



ELIZADE UNIVERSITY

ILARA-MOKIN

FACULTY: Basic and Applied Sciences
DEPARTMENT: Physical and Chemical Sciences
SECOND SEMESTER EXAMINATIONS
2016/2017 ACADEMIC SESSION

COURSE CODE: BCH 413

COURSE TITLE: ENZYME BIOTECHNOLOGY

DURATION: 2 Hrs

A handwritten signature in black ink, enclosed in a rectangular box.

HOD's SIGNATURE

TOTAL MARKS: 60

Matriculation Number: _____

INSTRUCTIONS:

1. Write your matriculation number in the space provided above and also on the cover page of the exam booklet.
2. This question paper consists of 1 page.
3. Answer all questions in the exam booklet provided.
4. At the end of this examination, place the question paper inside the exam booklet.
5. Attempt any 4 Questions



ELIZADE UNIVERSITY ILARA-MOKIN
FACULTY OF BASIC AND APPLIED SCIENCES
DEPARTMENT OF CHEMICAL AND PHYSICAL SCIENCES
FIRST SEMESTER EXAMINATION: 2016/2017 SESSION
BCH 413 - ENZYME BIOTECHNOLOGY

Time Allotted: 2 hours

Answer **any 4** out of the 6 questions

- 1a. Discuss the major characteristics of Industrial Enzymes.
- b. What are the plausible reasons why microbes is the ideal source of industrial enzymes
2. a Explain the basis and advantages of salt precipitation in enzyme purification. What are advantages of using ammonium sulphate precipitation over other salts?
- b. Illustrate the basic approaches of removing nucleic acid from proteins during large-scale purification.
- 3 Describe the fermentation variables that need to be optimized to achieved maximum microbial growth and enzyme production at large scale.
4. Expound on the industrial uses and applications of enzymes with some specific examples
5. Itemize the screening procedure and steps for a novel commercial enzyme
- 6 What do you understand by immobilization of enzymes? Write concisely on the following methods of immobilization: (i) Adsorption method, (ii) Affinity binding, (iii) Covalent binding (iv) Entrapment. Enumerate the possible advantages of these methods.