

OLABISI ONABANJO UNIVERSITY
DEPARTMENT OF BIOCHEMISTRY

2014/2015 HARMATTAN SEMESTER EXAMINATION

COURSE CODE: BCH 401

TIME ALLOWED: 3 HOURS

COURSE TITLE: Advanced Enzymology DATE: Wednesday, 24th June, 2014

INSTRUCTION: Answer any five (5) questions.

1. (a) Discuss the molecular models of Allosterism. ✓
2. (a) What are regulatory enzymes? ✓
(b) Write a short note on Enzyme Assay. ✓
(b) Name five instruments used in measuring enzyme activities. ✓
3. (a) Write a short note on enzyme reconstitution.
(b) Name five (5) factors that can denature an enzyme.
4. (a) Differentiate between a multi-enzyme complex and a multi-enzyme system. ✓
(b) With a named example, describe the mechanism of action of a multi-enzyme complex. ✓
5. (a) Differentiate between Steady and Transient State Kinetics.
(b) Explain the methods used in measuring the Transient State Kinetics.
6. Write a short note on five (5) criteria for determining the purity of an enzyme.

Enzyme activities and synthesis are regulated.

(a) Why? → Conservation of energy → less spontaneous

(b) How? ↓

- Induced expression
- Homeostatic control
- Allosteric regulation
- Covalent modification
- Competitive inhibition
- Genetic control

Enzymatic induction & transcription factors

Analytical gel filtration, SDS PAGE, Reversed phase HPLC, Mass Spectrometry, Western blotting with specific antibodies

(Protein) (clay)

Final line → Spec
continuous dead → Spec & light
control