



FACULTY OF MEDICINE, UNIVERSITY OF RUHUNA
SECOND EXAMINATION FOR MEDICAL DEGREES – MARCH 2015
ANATOMY PAPER II

THREE HOURS

MONDAY 23rd MARCH 2015

Answer all FIVE questions

Answer EACH QUESTION in a SEPARATE BOOK

Use diagrams where necessary

01. A 65 year-old patient with history of hypertension admitted to a medical ward with sudden onset aphasia, right side homonymous hemianopia, hemiparesis and hemianesthesia of the right side of the face and arm except the right leg.

1.1.1. Occlusion of which cerebral artery could give rise to the above clinical picture. (10 marks)

1.1.2. Explain the anatomical basis of the neurological features mentioned above. (20 marks)

1.2 Describe briefly the blood supply of the cerebral hemispheres. (30 marks)

1.3 Describe briefly the light microscopic appearance of cerebral cortex. (15 marks)

1.4 Outline the embryological development of the central nervous system. (25 marks)

02. A 50 year-old male was admitted to a surgical ward with a swelling below the right side of the jaw, which increases in size while eating. The surgeon inspected sublingual papilla in the floor of the mouth and did a bimanual examination by putting one index finger inside the oral cavity and the other outside in front of the angle of the mandible.

2.1.1 What salivary gland is palpated in this examination? (15 marks)

2.1.2 State the anatomical relations of this salivary gland. (30 marks)

2.1.3 Write notes on classification of salivary glands and light microscopic appearance of this particular glands. (30 marks)

2.2 List the derivatives of the first pharyngeal arch, pouch, and cleft. (25 marks)

03. A 53 year-old heavy alcoholic was admitted with hematemesis and melena. On examination he was found to have distended abdomen, dilated superficial veins radiating from the umbilicus and enlarged liver and spleen. He was diagnosed to have portal hypertension.
- 3.1.1. State the anatomical basis for the clinical features mentioned above. (30 marks)
 - 3.1.2. State the direction of enlargement of spleen and its anatomical basis. (10 marks)
 - 3.2 Draw a labeled diagram to show the different regions of the anterior abdominal wall. (20 marks)
 - 3.3 Describe briefly the embryological development of liver. (20 marks)
 - 3.4 Write an account on light microscopic appearance of spleen. (20 marks)
04. A 50 year-old security officer with a history of chronic dull ache in both legs visited a hospital for a medical check-up. On examination, dilated and tortuous veins were found on the medial side of his legs. Further, the skin over the medial malleolus was dry and discoloured.
- 4.1 State the origin, course, tributaries and termination of the vein involved. (40 marks)
 - 4.2 Describe the adaptations of the lower limb that ensure an efficient venous drainage. (35 marks)
 - 4.3 Describe the light microscopic appearance of the vein stated in 4.1 (25 marks)
05. A 27 year-old mother who had uncontrolled bleeding from the uterus following lower segment cesarean section was underwent hysterectomy (surgical removal of the uterus) to control bleeding.
- 5.1.1. Draw a labeled diagram to show the various parts of the uterus and state the part which becomes the lower segment in pregnancy. (20 marks)
 - 5.1.2. Describe the arteries that have to be ligated in order to remove the uterus to prevent bleeding. (25 marks)
 - 5.1.3. Name three important structures that may be injured during hysterectomy. (15 marks)
 - 5.2 Describe briefly the embryological development of the uterus and state its developmental abnormalities. (20 marks)
 - 5.3 Describe the light microscopic appearance of the ovary of an adult female. (20 marks)