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UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE
ALLIED HEALTH SCIENCES DEGREE PROGRAMME
THIRD BPHARM PART I EXAMINATION –DECEMBER 2015
PH 3153 PHARMACOLOGY III (SEQ)

TIME: THREE HOURS

INSTRUCTIONS

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

1. Write short notes on

- 1.1. Parenteral nutrition (30 marks)
- 1.2. Mucolytic agents (30 marks)
- 1.3. Oral rehydration solution in moderate dehydration (40 marks)

2. Answer **all** parts.

- 2.1. Briefly explain the chemoprophylaxis. (16 marks)
- 2.2. Name two genetic determinants of antibiotic resistance. (04 marks)
- 2.3. Briefly describe the mechanism of action of Sulfonamide and Trimethoprim. (25 marks)
- 2.4. State the condition of “Steven-Johnson Syndrome”, an adverse drug reaction of sulfonamides. (05 marks)
- 2.5. Briefly discuss the pharmacokinetic of quinolones with two examples. (20 marks)
- 2.6. Write brief notes on following topics.
 - 2.6.1. Quinolone contraindications. (10 marks)
 - 2.6.2. Nitrofurantoin. (10 marks)
 - 2.6.3. Sulfonamides and trimethoprim clinical uses. (10 marks)

3. Answer **all** parts.

- 3.1. List five effects of estrogen on the body. (15 marks)
- 3.2. List five adverse effects of conjugated estrogen. (20 marks)
- 3.3. Describe the pharmacological basis of using clomiphene in induction of ovulation. (30 marks)
- 3.4. List three clinical uses of progestin. (15 marks)
- 3.5. State the reason/s of using progestin in the clinical uses mentioned in 3.4. (20 marks)

4. Mrs AB has two children and for the last year has become increasingly nervous and agitated, especially when dealing with them. She is constantly rushing from one task to another, always feels hot and seems to sweat a lot, even when the room temperature is quite low. She has a very good appetite but has lost some weight recently. In addition, she feels constantly tired and weak. She has been to see her doctor today. He thoroughly examined Mrs AB. He noted a swelling on her neck, rapid onset and relaxation of her reflexes and that her heart rate was higher than normal (87 beats per minute). During the consultation, it became clear that none of Mrs AB's family had suffered any problems of this kind. A blood test was taken and showed high levels of thyroxine (T4) and triiodothyronine (T3) of $30 \mu\text{g dl}^{-1}$ and 300 ng dl^{-1} , respectively, compared with the normal values of $5\text{--}11.5 \mu\text{g dl}^{-1}$ for T4 and $100\text{--}215 \text{ ng dl}^{-1}$ for T3.

4.1 Where is the thyroid gland located in the body?

(10 marks)

4.2 Which hormones are secreted by the thyroid gland? Which is the most active of the thyroid hormones?

(15 marks)

4.3 What are the common causes of hyperthyroidism?

(15 marks)

4.4 Name two drugs used to treat hyperthyroidism. Your answer should include examples, their mechanisms of action and side effects.

(40 marks)

4.5 What are the advices should be given to patient while dispensing anti-thyroid drugs?

(20 marks)

5. Answer **all** parts.

5.1 Describe the pharmacological basis of using insulin in type 1 diabetes.

(40 marks)

5.2 List five adverse effects of insulin therapy.

(10 marks)

5.3 Describe the advice you would give to a patient who is given insulin therapy for the first time.

(50 marks)

6. Answer **all** parts.

6.1 Name five oral hypoglycaemic drugs.

(10 marks)

6.2 Describe the pharmacological basis of using biguanides in diabetes.

(40 marks)

6.3 Discuss the differences between biguanides and sulphonylureas.

(50 marks)