ELIZADE UNIVERSITY,
ILARA-MOKIN, NIGERIA

FACULTY: BASIC & APPLIED SCIENCES

DEPARTMENT: BIOLOGICAL SCIENCES

FIRST SEMESTER EXAMINATION

2017/2018 ACADEMIC SESSION

COURSE CODE: BTH 407

COURSE TITLE: BIOPHYSICS

DURATION: 2 HOURS

HOD's SIGNATURE

NAME:.....

MAT. No:.....

INSTRUCTIONS: Answer any four questions
All questions carry equal marks

1. Electromagnetic spectrum forms the bedrock of many instruments used as analyzers. Discuss the spectrum under the following headings:
   a. The ultra violet (UV) rays
   b. Visible light
   c. The term quantitative UV
2. Diffusion is one of the important biological processes dictating movement of materials across membranes:
   a. What is Diffusion
   b. Explain the concept using diffusion flux and Fick's law
3. Describe active transport in detail using a specified example in human or plant.
4. Explain mass spectrometry in the two primary methods used for ionization of whole protein.
5. Movement of ions across cell membrane is governed by a pump:
   a. Draw a diagram illustrating the work of sodium-potassium pump
   b. Describe a mechanism underlying the function of the pump
6. Discuss in detail the structure of nucleic acids and mention two equipment used in the methods for studying the structure of proteins and Deoxyribonucleic acid (DNA).