

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF MEDICINE

DIVISION OF BASIC MEDICAL SCIENCES

BACHELOR OF MEDICINE AND BACHELOR OF SURGERY DEGREE
PART I FINAL EXAMINATIONS

MBM 1202 : BIOCHEMISTRY PAPER 1

DATE : JUNE 2013

TIME : 3 HOURS

Instructions to Candidates

Answer all questions in the answer booklet provided

1. Compare and contrast the metabolic shifts that characterise the overnight fast and the adapted starved state. (20)
2. Outline haem biosynthesis and describe the regulation of this pathway. Elucidate the metabolic derangements that characterise congenital erythropoietic porphyria (CEP). (20)
3. Different cells can respond differently to the same extracellular signal molecule. Using a particular hormone or hormones as examples, discuss the validity of this statement. (20)
4. Giving examples of the hormones that utilize each type of receptor, discuss how the major types of hormonal receptors function in signal transduction. Use diagrams to illustrate your answer. (20)
5. Describe the pentose phosphate pathway, highlighting the tissue and cellular distribution of the enzymes of the pathway, reaction sequence and its biological significance. (20)

END OF EXAMINATION

