

**FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI.**  
**SCHOOL OF SCIENCE**  
**DEPARTMENT OF SCIENCE LABORATORY TECHNOLOGY**

ST/ BCH 314 : BIOENERGETICS

2012 / 2013 RAIN SEMESTER EXAMINATION

ANSWER FIVE QUESTIONS

27 / 01 / 2014

TIME: 3 HOURS

**Question 1**

*Energy generation and utilization is said to have intracellular locus in the mitochondria. Discuss*

**Question 2**

Write briefly on the following :

- (i) Electron transport components NAD
- (ii) Flavoprotein
- (iii) Cytochrome

**Question 3**

State clearly the importance of protein, fat and carbohydrate in bioenergetics.

**Question 4**

What is the relevance of Adenosine Triphosphate ( ATP) generation and utilization?

**Question 5**

Explain briefly the terms :

- (i) Oxidation reduction reactions
- (ii) Phosphorylation
- (iii) Electron transport chain ( ETC )

**Question 6**

Describe concisely the *aerobic glycolytic pathway*.