



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**FACULTY OF THE BUILT ENVIRONMENT**

**DEPARTMENT OF ARCHITECTURE**

**BUILDING CONSTRUCTION I**

**AAR 2102**

**Examination Paper**

**December 2014**

This examination paper consists of 2 pages

**Time Allowed: 4 hours**

**Total Marks: 100**

**Special Requirements: A1 Sheets, T-squares, Drawing Boards, Masking Tape**

**Examiner's Name: Miss M. V. Mudombo**

**INSTRUCTIONS**

1. Answer all three (3) questions
2. Use an appropriate scale for drawings.
3. Illustrate answers with sketches
4. Marks will be awarded to neatly presented work.
5. You can either draw in pencil or technical pen.
6. Number all your sheets and include candidate numbers only.

**MARK ALLOCATION**

<b>QUESTION</b>	<b>MARKS</b>
1.	50
2.	25
3.	25
<b>TOTAL</b>	<b>100</b>

### **QUESTION 1**

- a. Identify any 5 key professionals involved in the building process and their respective roles. [10]
- b. You have been approached by a client who is seeking advice on how to protect his double story brick masonry house from damp penetration. Draw a typical section up to ceiling height which is to cut across two exterior walls with a clear distance of seven metres (7m) between them. The ground floor is a lounge with an aluminium framed glass door and an interior wooden door that opens to a passage one metre (1m) wide. The first floor is a bedroom with an aluminium framed window. Use a scale of 1:25 and a floor to floor height of 3m. You are to detail necessary points to explain your recommendations. [30]
- c. Compare the efficiency of an aluminium framed glass door and a wooden door as exterior doors with the use of sketches where necessary. [10]

### **QUESTION 2**

- a. Identify any 2 types of drawings required for building realisation and the vital contents of each of them. [10]
- b. Describe with the aid of illustrations the process of setting out on a site before construction. [5]
- c. Compare the advantages and disadvantages of using a traditional strip foundation to a trench fill foundation. [10]

### **QUESTION 3**

- a. Discuss the following terms with the aid of annotated sketches:
  - i. Scaffolding [5]
  - ii. Waffle or honeycomb floor [5]
  - iii. Cavity wall [5][15]
- b. Use well annotated sketches to show how wood stud framing and steel framing are done in walling systems. [10]