



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2010/2011
INSTITUTIONAL BASED PROGRAMME (IBP) DECEMBER SESSION
EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
HFN 310: FOOD MICROBIOLOGY II

DATE: Thursday, 28th April, 2011

TIME: 11.00 a.m. – 1.00 p.m.

INSTRUCTIONS: Answer **all** questions

1. Explain the following terms
 - (a) Botulinum cook (2 Marks)
 - (b) Gram staining (2 Marks)
 - (c) Sampling (2 Marks)
 - (d) Threshold (2 Marks)
 - (e) Incubation (2 Marks)
 - (f) Food quality (2 Marks)
 - (g) Food intoxication (2 Marks)
 - (h) Food infection (2 Marks)
 - (i) Pasteurization (2 Marks)
 - (j) Sterilization (2 Marks)
2.
 - (a) Discuss any **four** sources of microbial contamination of food. (5 Marks)
 - (b) Explain the difference between extrinsic and intrinsic factors of microbial growth in food. (5 Marks)
 - (c) Discuss the typical growth curve of microorganisms in food. (5 Marks)
 - (d) Explain how the microbial load of food can be reduced. (5 Marks)
3. Discuss the economic importance of microorganisms in food. (10 Marks)
4. Differentiate between the **D** and **Z** values as used in thermal processing of food. (10 Marks)
5.
 - (a) What do you understand by the term HACCP and how is it applied in food industry? (5 Marks)
 - (b) Differentiate between Total plate count and MPN. State how they are used in food industry. (5 Marks)