

Uva Wellassa University, Sri Lanka
Faculty of Science and Technology
Science and Technology Degree Programme
1st Semester Examination – March/April 2013



SCT 418-2 Microbial Processes and Applications



Instructions to candidates

Total number of questions: Four (04)

Answer all questions

Time allocation: Two (02) hours

Total marks allocated: 100

1. Briefly explain the microbial processes and applications in following industries. Give examples of products and responsible microorganism for each of the industry

- a. Agriculture
- b. Medical
- c. Energy
- d. Waste water treatment

(25 marks)

2. Beverage industry is one of the major areas of microbial application.

- a. Name three alcoholic beverages produced by yeast. (5 marks)
- b. Name the widely used yeast species and their required qualities (5 marks)
- c. Write the flow chart of beer brewing. (7.5 marks)
- d. Briefly indicate the importance of separating and clarifying (7.5marks)

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3.

- a. Define food fermentation and its importance. (5 marks)
- b. Name the major products made by microbial fermentation using rice, soya, meat, fruits. Give the major microorganisms involved in each of the product. (10 marks)
- c. Draw the flow diagram that describes the process of making a fermented soya product and a vegetable product (10 marks)

4.

- a. Explain the importance of bacterial enumeration in microbial applications. (10 marks)
- b. Briefly write the importance of lactic acid bacteria in production of yoghurt. (7.5 marks)
- c. Briefly explain the production of citric and acetic acid using microorganism (7.5 marks)