



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BMLS

ABT 4202 : METABOLISM OF BIOMOLECULES- PAPER TWO

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: Pick Date Select Month Pick Year

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question ONE

- a) Distinguish between
 - (i) Catabolism and anabolism (2 marks)
 - (ii) Exorogenic and endogenic reactions (2 marks)

- b) State three types of compounds produced during metabolism that mediate the release of energy (3 marks)
- c) Outline the process involved in formation of mevalonate (5 marks)
- d) Explain the process of ketogenesis (4 marks)
- e) Explain the activation process of fatty acids (4 marks)
- f) State four functions of nucleotides (4 marks)
- g) Name three amino acids that can be catabolized to pyruvate (3 marks)
- h) state any three conditions associated with elevated amounts of unconjugated bilirubin in blood (3 marks)

Question TWO

- i) Discuss the energy production phase of glycolysis (10 marks)
- ii) Describe the bypass reaction in gluconeogenesis (10 marks)

Question THREE

Eukaryotes use organelles to compartmentalize metabolic pathways. Discuss. (20 marks)

Question FOUR

- (i) Discuss the de novo biosynthesis of pyrimidine nucleotides (15 marks)
- (ii) Describe the dangers associated with accumulation of the products of degradation of nucleic acid biosynthesis (5 marks)

Question FIVE

Describe the fatty acid oxidation process (20 marks)