

91 61 Original

Index No:.....



UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE
ALLIED HEALTH SCIENCES DEGREE PROGRAMME
FIRST BPHARM PART II EXAMINATION – MAY 2015
PH 1254: HUMAN BIOLOGY II (SEQ)



TIME: 3 HOURS

INSTRUCTIONS

- Answer all questions.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

1.

1.1 Name the sensory organs in the human body. (10 marks)

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1.2 State the types of special sensations and general sensations. (20 marks)

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1.3 What are the types of muscles in the human body? (05 marks)

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1.4 Name two sites that are used to give intramuscular injections. (10 marks)

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1.5 Name the bones of the upper limb. (15 marks)

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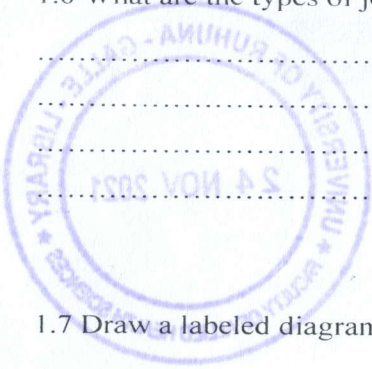
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18

Index No:.....

1.6 What are the types of joints in the human body?

(15 marks)



1.7 Draw a labeled diagram to show various parts of a synovial joint.

(25 marks)

92

62

Index No:.....

2.

2.1 Draw a labeled diagram of the female reproductive system.

(30 marks)

2.2 Give the functions of the each part you named.

(30 marks)

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2.3 Describe the hormonal regulation of the menstrual cycle.

(20 marks)

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2.4 What are the differences/similarities between male testis and female ovary?

(20 marks)

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93

63

Index No:.....

3.

3.1 Every sexually mature woman undergoes cyclical changes. Ovary and uterus also show cyclical changes that are important for fertilization and implantation.

Describe briefly changes occur in the uterine endometrium during uterine cycle. **(25 marks)**

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3.2 Describe briefly changes occur in the ovaries during ovarian cycle. **(25 Marks)**

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3.3. Briefly describe the distribution of water in the body.

(20 marks)

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3.4 State the Starling forces.

(10 marks)

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3.5 Briefly describe the development of oedema in cirrhosis.

(20 marks)

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4.

4.1 State the hormones secreted by the neurohypophysis with their respective functions. (20 marks)

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4.2 Briefly describe the diseases caused by abnormal GH secretion (20 marks)

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4.3 State the hormones secreted by the thyroid gland with their functions. (20 marks)

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4.4 State the changes in the thyroid-stimulating hormone blood level in hypothyroidism. (10 marks)

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Index No:.....

Index No:.....

5.

4.3 Briefly describe the physiological basis for enlargement of the thyroid in the endemic goiter. **(05 marks)**

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5.2 List 3 factors that affect Glomerular Filtration Rate (GFR) **(15 marks)**

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4.6 What is the physiological cause of cretinism?
5.3 Describe briefly how these factors mentioned above affect GFR. **(10 marks)**
(25 marks)

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5.4 List 4 substances that get absorbed in the proximal tubules. **(10 marks)**

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76

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Index No:.....

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5.5 What are the mechanisms that control water content in urine? (Describe very briefly). **(30 marks)**

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5.6 List **3** hormones produced **or** converted to an active form by the kidney. **(15 marks)**

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6.

6.1. Draw a clearly labeled diagram of an action potential of a skeletal muscle. **(10 marks)**



6.2. Explain the ionic changes that occur during the action potential of a skeletal muscle. **(20 marks)**

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6.3. Explain the following terms;

6.3.1 Isometric muscle contraction. **(10 marks)**

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96

66

Index No:.....

6.3.2 Isotonic muscle contraction.

(10 marks)

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6.4. What are the upper and lower motor neurons related to skeletal muscle?

(10 marks)

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6.5. What are important nerve pathways in the spinal cord which carry nerve impulse for the action of skeletal muscles?

(10 marks)

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6.6. What is/are the basic function/s of basal ganglia?

(10 marks)

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6.7. Name one disease related abnormality in basal ganglia.

(10 marks)

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