

2015

Uva Wellassa University, Sri Lanka  
Faculty of Science and Technology  
Mineral Resources and Technology Degree program  
1<sup>st</sup> Semester Examination – March/ April 2013  
MRT 302-1 Microbiology for Water Science



**Uva Wellassa  
University**

Instructions to candidates

Answer all questions

Number of questions: Three (03)

Time allocation: One (01) hour

Total marks allocated: 100

1.
  - a) Define the word "pathogenicity". (02 marks)
  - b) Name the characteristic features of indicator microorganisms. (10 marks)
  - c) Fecal coliform / Fecal *Streptococci* ratio for a particular water sample is 7.
    - i. What can you say about this water sample? (04 marks)
    - ii. Name two types of Fecal *Streptococci* (02 marks)
    - iii. How can you detect the Fecal *Streptococci* in a water sample? (02 marks)
  - d) Briefly explain four (04) disinfection methods. (20 marks)
2.
  - a) Write down three (03) types of microorganisms which can produce hepatotoxins. (03 marks)
  - b) Briefly explain the effects of algal contamination in drinking water. (12 marks)
  - c) Discuss the importance of use of activated carbon in water purification process. (15 marks)
3.
  - a) Draw a labeled diagram of a waste water treatment plant. (05 marks)
  - b) Briefly explain the waste water treatment process. (15 marks)
  - c) Discuss the advantages and disadvantages of biological waste water treatment method compared to chemical methods (10 marks)