



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**FACULTY OF THE BUILT ENVIRONMENT**

**DEPARTMENT OF ARCHITECTURE**

**BUILDING CONSTRUCTION II**

**AAR 2202**

**Main Examination Paper**

**May 2015**

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.	<b>50</b>
2.	<b>25</b>
3.	<b>25</b>
<b>TOTAL</b>	<b>100</b>

### **Question 1**

- a. Sketch any five types of roofs that you have studied. [5]
- b. Draw a typical section (through a door on ground floor and two windows, each one on either sides of the first floor level) of a double storied masonry residential structure on good soils. The structure which contains a masonry fireplace is under clay tiles with a clear distance between the brick outer walls (one 300mm cavity wall and the other rainscreen clad) being 9 meters. Use a scale of 1:50 and a floor to floor height of 3m. [15]
- c. From the section drawn in (b), draw details related to the following areas:
  - i. Eaves [10]
  - ii. Cladding [10]
  - iii. Chimney to roof connection [10]

### **Question 2**

- a. What are the functional requirements of fireplaces? [5]
- b. With the aid of sketches, compare and contrast the application of prefabricated and masonry fireplaces. [10]
- c. List the functions that cladding performs describing with the aid of sketches ways in which each of these functions is typically satisfied in cladding design. [10]

### **Question 3**

- a. List any five functions of stairs. [5]
- b. Sketch a detailed section through a typical timber stair showing the various components that make up a stair. [10]
- c. Compare the performance of concrete stairs and a timber stairs. [10]