

**2<sup>nd</sup> SEM. 2005/2006**



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**UNIVERSITY OF SWAZILAND**

**SUPPLEMENTARY EXAMINATION PAPER**

**PROGRAMME : DIPLOMA IN HOME ECONOMICS &  
HOME ECONOMICS EDUCATION  
YEAR II**

**COURSE CODE : FN 202**

**TITLE OF PAPER : BIOCHEMISTRY & NUTRITION**

**TIME ALLOWED : TWO (2) HOURS**

**INSTRUCTIONS : ANSWER QUESTION ONE (1)  
AND ANY OTHER (2) QUESTIONS**

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GRANTED BY THE CHIEF INVIGILATOR**

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**QUESTION 1 [COMPULSORY]**

All organisms produce ATP by releasing energy stored in glucose and other sugars.

Describe the three major reaction pathways which are involved in the release of energy stored in glucose.

**[Total marks = 40]**

**QUESTION 2**

List and describe **five** elements that need to be considered when constructing a healthy and nutritious diet.

**[5 x 6 = 30]**

**[Total marks = 30]**

**QUESTION 3**

An important nutritional-metabolic fact that will emerge increasingly in the study of nutrition is the fundamental principle of **nutrient interaction**.

Discuss the intimate metabolic relationships which exist among all the basic nutrients and their metabolites.

**[Total marks = 30]**

**QUESTION 4**

Nutrients are converted into usable forms via digestion and absorption and are made ready for cell metabolism, which is the means by which the body uses these nutrients to build tissues, produces energy, and maintain normal functions.

Describe the digestion and absorption of the following macronutrients:

- i) Carbohydrate
- ii) Protein
- iii) Fat

**[Total marks = 30]**