(81)

UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCE DEGREE PROGRAMME

FIRST B PHARM PART II EXAMINATION- FEBRUARY 2013

PH 1254 HUMAN BIOLOGY II

DATE : **21.02.2013** **TIME: 9.00a.m.- 12.00 a.m**

INDEX NO .....

INSTRUCTIONS

- Answer all questions.
- No paper should be removed from the examination hall.
- Marks will be deducted for illegible hand writting.
- Do not use any correction fluids.
- Answer each question in a seperate book.
- Use labelled diagrams where appropriate.

1.

1.1 Explain the meaning of neuro-endocrine system. **(10 marks)**

.....
.....
.....
.....
.....
.....
.....
.....

1.2 Describe the general arrangement of the central nervous system. **(25marks)**

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

1.3 Discuss the arrangement of endocrine tissue/glands in human body. **(30 marks)**

1.4 Describe the stages of maturation of ovarian follicles in human ovary. **(35 marks)**

82

2.

2.1 Draw a labelled diagram of a nephron with its associated blood vessels. **(15 marks)**

2.2 State the classification of joints in human body. **(25 marks)**

2.3 Describe the structure (including light microscopic appearance) of the skeletal muscle. **(25 marks)**

2.4 Describe the structure of seminiferous tubules of the human testis. **(35 marks)**

83

3. Muscle is consisted of two types of fibers; regular contractile units called extrafusal fibers and special fibers important for **regulation** of the tension of the muscle.

3.1 Name the type of these special fibers. **(5 marks)**

.....

.....

3.2 Name one type of sensory endings on these special fibres. **(10 marks)**

.....

.....

.....

3.3 Name one type of motor efferents for these special fibres. **(10 marks)**

.....

.....

.....

3.4. Give one example of,

3.4.1 Monosynaptic reflex . **(10 marks)**

.....

.....

.....

.....

.....

.....

.....

.....

3.4.2 Polysynaptic reflex. **(10 marks)**

.....

.....

.....

.....

.....

.....

3.5 Name the place where afferent impulses originate and efferent impulses terminate in these examples above. **(20 marks)**

.....

.....

.....

.....

.....

.....

.....

3.6 What are the differences between dull pain and sharp pain? **(20 marks)**

3.7 What is the clinical importance of referred pain? **(15marks)**

84

4.

4. 1. State the Starling forces **(10 marks)**

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

4.2 Describe the mechanism of formation of generalized oedema in nephrotic syndrome.

(20 marks)

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

4.3 State the hormones secreted by anterior pituitary gland. **(10 marks)**

.....
.....
.....
.....
.....
.....
.....
.....
.....

4.4 State the hormones secreted by adrenal gland. **(15 marks)**

.....
.....
.....
.....
.....
.....
.....
.....
.....

4.5 Describe the effects of excessive secretion of glucocorticoids by adrenal gland. **(20 marks)**

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

4.6 Describe the term "adrenal crisis". **(25 marks)**

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

85

5.

5.1 Draw a labeled diagram to show the temporal relationship between an action potential of a skeletal muscle and its mechanical response. **(15 marks)**

5.2 Draw a clearly labeled diagram of the length-tension relationship of a muscle fibre. **(15 marks)**

5.3 Briefly explain the role of different proteins in muscle contraction. **(40 marks)**

5.4 Explain the fate of neurotransmitters released at neuromuscular junction. **(20 marks)**

5.5 Name two drugs that are used to modify the events taking place at neuromuscular junction. **(10 marks)**

86

6.

6.1 List 6 functions of estrogen. **(20 marks)**

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

6.2 Describe the hypothalamo-pituitary-gonadal axis using a diagram. **(30 marks)**

6.3 Explain how hypothalamo-pituitary-gonadal axis is affected by hormonal contraceptive methods. **(20 marks)**

.....
.....
.....
.....
.....
.....
.....

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

6.4 Give mechanism of action of oral contraceptive pills. **(10 marks)**

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

6.5 What is true precocious puberty? Give two causes, **(20 marks)**

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....