

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF MEDICINE

BACHELOR OF MEDICINE AND BACHELOR OF SURGERY DEGREE
PART 2 EXAMINATIONS

MBM 2102 : HORMONAL REGULATION

DATE : MAY 2006

TIME : 3 HOURS

Instructions to Candidates

Answer all questions

SECTION A

1. Compare and contrast the general mechanism of action of peptide hormones and steroid hormones. (20)
 2. "Signalling systems have various mechanisms of "switching off" the signal". Discuss this statement with reference to the neurotransmitters acetylcholine and serotonin as well as the hormones adrenaline and glucagon. (20)
 3. Outline the regulated synthesis of the thyroid hormones and explain their metabolic effects. (20)
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SECTION B

4. Diagrammatically illustrate the metabolic shifts that characterise pregnancy.(4)
5. Explain the weight loss that typifies the following conditions:
 - (a) cancer cachexia (4)
 - (b) anorexia nervosa (4)
 - (c) sustained exercise. (4)

6. What are the biochemical bases of the following disorders:
- (a) Parkinsonism (4)
 - (b) cholera (4)
 - (c) Cushing's syndrome (4)
 - (d) diabetic ketosis? (4)
7. What is the "metabolon"? Give one example. (4)
8. Differentiate between inhibitory and excitatory amino acid neurotransmitters. (4)

END OF EXAMINATION