Uva Wellassa University, Sri Lanka
End-Semester Examination – March 2012
SCT 418-2 Microbial Process and Applications
Time: Two (02) hours

Answer all the questions

1.

Briefly describe the microbial processes (production steps) of the followings.

a) Buffalo curd. *(25 marks)*
b) Antibiotics. *(25 marks)*
c) Cheese. *(25 marks)*
d) Alcohol from molasses. *(25 marks)*

2.

a) Distinguish between homofermentative lactics and heterofermentative lactics. *(10 marks)*
b) Briefly explain, giving examples, the three major types of fermentations. *(20 marks)*
c) Briefly explain the production procedure of Wine. *(30 marks)*
d) Briefly explain the production procedure of Fermented Fish. *(40 marks)*

3.

a) Briefly explain as to why *E. coli* is considered as **the major indicator organism** of food poisoning. *(20 marks)*
b) Distinguish between two-class attributes plan and three-class attributes plan. *(20 marks)*
c) Distinguish between cultural techniques and chemical/biological techniques used in microbiological examination of products. *(20 marks)*
d) A food sample of 25 g was blended with 75 ml of MRD. The resulting mix was further diluted to a final volume of 200 ml using the same diluent. A serial decimal dilution was prepared and 0.1 ml volumes from the 1:10,000 dilution was plated onto three Nutrient Agar plates. After incubation, the plates had 30, 70 and 50 colonies on them. Calculate the total number of organisms in the food sample. Clearly state all your assumptions. *(40 marks)*

4.

a) Distinguish between, giving examples, probiotics and prebiotics. *(10 marks)*
b) Write a brief account on justification of use of probiotcs in relation to human health. *(20 marks)*
c) Briefly explain the reasons for loss of viability of probiotics in the product and the gut. *(30 marks)*
d) Briefly explain the health benefits associated with the consumption of probiotic food products. *(40 marks)*