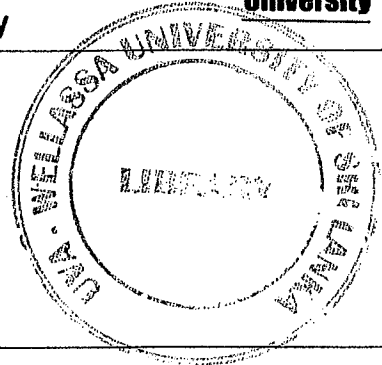


Uva Wellassa University of Sri Lanka
Faculty of Science and Technology
Department of Science and Technology
400 Level 1st Semester Examination – Jul/Aug 2016
MRT 451-2 Advanced Hydrogeology



Instructions to candidates

Duration: Two (02) hours

Number of questions: Four (04) Essay

Answer all questions

Mark allocation: 100 Mark

1. a. Classify geological formations depending on the relative permeability and describe each category. (15 mark)
- b. Explain how it is possible to distinguish a perched aquifer from the main unconfined aquifer by drilling a borehole. (10 mark)
2. a. Briefly explain the importance of fractures and discontinuities in hydrogeological point of view? (10 mark)
- b. Explain what happens to the hydraulic conductivity through fractures when
 - I. increase in normal stresses
 - II. increase in temperature. (10 mark)
3. a. Briefly describe the 'Hydrogeologic mapping' and its importance. (07 mark)
- b. Describe the techniques that are commonly used in hydrogeologic mapping for analyzing and correlating data from individual sites and depicting them as continuous data. (18 mark)
4. a. Classify tube wells based on the method of construction and describe each type. (18 mark)
- b. Briefly describe well-point system and its importance. (08 mark)
- c. What are the advantages and disadvantages of shallow tube wells? (04 mark)