

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF MEDICINE

BACHELOR OF MEDICINE AND BACHELOR OF SURGERY DEGREE
PART 2 EXAMINATIONS

MBM 2102 : HORMONAL REGULATION AND TISSUE SPECIALISATION

DATE : DECEMBER 2006

TIME : 3 HOURS

Instructions to Candidates

Answer all questions

SECTION A

1. "The human body is made up of specialised organs and adequate inter-organ communication is imperative for correctly coordinated function." Discuss this statement with reference to neuromuscular signalling and describe one relevant disorder. (20)
2. Provide a sketch of inter-organ cooperation in the post-prandial state. Comment on the regulation of the amount of storage triacylglycerols in an individual. (20)
3. Detail the functions of the G proteins in the transduction of signals that increase or decrease cAMP levels. (20)

SECTION B

4. Differentiate between cholinergic neurons and dopaminergic neurons. How are the signals of these neurons cancelled? (5)
5. Explain the involvement of eicosanoids in respiratory syndromes. (6)
6. Giving examples, differentiate between secondary and tertiary messengers of hormones. (4)

7. What are the biochemical bases of the following disorders:
- a) gigantism (4)
 - b) Addison's disease (4)
 - c) cretinism (4)
 - d) pheochromocytoma (4)
 - e) juvenile onset diabetes mellitus. (4)
8. Briefly, elucidate the management of hypoglycaemia. (5)

END OF EXAMINATION