride (KCl) IV

Intra venous Fluids (N/saline, colloids)

- 1.1 Give the physiological basis for the following

1.1.1 tachypnoea (30 marks)

1.1.2 low urine output (20 marks)

1.1.3 hypokalaemia (20 marks)

- 1.2 Outline the role of kidneys in acid/base homeostasis in this patient. (30 marks)

2. Give the physiological basis for the following:

2.1 Intestinal colic and its treatment. (50 marks)

2.2 O₂ therapy in hypoxic hypoxia (50 marks)

3. Write short notes on the following:

3.1 Jugular Venous Pressure (JVP) as a guide to fluid therapy in hypovolaemic and septicaemic shock. (50 marks)

„ 3.2 Basal Metabolic Rate (BMR) and the factors affecting it. (50 marks)

PART B – PATHOLOGY

Answer question 4 and one other.

Answer each question in a separate book.

4. Discuss haemorrhage in a surgical context with special emphasis on acute haemorrhage.

5. Discuss the effects and presentations of tumours.

6.
 - 6.1 Define the term infarction.

 - 6.2 Describe the pathological basis of the different types of infarction giving examples seen in clinical practice.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION
FEBRUARY 2009

Date : 10th February 2009

Time : 2.00 pm - 4.00pm

PAPER 1

ANATOMY

**Candidate should answer one question from each part.
Please answer each part in a separate book.**

PART A

1. Discuss the anatomy of the right axilla. (100 marks)

2.
 - 2.1. Describe the cross sectional anatomy of the middle one third of the right leg. (50 marks)
 - 2.2. Describe the anatomical formation of the compartments of the leg and its clinical significance. (50 marks)

PART B

3.
 - 3.1. Describe the coeliac axis outflow and its anatomical relations. (70 marks)
 - 3.2. Describe its anatomical variations. (30 marks)

4.
 - 4.1. Describe the anatomy of the mesorectum. (60 marks)
 - 4.2. Discuss the arterial blood supply of the rectum. (40 marks)

PART C

5. Describe the anatomical relationships of the apex of the left lung. (100 marks)

6.
 - 6.1. Describe the anatomy and distribution of the sensory component of the right trigeminal nerve. (70 marks)
 - 6.2. Discuss its clinical significance. (30 marks)

PART D

7. Describe the anatomical architecture of the stomach in relation to its mechanical functions. (100 marks)

8.
 - 8.1. Describe the anatomy of the perineum. (70 marks)
 - 8.2. Discuss the role of the muscles of the perineum in maintaining urinary and faecal continence. (30 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION
FEBRUARY 2009

Date : 11th February 2009

Time : 9.30 am - 11.30 am

PAPER 1I

Answer question 1 and one other
Answer each question in a separate book.

1.
 - 1.1. Describe the physiology of micturition (60 marks)
 - 1.2. Explain the Physiological basis of neurogenic bladder (40 marks)

2. Explain the physiological basis of the following
 - 2.1. Occurrence of steatorrhoea in a patient with chronic pancreatitis (30 marks)
 - 2.2. Patient A with renal carcinoma had polyeythaemia and his arterial partial pressure of oxygen was 13 k Pascals (11.3 – 13 k Pascals). Patient B who had chronic lung disease had polyeythaemia and a arterial partial pressure of oxygen of 8 k Pascals. (30 marks)
 - 2.3. The base of the lung is better ventilated and perfused than the apex in upright posture. (40 marks)

3. Write short notes on the following
 - 3.1. GTP – binding regulatory proteins (G proteins) (40 marks)
 - 3.2. Reduced coronary blood flow to the left ventricle in tachycardia (30 marks)
 - 3.3. Defaecation (30 marks)

PART B - PATHOLOGY

Answer question 4 and one other

Answer each question in a separate book.

4. Briefly describe the lesions / conditions which predispose to the development of malignancy indicating the methods of screening where relevant. (100 marks)
5. Describe the pathogenesis and complications of calculi in the urinary tract. (100 marks)
6.
 - 6.1. Define an ulcer. (10 marks)
 - 6.2. Describe the pathogenesis of peptic ulcers. (40 marks)
 - 6.3. Enumerate the other causes of ulcers in different tissues giving examples. (50 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION

JULY 2009

Date : 13th July 2009

Time : 2.00 pm - 4.00pm

PAPER 1

ANATOMY

Candidate should answer one question from each part.

Answer each question in a separate book.

PART A

1. Detail the anatomy of the palatine tonsil including its histology. (100 marks)
2. Describe the anatomy of the cavernous sinus and its clinical relevance. (100 marks)

PART B

3. Describe the anatomy of the root of the left lung. (100 marks)
4.
 - 4.1. Describe the anatomy of the arch of the aorta. (80 marks)
 - 4.2. Add a note on its embryological development and its clinical relevance. (20 marks)

PART C

5.
 - 5.1. Describe the macroscopic anatomy of the terminal ileum and the right colon. (80 marks)
 - 5.2. Add notes on clinical significance of the above. (20 marks)
6. Describe the anatomy of the umbilicus with particular emphasis on the surgical relevance of its abnormal development (100 marks)

PART D

7.
 - 7.1. Give a brief account of the wrist joint and list its relations. (80 marks)
 - 7.2. Add a note on the clinical significance of the scaphoid and lunate bones. (20 marks)
8.
 - 8.1. Describe the vascular anatomy around the knee joint. (80 marks)
 - 8.2. Describe the clinical significance of the above. (20 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION
JULY 2009

Date : 14th July 2009

Time : 9.30 a.m – 11.30 a.m

PAPER II

PART A - PHYSIOLOGY

Answer question 1 and one other.

Answer each question in a separate book.

1. A man is admitted to hospital with deep vein thrombosis of the right leg. In spite of the treatment with heparin he develops a pulmonary embolus to the right main pulmonary artery. Examination at this stage reveals central cyanosis.
Blood gas analysis shows :

PaO₂ 8.5kPa (Normal 10.0 - 13.3kPa)

PaCO₂ 3.0kPa (Normal 4.7 - 6.0kPa)
 - 1.1. State the mechanisms that maintain circulating blood in a fluid state in a healthy man and outline the role of heparin in treating this patient. (50 marks)
 - 1.2. Explain the physiological basis for his
 - a. arterial blood gases (25 marks)
 - b. cyanosis (25 marks)
2. Explain the physiological basis of
 - 2.1. the effects of spinal cord transaction at the level of the 10th thoracic vertebra. (60 marks)
 - 2,2, the regulation of coronary circulation in a healthy adult. (40 marks)
3. Write notes on the following.
 - 3.1. Mechanisms of urinary acidification in the kidney. (50 marks)
 - 3.2. Immune surveillance mechanisms operating against cancer. (50 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION
JULY 2009

Date : 14th July 2009

Time : 9.30 a.m – 11.30 a.m

PAPER 1I

PART B - PATHOLOGY

Answer question 4 and one other.

Answer each question in a separate book.

4.
 - 4.1. Describe the pathological basis of different types of graft rejection. (45 marks)
 - 4.2. Discuss the factors influencing the outcome of an allograft. (55 marks)

5.
 - 5.1. Discuss the aetiopathogenesis of acute haematogenous osteomyelitis. (40 marks)
 - 5.2. Describe the course of the above disease (pathological phases). (50 marks)
 - 5.3. List the complications of acute pyogenic osteomyelitis. (10 marks)

6. Write short notes on the following-
 - 6.1. Pathology of acute pancreatitis. (50 marks)
 - 6.2. Molecular basis of carcinogenesis. (50 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION
FEBRUARY 2010

Date : 8th February 2010

Time : 2.00 pm - 4.00pm

PAPER 1

ANATOMY

**Candidate should answer one question from each part.
Answer each question in a separate book.**

PART A

1. Describe the anatomy of the pituitary gland **excluding** its histology.
Add a note on its development. (100 marks)
2.
 - 2.1. Describe the anatomy of the tongue. (70 marks)
 - 2.2. Add a note on the embryological basis of its innervations. (30 marks)

PART B

3. Describe the gross anatomy of the thoracic part of the trachea and extra pulmonary bronchi.
Add notes on the clinical relevance. (100 marks)
4. Describe the azygos system of veins. Add notes on the clinical relevance. (100 marks)

PART C

5.
 - 5.1. Describe the gross anatomy of the liver, including hepatic segments. (80 marks)
 - 5.2. Discuss its clinical relevance. (20 marks)
6. Describe the anatomy of the pelvic ureter. (100 marks)

PART D

7.
 - 7.1. Describe the anatomy of the femoral sheath. (70 marks)
 - 7.2. Add a note on its clinical significance. (30 marks)
8. Describe the gross anatomy of the elbow joint with emphasis on its immediate relations.
Add a note on the clinical relevance. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION
FEBRUARY 2010

Date : 9th February 2010

Time : 9.30 a.m. - 11.30 a.m.

PAPER 1I

PART A – PHYSIOLOGY

Answer question 1 and one other.

Answer each question in a separate book.

1. A patient who had a total thyroidectomy was found to have stridor and carpopedal spasm on the second postoperative day.
 - 1.1. Explain the physiological basis of stridor and carpopedal spasm on the second postoperative day. (50 marks)
 - 1.2. Explain the physiological basis of the treatment of the above condition. (30 marks)
 - 1.3. Explain the long term effects of the above condition in a suboptimally treated patient. (20 marks)

2. Explain the physiological basis of the following –
 - 2.1. Reduced urine output in moderate haemorrhage. (50 marks)
 - 2.2. Initial constriction of the pupil followed by dilatation in intracranial haemorrhage. (25 marks)
 - 2.3. Haemodynamic changes in cardiac tamponade. (25 marks)

3. Write short notes on the following –
 - 3.1. Anaemic hypoxia and its compensatory mechanisms. (40 marks)
 - 3.2. Changes that occur in body fluid compartments in different types of dehydration. (30 marks)
 - 3.3. Response to starvation. (30 marks)

PART B – PATHOLOGY

Answer question 4 and one other.

Answer each question in a separate book.

4. Discuss the use of molecular biomarkers in clinical oncology with reference to diagnosis, therapy and prognosis. (100 marks)

5. Write an essay on clostridial infections emphasizing the pathogenesis and clinical syndromes. (100 marks)

6.
 - 6.1. Define an aneurysm. (10 marks)
 - 6.2. Classify aneurysms. (30 marks)
 - 6.3. Describe the pathogenesis of abdominal aortic aneurysms and the clinical course of the disease. (60 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION
JULY 2010

Date : 12th July 2010

Time : 2.00 p.m. - 4.00 p.m.

PAPER 1

ANATOMY

**Candidate should answer one question from each part.
Please answer each part in a separate book.**

PART A

1.
 - 1.1. Describe the lateral wall of the nose. (70 marks)
 - 1.2. Describe how infection could spread from the nose (20 marks)

2. Describe the management and drainage of intracranial venous sinuses giving its clinical significance (100 marks)

PART B

3. Describe the posterior mediastinum (100 marks)
4. Describe the anatomy of the pericardium with its clinical significance (100 marks)

PART C

5. Describe the cross sectional anatomy of the abdomen at the level of the first lumbar vertebra with the help of a diagram. (100 marks)
6. Describe the arrangement of the peritoneum in the true pelvis indicating its clinical significance (100 marks)

PART D

7. Describe the anatomy of the female breast (100 marks)
8. Describe the anatomy of the knee joint in relation to its stability (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION

JULY 2010

Date : 13th July 2010

Time : 9.30 a.m - 11.30 a.m

PAPER 1I

PART A – PHYSIOLOGY

Answer question 1 and one other.

Answer each question in a separate book.

1. A 50 year –old man presented with a history of progressive jaundice for one month duration, pruritus and loss of weight.
 - 1.1. State the most likely type of jaundice found in this patient with giving reasons. (10 marks)
 - 1.2. State two causes for the condition stated in section 1.1. (10 marks)
 - 1.3. State five biochemical features that are likely to be present in this patient. (20 marks)
 - 1.4. Explain the physiological basis for the features stated in 1.3. (60 marks)

2. Write short notes on
 - 2.1. Lung compliance (20 marks)
 - 2.2. Haemorrhagic shock. (35 marks)
 - 2.3. Syndrome of inappropriate ADH secretion. (SIHADH) (45 marks)

3. Describe the role of following in acid base balance.
 - 3.1. Buffers in the blood. (25 marks)
 - 3.2. Respiratory system (25 marks)
 - 3.3. Kidney. (50 marks)

PART B – PATHOLOGY

Answer question 4 and one other.

Answer each question in a separate book.

4.
 - 4.1. Discuss the importance of grading and staging of cancer. (40 marks)
 - 4.2. Describe the mechanism of the invasion and metastasis of cancer. (60 marks)

5.
 - 5.1. Classify the fractures of bone. (10 marks)
 - 5.2. Describe the process of fracture healing. (50 marks)
 - 5.3. Give an account on the aetio-pathogenesis of the complications of fractures. (40 marks)

6. Write short notes on
 - 6.1. The role of platelets in bleeding disorders. (25 marks)
 - 6.2. The role of bio markers in the diagnosis and treatment of thyroid disorders. (50 marks)
 - 6.3. Prevention of hospital acquired infection. (25 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION
FEBRUARY 2011

Date : 7th February 2011

Time : 2.00 pm - 4.00pm

PAPER 1

ANATOMY

**Candidate should answer one question from each part.
Answer each question in a separate book.**

PART A

1. Describe the facial nerve and its divisions, throughout its entire course. (100 marks)
2. Describe the anatomy of the lymphatic drainage of the head and neck. (100 marks)

PART B

3. Describe the anatomy of a typical rib. Add a note on its important relations and functional adaptations. (100 marks)
4. Describe the anatomy of the phrenic nerves. Add a note on its clinical relevance. (100 marks)

PART C

5. Describe the anatomy of the omentum. Add a note on its clinical relevance. (100 marks)
6.
 - 6.1. Describe the anatomy of the anterior abdominal wall. (70 marks)
 - 6.2. Describe the surgical approach to open appendicectomy. (30 marks)

PART D

7.
 - 7.1. Describe the anatomy of the ante-cubital fossa. (50 marks)
 - 7.2. Describe the arterial anastomosis around the elbow joint. (50 marks)
8. Discuss the venous drainage of the lower limb. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION
FEBRUARY 2011

Date : 8th February 2011

Time : 9.30 a.m - 11.30 a.m

PAPER 1I

PART A – PHYSIOLOGY

Answer question 1 and one other.

Answer each question in a separate book.

1. A 35 year old woman presented with a history of weight loss and on examination she was noted to have a large goiter with a bruit. Her pulse rate was 112/min and blood pressure 150/50mmHg. She was treated with carbimazole.
 - 1.1. List the physiological basis for any bruit. (15 marks)
 - 1.2. Outline the mechanism for the bruit in this patient. (5 marks)
 - 1.3. Outline the physiological basis of her blood pressure recording (40 marks)
 - 1.4. List the stages of thyroid hormone synthesis and indicate the physiological basis of the action of carbimazole. (40 marks)

2. Outline the physiological basis of the following.
 - 2.1. Effects of obstructive jaundice on haemostasis. (40 marks)
 - 2.2. Motility patterns in the small intestine. (30 marks)
 - 2.3. Reduction of pain due to rubbing the injured site. (30 marks)

3.
 - 3.1. Describe the physiology of micturition in a healthy adult male.(60 marks)
 - 3.2. Discuss the physiological basis in the use of the following in disorders of the lower urinary tract.
 - 3.2.1. Anticholinergics (20 marks)
 - 3.2.2. a receptor antagonists (10 marks)
 - 3.2.3. 5a reductase inhibitors (10 marks)

PART B – PATHOLOGY

Answer question 4 and one other.

Answer each question in a separate book

4. Describe the pathological processes that take place in acute appendicitis, and its sequelae. (100 marks)

5. Define a ‘tumour marker’ and discuss the use of tumour markers in the management of cancer giving three examples. (100 marks)

6. Write notes on
 - 6.1. Pathological calcification. (100 marks)
 - 6.2. Apoptosis (30 marks)
 - 6.3. Ischaemia-reperfusion injury. (30 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION

JULY 2011

Date : 11th July 2011

Time : 2.00 pm - 4.00pm

PAPER 1

**Candidate should answer one question from each part.
Answer each question in a separate book.**

PART A

1. Describe the macroscopic anatomy of the pharyngeal musculature, and its motor innervation. (100 marks)
2. Describe the macroscopic anatomy of the submandibular gland. (100 marks)

PART B

3. Describe the macroscopic anatomy of the oesophagus. (100 marks)
4. Describe the macroscopic anatomy of the 12th rib, with its clinical relevance. (100 marks)

PART C

5.
 - 5.1. Describe the macroscopic anatomy of the abdominal aorta. (70 marks)
 - 5.2. Describe the potential collateral circulation that occurs in an occlusion of the aorta at a level below the renal arteries. (30 marks)
6. Describe the anatomy of the left colon (mid transverse colon to rectosigmoid junction) (100 marks)

PART D

7. Describe the anatomy of the middle finger with particular emphasis on its clinical relevance. (100 marks)
8.
 - 8.1. Describe the anatomical structures that stabilise the hip joint.(50 marks)
 - 8.2. Describe the arterial supply of the hip joint with its clinical relevance. (50 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (SURGERY) PART I EXAMINATION
JULY 2011

Date : 12th July 2011

Time : 9.30 a.m. – 11.30 a.m.

PAPER II
PART A – PHYSIOLOGY

Answer question 1 and one other
Answer each question in a separate book.

1. A 32 year old post operative patient develops worsening swelling and pain in her left leg and a diagnosis of an ileo-femoral venous thrombosis is made . An hour later she develops shortness of breath with a respiratory rate of 45/min and cyanosis. Her systolic blood pressure is 50 mmHg.

Outline the physiological basis of the following:

- | | | |
|------|---|------------|
| 1.1. | Pitting oedema of her left leg on admission | (25 marks) |
| 1.2. | Her respiratory rate | (40 marks) |
| 1.3. | Systolic blood pressure | (35 marks) |

2. Outline the physiological basis of the following:

- | | | |
|------|---|------------|
| 2.1. | Diarrhoea in a person with lactose intolerance. | (30 marks) |
| 2.2. | Elevated creatinine in a man with long standing prostatic hypertrophy | (35 marks) |
| 2.3. | Ataxia in a patient following resection of his terminal ileum. | (35 marks) |

3. A man with a long history of alcohol abuse complains of upper backache, passing large volumes of urine and diarrhea. Investigations reveal that his blood glucose is 25 mg/dl. and that he has fat malabsorption.

Outline the physiological basis of the following:

- | | | |
|------|----------------------------------|------------|
| 3.1. | Pain referred to the upper back. | (35 marks) |
| 3.2. | Polyuria | (30 marks) |
| 3.3. | Fat malabsorption | (35 marks) |

PART B - PATHOLOGY

Answer question 4 and one other

Answer each question in a separate book.

4. Discuss the consequences of intestinal obstruction.
5. Describe the pathological responses to infectious agents, citing examples.
6. What are the pathological sequelae of urinary tract outflow obstruction ?

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
FEBRUARY 2012

Date : 13th February 2012

Time : 2.00 p.m. - 4.00 p.m.

PAPER 1 - ANATOMY

Answer all questions.

Answer each question in a separate book.

1. Describe the anatomy of the brachial plexus. (100 marks)

2. Describe the course, relations and distribution of the common carotid artery and its branches. (100 marks)

3.
 - 3.1. Describe the anatomy of the extra hepatic biliary tract. (60 marks)
 - 3.2. Outline its relevance to clinical practice. (20 marks)
 - 3.3. Give an account of the surgical approach/s to the extra hepatic biliary tract. (20 marks)

4.
 - 4.1. Describe the inferior relations of the diaphragm. (60 marks)
 - 4.2. Give an account of the innervation of the diaphragm And explain its embryological basis. (20 marks)
 - 4.3. What is the clinical relevance of the innervations and development of the diaphragm ? (20 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
FEBRUARY 2012

Date : 14th February 2012

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

PAPER 1I

PART A - PHYSIOLOGY

Answer all questions.

Answer each question in a separate book.

1. A trained athlete can increase his oxygen consumption from 250 ml/min at rest to 25,000 ml/min when exercising.
Discuss the cardio-respiratory mechanisms contributing to meet this additional oxygen demand during exercise. (100 marks)

2. A 28 year old female presented with polyuria, body aches and a fracture tibia following a minor fall. She was diagnosed with an adenoma of the right inferior parathyroid gland.
 - 2.1. Describe the key biochemical changes and the physiological basis of such changes that would be expected in this patient. (35 marks)

 - 2.2. Compare the followings you mentioned above, with those of a patient with end stage chronic kidney disease. (35 marks)

 - 2.3. The patient complained of circumoral numbness two days after surgical removal of the adenoma. Describe the clinical features you would expect in this patient and give their physiological basis. (20 marks)

 - 2.4. What is tertiary hyperparathyroidism ? (10 marks)

3. A 30 year old man underwent a haemorrhoidectomy. On the day after surgery he complained of severe lower abdominal pain and inability to pass urine.
- 3.1. Describe the pressure changes that would have taken place in his bladder from the time of his last normal voiding. (40 marks)
- 3.2. Describe the physiological basis of the micturition reflex and the effects of denervation. (60 marks)

PART B – PATHOLOGY

Answer all questions.

Answer each question in a separate book.

4. A 45 year old obese female underwent a pancreaticoduodenectomy for carcinoma of the head of pancreas. On the 3rd post operative day her right leg and ankle swelled. Duplex ultrasonography identified a thrombus in her right popliteal and femoral veins.
- Discuss the pathogenesis, sequelae and clinical effects of venous thrombosis in this patient. (100 marks)
5. A 20 year old man complained of bleeding per rectum. Colonoscopy revealed that the entire colon was studded with multiple polyps.
- 5.1. Explain the process by which this condition progresses to carcinoma. (45 marks)
- 5.2. Briefly explain the factors which influence the prognosis of colorectal cancer. (35 marks)
- 5.3. List other premalignant lesions / conditions of the gastrointestinal tract. (20 marks)

6. Write notes on
 - 6.1. Pathogenesis and pathological effects of septic shock. (40 marks)
 - 6.2. Graft versus host disease. (30 marks)
 - 6.3. Beneficial effects of exudates in acute inflammation. (30 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
JULY 2012

Date : 9th July 2012

Time : 2.00 p.m. - 4.00 p.m.

PAPER 1 - ANATOMY

Answer all questions.

Answer each question in a separate book.

1. Describe the course of the facial nerve, stressing its points of vulnerability at surgery. (100 marks)

2. Describe the anatomy of the urinary bladder. (100 marks)

3.
 - 3.1. Describe the lymphatic drainage of the thoracic wall including the breast. (50 marks)
 - 3.2. Give an account of the lymphatic drainage of the lung including its clinical relevance.. (50 marks)

4.
 - 4.1. Describe briefly the gross anatomy of the wrist joint (radio-carpal joint). (30 marks)
 - 4.2. Give a description of the carpal tunnel, its boundaries, contents and relations. (60 marks)
 - 4.3. Give the clinical significance of the carpal tunnel. (10 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
JULY 2012

Date : 10th July 2012

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

PAPER 1I

PART A - PHYSIOLOGY

Answer all questions.

Answer each question in a separate book.

1.
 - 1.1. Outline the factors that determine plasma osmolality. (25 marks)
 - 1.2. Explain the mechanisms that maintain plasma osmolality within the range of 285-295 mosm/L (75 marks)

2. Write notes on –
 - 2.1. Cerebrospinal fluid (CSF) formation. (50 marks)
 - 2.2. Regulation of gastric acid secretion including clinical relevance. (50 marks)

3. A 30 year old man is admitted one week after treatment for a fracture of his tibia and fibula with a plaster cast. He has difficulty in breathing and left sided chest pain. His breathing is rapid and shallow and he complains of pain beneath the cast.

His vital parameters are given below.

Respiratory rate	30 breaths per minute
Pulse rate	120/minute
Arterial blood pressure	80/60 mmHg

An arterial blood gas analysis gave the following results.

PaO ₂	70 mmHg	(normal > 90 mmHg)
PaCO ₂	30 mmHg	(normal 35 - 45 mmHg)
pH	7.46	(7.35 – 7.45)

Pulmonary embolism is diagnosed.

- 3.1. Discuss the physiological basis for his vital parameters and blood gas findings. (60 marks)
- 3.2. He is started on anticoagulant therapy. Discuss the physiological basis of this treatment. (40 marks)

PART B – PATHOLOGY

Answer all questions.

Answer each question in a separate book.

4. Define the term “fistula”. Discuss the aetiopathogenesis of fistulae and their complications. (100 marks)
- 5.
- 5.1. Describe the pathological process of wound healing in an uncomplicated surgical wound. (40 marks)
- 5.2. A 65-year-old male presented to the surgical clinic with an incisional hernia. He had a laparotomy for a perforated carcinoma of the sigmoid colon six months prior to presentation.
- Discuss pathological processes that would have led to this complication. (60 marks)
6. Write notes on –
- 6.1. Dysplasia giving pertinent clinical examples. (30 marks)
- 6.2. Renal failure secondary to liver dysfunction. (30 marks)
- 6.3. Pathogenesis of adult respiratory distress syndrome (ARDS). (40 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
FEBRUARY 2013

Date : 11th February 2013

Time : 2.00 p.m. - 4.00 p.m.

PAPER 1 - ANATOMY

Answer all questions.

Answer each question in a separate book.

1. Describe the origin, course and distribution of the median nerve and the effects of injury to this nerve at the elbow. (100 %)

2. Describe the anatomy of the large bowel. (100 %)

3.
 - 3.1. Describe the anatomy of the fasciae of the neck. (75 %)
 - 3.2. Outline their clinical significance. (25 %)

4.
 - 4.1. Describe the vascular supply of the heart. (75 %)
 - 4.2. Briefly describe the development of the inter-atrial septum. (25 %)

POSTGRADUATE INSTITUTE OF MEDICINE
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SELECTION EXAMINATION IN MD (SURGERY)
FEBRUARY 2013

Date : 12th February 2013

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

PAPER II

PART A - PHYSIOLOGY

Answer all questions.

Answer each question in a separate book.

1. Discuss the regulation of motility of the stomach, small and large intestine.
Illustrate your answer with examples of dysregulation. (100 %)

2. Explain the physiological basis of the following.
 - 2.1. A patient with a tension pneumothorax develops tachypnoea. (30 %)
 - 2.2. Development of ankle oedema in a patient with pulmonary valve stenosis. (30 %)
 - 2.3. Low serum sodium and normal serum potassium concentration in diabetic ketoacidosis.. (40 %)

3.
 - 3.1. Describe mechanisms of temperature regulation in a healthy adult. (65 %)
 - 3.2. A 45-year-old man was admitted to the surgical casualty ward with swelling and redness of his right foot following a thorn prick. On examination his body temperature was found to be 38⁰ C.

Explain the physiological basis of his fever. (35 %)

PART B – PATHOLOGY

Answer all questions.

Answer each question in a separate book.

4. A 60 year old obese male has had intermittent claudication of the left calf for two years. He has diabetes, hypertension and smokes a pack of cigarettes daily. He is admitted to the surgical casualty ward with an acutely painful and cold left leg. A few hours after emergency revascularization he develops cardiac failure, hypoxia and progressive deterioration of his renal function.

Describe the pathogenesis of the following in this patient:

- | | | |
|-----|---------------------------------------|--------|
| 1.1 | Intermittent claudication | (50 %) |
| 1.2 | Painful cold limb | (25 %) |
| 1.3 | Complications after revascularization | (25 %) |
2. Discuss the role of the pathologist's report in the management of the cancer patient. Illustrate your answer with examples. (100 %)
3. Write notes on
- | | | |
|------|---|--------|
| 3.1. | The pathogenesis of acute pancreatitis. | (40 %) |
| 3.2. | Weight loss in the surgical patient. | (30 %) |
| 3.3. | Coagulopathy in obstructive jaundice. | (30 %) |

POSTGRADUATE INSTITUTE OF MEDICINE
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SELECTION EXAMINATION IN MD (SURGERY)
JULY 2013

Date : 16th July 2013

Time :9.30 a.m. - 11.30 a.m.

PAPER 1

ANATOMY

Answer all questions.

Answer each question in a separate book.

PART A

1.
 - 1.1. Give an account of the course, relations and branches of the fourth intercostals nerve. (60%)
 - 1.2. Describe the anatomical basis of respiratory movements in quiet respiration. (40%)

PART B

2. Describe the relations of the left lobe of the thyroid gland.
Outline the development of the thyroid and its clinical significance. (100%)

PART C

3. Describe the macroscopic anatomy of the duodenum and explain its surgical significance. (100%)

PART D

4.
 - 4.1. Describe the fasciae of the palmar aspect of the hand (palm and digits) excluding the flexor retinaculum. (80%)
 - 4.2. Explain the functions of these fasciae. (20%)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
JULY 2013

Date : 16th July 2013

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

PAPER 1I

PART A - PHYSIOLOGY

Answer all questions.

Answer each question in a separate book.

1. Describe the normal ventilation perfusion (V/Q) relationship of the lungs, and discuss giving examples how it can be altered in disease. (100%)

2. **Expalin the physiological basis of the following.**
 - 2.1. A patient who had a partial gastrectomy complains of weakness, dizziness and sweating after meals. (40%)
 - 2.2. Hypochloraemic, hypokalaemic, metabolic alkalosis in hypertrophic pyloric stenosis in an infant. (30%)
 - 2.3. Bradycardia and elevated blood pressure in a patient with an acute intracranial haemorrhage. (30%)

3.
 - 3.1. Describe the physiological basis for hyper-reflexia six months following a spinal cord injury. (40%)
 - 3.2. Discuss the role of adrenal hormones in major trauma. (60%)

PART B – PATHOLOGY

Answer all questions.

Answer each question in a separate book.

1. A 65 year old female presents with right sided unilateral lower limb oedema.
Explain the possible pathological bases of the condition. (100 %)

2. Describe the pathological processes that lead to a change in the colour of an organ or tissue. (100%)

3. Write notes on –
 - 3.1. Mechanisms of chemical carcinogenesis. (30 %)
 - 3.2. Metaplasia at the lower end of the oesophagus. (30 %)
 - 3.3. Angiogenesis. (40 %)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
FEBRUARY 2014

Date : 18th February 2014

Time : 9.30 a.m. -11.30 a.m.

PAPER 1 - ANATOMY

Answer all questions.

Answer each question in a separate book.

1. Describe the structural adaptations of the shoulder joint in relation to its function. (100 %)

2. Discuss the anatomy of veins of the retroperitoneum and their important clinical correlations. (100 %)

3.
 - 3.1. Describe the anatomy of the deep fascia of the leg and its extensions, enumerating the major structures in each fascial compartment. (70%)

 - 3.2. Discuss briefly its functional and clinical importance. (30 %)

4.
 - 4.1. Describe the anatomy of the pituitary gland. (70%)

 - 4.2. Describe its histology and development. (30%)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
FEBRUARY 2014

Date : 18th February 2014

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

PAPER 1I

PART A - PHYSIOLOGY

Answer all questions.

Answer each question in a separate book.

Question 1.

A 35 year old man was admitted to a surgical ward after trauma. He had bled from a large scalp laceration. He weighed 70 kg. The patient was given 1 litre of isotonic saline during the initial resuscitation.

- 1.1 Describe how this 1 litre of isotonic saline gets distributed in different fluid compartments of the body. (50%)
- 1.2 Explain why 5% dextrose is not appropriate as a resuscitation fluid. (30 %)
- 1.3 If I litre of colloid is given in place of isotonic saline how does it get distributed in different fluid compartments ? (20%)

Question 2.

- 2.1 Describe the transfer of information at the skeletal muscle neuromuscular junction. (60 %)
- 2.2 Explain the physiological basis for type II respiratory failure in a patient with acute ascending motor neuropathy (40 %)

Question 3.

- 3.1 Describe the main anti-clotting mechanisms that operate in humans. (40 %)
- 3.2 Explain the cardiovascular and respiratory effects due to pneumoperitoneum during laparoscopic surgery. (60 %)

PART B – PATHOLOGY

Answer all questions.

Answer each question in a separate book.

1. Discuss the role of apoptosis in health and disease with special reference to its significance in malignancy. (100 %)

2. Describe the pathology of the local complications of colonic diverticular disease. (100 %)

3. Write notes on
 - 3.1 Non metastatic complications of malignancy (30%)

 - 3.2 Effects of pulmonary thromboembolism (30%)

 - 3.3 Delayed healing in long bone fractures. (40%)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
JULY 2014

Date : 15th July 2014

Time :9.30 a.m. - 11.30 a.m.

PAPER 1

ANATOMY

Answer all questions.

Answer each question in a separate book.

1.
 - 1.1. Describe the gross anatomy of the temporomandibular joint. (excluding its movements). (50%)
 - 1.2. Describe the relations of the temporomandibular joint. (50%)
2. Describe the anatomy of the sciatic nerve including its origin, course and distribution. (100%)
3.
 - 3.1. Describe the relations of the pancreas. (50%)
 - 3.2. Describe the blood supply and the lymphatic drainage of the pancreas. (35%)
 - 3.3. Describe the developmental abnormalities of the pancreas. (15%)
4. Describe the anatomy of the oesophagus (excluding its development). (100%)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
JULY 2014

Date : 15th July 2014

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

PAPER 1I

PART A - PHYSIOLOGY

Answer all questions.

Answer each question in a separate book.

1. Compare and contrast the physiology of swallowing and vomiting. (100%)

2.
 - 2.1. Describe how the countercurrent mechanism operates to concentrate urine. (50%)

 - 2.2. Discuss the factors that predispose a patient to hypothermia during prolonged open abdominal surgery. (50%)

3. A 55 year old male developed a left anterior wall myocardial infarction. The following are his clinical and investigation findings.

Respiratory rate	-	28/minute
Heart rate	-	110 beats per minute
Blood pressure	-	90/60 mmHg
Ejection fraction	-	40%

 - 3.1. Explain the physiological basis for the cardiovascular changes seen in this patient. (60%)

 - 3.2. List the types of hypoxia that could occur in this patient and the physiological basis for oxygen therapy. (40%)

PART B – PATHOLOGY

Answer all questions.

Answer each question in a separate book.

4. Describe the different pathological processes that lead to fibrosis of an organ or a tissue and the clinical effects giving examples. (100%)

5. Describe the aetiopathogenesis and clinicopathological effects of ischaemia of the intestine. (100%)

6. Write notes on
 - 6.1 . The immunological basis of solid organ transplantation rejection. (40%)

 - 6.2. The role of the endothelium in haemostasis. (30%)

 - 6.3. Staphylococcal infection in surgical practice. (30%)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
FEBRUARY 2015

Date : 10th February 2015

Time : 9.30 a.m. -11.30 a.m.

PAPER 1

ANATOMY

Answer all questions.

Answer each question in a separate book.

1. Describe the anatomical arrangement of the lymphatic system of the head and neck region. (100 marks)

2.
 - 2.1. Describe the gross anatomy of the male urethra and its sphincters. (70 marks)
 - 2.2. Explain the anatomical features of the urethra which must be considered during urethral catheterization. (30 marks)

3.
 - 3.1. Describe the anatomy of the anterior abdominal wall excluding the inguinal Canal. (60 marks)
 - 3.2. List four surgical incisions in the abdominal wall and describe the anatomical basis for each incision. (40 marks)

4. Describe the structural and functional anatomy of pronation and supination of the forearm. (100 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
FEBRUARY 2015

Date : 10th February 2015

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

PAPER 1I

PART A - PHYSIOLOGY

Answer all questions.

Answer each question in a separate book.

1. Describe the handling of excess hydrogen ions in diabetic ketoacidosis. (100 marks)

2.
 - 2.1 Describe the changes that occur in stored blood. (40 marks)
 - 2.2 Describe the physiological derangements that occur following a massive blood transfusion. (60 marks)

3. A 42- year old man was admitted to hospital with a history of severe headache for one hour, neck stiffness and vomiting. A CT scan of his head confirmed the presence of a ruptured middle cerebral artery aneurysm causing a subarachnoid haemorrhage.

Around 48 hours after admission, he became unconscious. He was treated with intravenous mannitol and placed on a ventilator prior to transfer for neurosurgical intervention.
 - 3.1. Describe the physiological basis for headache in this person including the pain pathway. (40 marks)
 3. 2.1 Outline the regulation of blood flow to the brain including the factors which determine the intracranial pressure. (40 marks)
 - 3.2.2 Explain the physiological basis for the treatment of this patient with ventilation. (20 marks)

PART B - PATHOLOGY

Answer all questions

Answer each question in a separate book.

1. Describe the different morphological and histopathological patterns of inflammatory responses in tissues to infection. (100 marks)

2. Write notes on
 - a) Tumour markers (25 marks)
 - b) Fine needle aspiration cytology (25 marks)
 - c) Ascites (25 marks)
 - d) Pathological calcification (25 marks)

3.
 - a) Define a premalignant lesion/condition. (10 marks)
 - b) List five premalignant lesions/conditions. (20 marks)
 - c) Describe in detail the pathogenesis, pathological features and possible sequelae of two of the lesions/conditions you mentioned in (b). (70 marks)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
JULY 2015

Date : 14th July 2015

Time :9.30 a.m. - 11.30 a.m.

PAPER 1

ANATOMY

Answer all questions.

Answer each question in a separate book.

1. Describe the anatomy of anal canal with its sphincter complex and spaces immediately around it excluding the development.

2. Describe the gross anatomy of the parotid gland.

3.
 - 3.1. Describe the movements of all the joints of the thumb. (40%)
 - 3.2. Describe the muscles involved in the above movements and their innervation. (60%)

4.
 - 4.1. Describe in detail the arterial supply and venous drainage of the foregut structures in the abdomen. (80%)
 - 4.2. Outline its clinical importance. (20%)

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION IN MD (SURGERY)
JULY 2015

Date : 14th July 2015

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

PAPER 1I

PART A - PHYSIOLOGY

Answer all questions.

Answer each question in a separate book.

1. Explain the role of hypothalamus in endocrine regulation.

2. Describe the factors that increase the
 - 2.1. delivery of oxygen to tissues during exercise. (60%)
 - 2.2. venous return during exercise. (40%)

3. Write an account on
 - 3.1. physiology of micrurition reflex. (30%)
 - 3.2. physiological basis of pain in ureteric colic. (30%)
 - 3.3. physiological basis of symptoms in obstructive jaundice. (40%)

PAPER II

PART B – PATHOLOGY

Answer all questions.

Answer each question in a separate book.

04. Describe the methods of spread of malignant tumours and their clinical implications. Illustrate each of the clinical implications you describe with reference to a specific tumour.
05. Write notes on
- 5.1 Prevention of surgical site infection. (60%)
 - 5.2. Fat embolism syndrome. (40%)
06. 65 year old female presented to the surgical clinic with a chronic ulcer of the right lower limb.
- 6.1. Briefly describe the possible aetiological factors. (25%)
 - 6.2. List the predisposing factors for venous ulcers. (25%)
 - 6.3. Describe the pathogenesis of venous ulcers. (50%)