

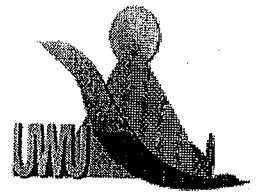


Uva Wellassa University, Sri Lanka

End Semester Examination –February/March 2012

MRT 302-1 Microbiology for Water Science

Time: One (01) hour



Total four (04) Questions.

Answer three (03) questions only.

1.
 - i. Write down three common features of indicator organisms in water. (03 marks)
 - ii. Heterotrophic Plate Count of an unknown water sample is 10^6 CFU/ml.
 - a) Can this water sample be used for drinking purpose? Comment on your answer. (07 marks)
 - b) List five bacterial genera found in heterotrophic plate count. (05 marks)
 - c) How can you use heterotrophic plate count as fecal indicator? (10 marks)

2.
 - i. What is meant by disinfection? (04 marks)
 - ii. Write down the factors that affect disinfection process. (06 marks)
 - iii. Briefly explain the methods used to disinfect untreated water before consumption. (15 marks)

3.
 - i. State three possible ways that water can get contaminated during distribution. (03 marks)
 - ii. Briefly explain the sewage treatment process. (12 marks)
 - iii. Discuss the major factors you have to consider before applying a biological treatment method. (10 marks)

4.

- i. Draw a sketch diagram of a conventional water filtration plant and indicate the major steps of water treatment. (10 marks)
- ii. Name three common microbial genera found in bottled water. (03 marks)
- iii. What are the differences between slow sand filtration method and rapid sand filtration method? (12 marks)