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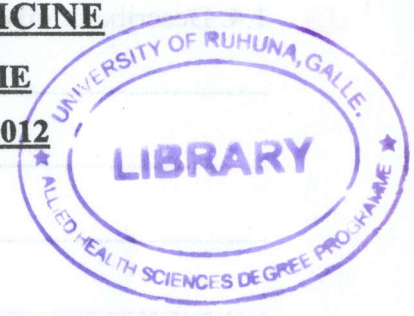


UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

FIRST BPHARM PART II EXAMINATION - MARCH 2012

PH 1254 - HUMAN BIOLOGY II



DATE: 12/03/2012

INDEX NO:

TIME : 8.30 a.m.- 12.00 noon

INSTRUCTIONS

- No paper should be removed from the examination hall.
- Answer all questions.
- Marks will be deducted for illegible hand writing.
- Do not use any correction fluid.

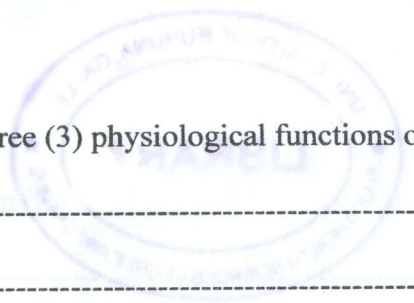
Physiology

1.

1.1. What is the function of sensory receptor? (10 marks)

1.2. Name the receptor types involved in pain perception. (10 marks)

1.3. Name different types of pain. (20 marks)



2.4. State three (3) physiological functions of the placenta.

(15 marks)

2.5. What is menopause?

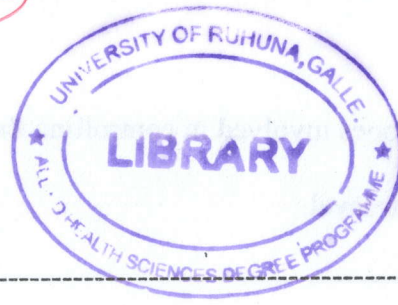
(10 marks)

2.6. List three (3) post menopausal symptoms.

(15 marks)

2.7. Name two (2) health risks of post menopausal women.

(10 marks)



3.

3.1. State the physiological action of thyroxin.

(15 marks)

3.2. Describe briefly the hypothalamic-pituitary-thyroid axis.

(20 marks)

3.3. List four (04) clinical features of hypothyroidism.

(10 marks)

4.

4.1. Draw a clearly labeled diagram to show an action potential of a skeletal muscle. (15 marks)

Blank lined area for drawing the action potential of a skeletal muscle.



4.2. Draw a clearly labeled diagram to show the temporal relationship between an action potential of a skeletal muscle and the tension developed in that muscle. (10 marks)

Blank lined area for drawing the temporal relationship between an action potential and tension in a skeletal muscle.

(29)

4.3. State three (3) differences between an action potential of a skeletal muscle and an action potential of a cardiac muscle. (15 marks)



4.4. State four (4) types of proteins in skeletal muscle. (10 marks)

4.5. State how an action potential that develops on the cell membrane causes contraction of a skeletal muscle. (30 marks)

4.6. Explain the physiological basis behind using neostigmine in treating myasthenia gravis.

(20 marks)

5.

5.1. State the normal pH of blood in human.

(5 marks)

5.2. State two (2) main mechanisms of maintenance of pH in the body.

(20 marks)

5.3. State major buffer systems of the body.

(15 marks)



Anatomy

Answer each question in a separate book.

- 6. (20 marks)
- 6.1. Draw a diagram to show a cross section of placenta. (20 marks)
- 6.2. Briefly outline the classification of joints. (30 marks)
- 6.3. Describe the anatomy of the blood-testis barrier and state its importance. (30 marks)
- 6.4. Describe the structure of the uterus and explain the changes of its structure during different phases of the ovarian cycle. (30 marks)

7.

- 7.1. What is meant by neuro-endocrine system? (15 marks)
- 7.2. Briefly describe the arrangement of the nervous system. (30 marks)
- 7.3. Discuss the component of endocrine system. (30 marks)
- 7.4. Describe briefly the structure of pituitary gland (25 marks)

