



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**FACULTY OF THE BUILT ENVIRONMENT**

**DEPARTMENT OF ARCHITECTURE**

**COMPUTER AIDED ARCHITECTURAL DESIGN I**

**AAR 2103**

**Examination Paper**

**December 2017**

This examination paper consists of 3 pages

**Time Allowed: 4 hours**

**Total Marks: 100**

**Special Requirements: Standard Monarch Catalogue in AutoCAD**

**Examiner's Name: Mr. A Furusa**

**INSTRUCTIONS**

1. Answer all questions
2. Question 1 to be completed in the answer book provided,
3. Question 2 will be completed on the PC.
4. Make sure that you save your work at least every 5 minute intervals.
5. Do not leave your PC/Workstation until your drawing has been collected on a flash disk by the Invigilator

**MARK ALLOCATION**

<b>QUESTION</b>	<b>MARKS</b>
1.	10
2.	90
<b>TOTAL</b>	<b>100</b>

## QUESTION 1

- a. Explain the difference between Computer-Aided Architectural Design (**CAAD**) and Building Information Modelling (**BIM**) (5)
- b. One of the advantages of **CAAD** is producing drawings as fast as is possible. What are the keyboard shortcuts commands for the following
- i. Drawing Tools
- Construction line
  - Hatching
  - Polyline
  - Rectangle
  - Circle
- ii. Modification Tools
- Trim
  - Fillet
  - Rotate
  - Offset
  - Scale (5)

## QUESTION 2

The exercise consists of an accurately designed two bed-roomed cottage. The general floor layout is attached as APPENDIX 1. The windows and door codes are from the Standard Monarch Catalogue and along with the furniture, are given as AutoCAD Blocks drawing on the desktop of your computer.

### STEP 1:

- a. Open the AutoCAD Application and save your drawing file under the name [STUDENT NUMBER] CAAD01/2017.

- b. Set the Layers, Text Styles, Line Types, Dimension's Style as is necessary to reproduce the given drawing.

**STEP 2:**

- a. Redraw the FLOOR PLAN with all dimensions, hatching and relevant notes as shown on the attached APPENDIX 1. (35)

**STEP 3:**

- a. Attached as APPENDIX 2 are two elevations, the South and the East Elevations. Draw the Section A-A, and the North and West Elevations that are commensurate with the given floor plan, with all necessary notes and windows as shown in APPENDIX 1.

**Section A- A** (20)

**North Elevation & West Elevation** (20)

- b. Write notes with TEXT STYLE of your choice. (10)
- c. Draw the foundation footing detail at a scale of 1:20 (5)