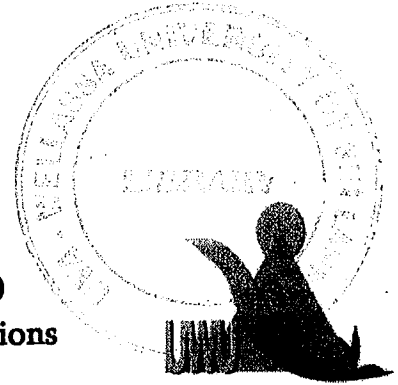


Uva Wellassa University, Sri Lanka
1st Semester Examination Dec/Jan 2010
BIO 418-2 Microbial Process and Applications
Time: Two (02) hour



Total number of questions 08

Answer four (04) questions including question 1 and 2

1. a). Define the term fermentation. (10 marks)
b). Briefly explain, giving examples, three major types of fermentation. (20 marks)
c). Briefly explain the production procedure of yoghurts. (35 marks)
d). Briefly explain the production procedure of cheese. (35 marks)

2. Write short notes on
 - a). Antibiotic production. (25 marks)
 - b). Vinegar Production. (25 marks)
 - c). Anaerobic digestion. (25 marks)
 - d). Vitamin production. (25 marks)

3. a). What are the major alcohols produced in the industrial alcohol production? (10 marks)
b). Name the major raw materials used in industrial alcohol production. (10 marks)
c). Name the microorganisms that are used in production of ethyl alcohol. (10 marks)
d). Briefly explain the production procedure of ethyl alcohol from molasses. (70 marks)

4. a). Define the terms Probiotics and Prebiotics (10 marks)
b). Name five bacterial species that are widely used as probiotic organisms in foods. (20 marks)
c). Explain briefly five health benefits of consumption of probiotic foods (50 marks)
d). With the help of "the Henderson-Hasselbalch equation", briefly explain how weak acids can bring about bacterial inhibition. (20 marks)

5. a). Briefly explain, using schematic diagrams, the production procedure of wine. (30 marks)
b). Distinguish between still wines and sparkling wines (20 marks)
c). Distinguish between brewing and distillation (20 marks)
d). Briefly explain the production procedure of whiskey (30 marks)