



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2011/2012

INSTITUTION BASED PROGRAMME

DECEMBER SESSION EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE

HFN 506N: ADVANCED – NUTRITIONAL BIOCHEMISTRY

DATE: Thursday 3rd May, 2012

TIME: 9.00 a.m. – 12.00 p.m.

INSTRUCTIONS: Answer *ALL* questions.

1. (a) Define *trans* fatty acids and explain why they are not desirable in foods. [4 marks]
 (b) Describe **three** classes of enzymes and give an example of each. [6 marks]

2. (a) Describe ketosis and how it occurs. [6 marks]
 (b) Write an equation summarizing
 (i) glycolysis and
 (ii) gluconeogenesis pathways [8 marks]

3. (a) Define and list the essential amino acids. Which amino acids are regarded as semi-indispensable? Explain. [6 marks]
 (b) Explain why a person who wants to lose weight should not avoid carbohydrates. [4 marks]

4. (a) Explain four (4) advantages of biochemical nutrition assessment. [4 marks]
 (b) Explain oxidative stress, and the role of antioxidants in defense against oxidative stress. [8 marks]

5. (a) Briefly explain two main factors that determine protein quality. [6 marks]
 (b) Discuss **four** nutrition goals that you would recommend for our country. [8 marks]

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