

**UNIVERSITY OF KABIANGA**

**UNIVERSITY EXAMINATIONS**

**2014/2015 ACADEMIC YEAR**

**FOURTH YEAR SECOND SEMESTER EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF SCENCE IN BIOCHEMISTRY**

**COURSE CODE: BIO 418**

**COURSE TITLE: APPLIED BIOCHEMISTRY**

**DATE: 28TH APRIL, 2015**

**TIME: 9.00 A.M-12.00 NOON**

**INSTRUCTIONS TO CANDIDATES:**

*Answer* ***ALL*** *Questions. Illustrate your answers with diagrams where applicable*.

1. Define the following terms:
2. Primary metabolite and secondary metabolite. (2 marks)
3. Malt and adjunct. (2 marks)
4. Describe the contrast between the production of a primary and secondary metabolite. (10 marks)
5. Describe the biochemistry of seed germination in beer making.(6 marks)
6. What factors are considered when identifying a microorganism for industrial process? (4 marks)
7. What factors are considered when growing microbes in fermenters? (6 marks)
8. Discuss the industrial production of L-glutamic acid. (10 marks)
9. Describe the ensiling process. (10 marks)
10. Outline some of the undesired microorganism known in the ensiling process. (10 marks)
11. Explain the industrial manufacture of beer using barley. (10 marks)