



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF BUILT ENVIRONMENT

DEPARTMENT ARCHITECTURE

COMPUTER AIDED ARCHITECTURAL DESIGN 1

AAR 2103

Examination Paper

December 2016

This examination paper consists of 3 pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements: Standard Monarch Catalogue in AutoCAD

Examiner's Name: Mr. A. FURUSA

INSTRUCTIONS

1. Answer all questions
2. Each question carries 25 marks
3. Use of calculators is permissible

MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
TOTAL	100

QUESTION 1

(a). The concept of **Building Information Modelling (BIM)** moves well beyond 2D **Computer-aided Design (CAD)**, ultimately entailing a 7-di-mensional process. List the current 7 dimensions BIM is considered to have. (7)

(b). To think that **Building Information Modelling (BIM)** is merely meant for 3D viewing is to severely underutilize the tools that BIM has to offer.

Give six examples of **Computer-aided Design (CAD)** application tools that are used to achieve BIM (3)

QUESTION 2

The exercise consists of an accurate design of a three bed-roomed house. 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] CAAD01/2016.

(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 the dimensions, hatching and relevant notes as shown on the attached APPENDIX 1. (45)

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 APPENDIX1.

Section A-A (15)

North Elevation & West Elevation (20)

(b). Write notes with TEXT STYLE of your choice. (10)