



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE AND BACHELOR OF EDUCATION

SBT 437: INDUSTRIAL MICROBIOLOGY

DATE: Friday 30th March 2012

TIME: 2.00p.m – 4.00p.m

INSTRUCTIONS

SECTION A: Answer all questions in this section. Each question is five marks (5 marks)

1. Briefly discuss preservation techniques for microorganism for industrial application
2. Briefly discuss the mechanisms that regulate synthesis of primary metabolites such as enzymes

3. Describe the biochemical reactions involved during production of ethanol by fermentation

4. Describe biosynthesis of amino acids

5. Outline the production process for enzymes

6. Describe plasmid stability in relation to microbial fermentation

7. Briefly describe the microbial processes in industrial production of hydrogen

8. Describe the major areas of concern in ensuring that industrial products are acceptable, of good quality and have high economic returns

SECTION B: (Each question is 30 marks)

Write an essay on any ONE of the following topics:

1. Methane and hydrogen production
2. Upstream and downstream processes in general fermentation
3. Industrial production of amino acids.