

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF THE BUILT ENVIRONMENT

DEPARTMENT OF ARCHITECTURE

BACHELOR OF ARCHITECTURAL STUDIES (HONOURS) DEGREE

2013-2014 ACADEMIC YEAR

PART 111 – FIRST SEMESTER SUPPLEMENTARY EXAMINATIONS – JULY 2014

AAR 3103 BUILDING SERVICES I

Instructions

Time: 3 Hours

- All questions carry equal marks
- Answer all questions

QUESTION 1

You have been given a platform to educate the Bulawayo community on how it can benefit from the use of rain water harvesting. Discuss different techniques that can be used. **25]**

QUESTION 2

- a) Explain how direct and indirect solar geysers operate. (15)
- b) Debate on the use of solar as a source of energy for both heating and lighting. (10)

[25]

QUESTION 3

- a) Discuss factors that should be considered in lighting design for correct illumination. (10)

Differentiate a ring power circuit from a lighting circuit.

(15)

[25]

QUESTION 4

Furnish the benefits and setbacks of each of the following transportation systems and where each can best be installed:

- i. Lifts;
- ii. Escalators;
- iii. Travelators; and
- iv. Paternosters.

[25]