



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF ENGINEERING AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS FOR THE DIPLOMA IN CONSTRUCTION  
MANAGEMENT (TVET)**

**2<sup>ND</sup> YEAR 1<sup>ST</sup> SEMESTER 2022/2023 ACADEMIC YEAR**

**CENTRE: MAIN CAMPUS**

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**COURSE CODE: TDC 2223**

**COURSE TITLE: TECHNICAL DRAWING II**

**EXAM VENUE: STREAM: Dip CONSTRUCTION MGT**

**DATE: ../12/2023 EXAM SESSION:**

**DURATION: 2 HOURS**

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**Instructions**

- 1. Answer question 1 (Compulsory) and ANY other three questions**
- 2. Candidates are advised not to write on question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

**Question one (40 Marks)**

- a) Explain FOUR advantages of preparing construction working drawings using a CAD software. **(4 Marks)**
- b) What are the main specifications of a computer that you would be looking for while considering one for CAD software installation and use. **(4 Marks)**
- c) Describe any SIX items that are present on the ArchiCAD 2D drawing interface. **(12 Marks)**
- d) Describe any EIGHT basic design tools present in ArchiCAD object library that you would use while preparing drawings for a storied residential house **(8 Marks)**
- e) Using neat sketches, explain the use of the following modify tools in AUTOCAD **(8 Marks)**
  - i) Offset
  - ii) Array
  - iii) Scale
  - iv) Fillet
- f) Explain the use of the following in AUTOCAD 3D **(4 Marks)**
  - i) Modelling
  - ii) Solid editing
  - iii) View
  - iv) Visual styles

**Question two (20 Marks)**

- a) Describe the significance of using LAYERS tool while drafting using AUTOCAD **(5 Marks)**
- b) With the aid of neat sketches describe the main types of dimension types used in AUTOCAD drafting. **(6 Marks)**
- c) With the aid of neat sketches, explain how the hatch command is applied and edited in AUTOCAD drafting. **(4 Marks)**
- d) Describe the primary functions of the MODEL and LAYOUT spaces in AUTOCAD **(5 Marks)**

**Question three (20 Marks)**

- a) State any three functions of the mouse during a CAD drafting process. **(3 Marks)**
- b) Explain how the following commands are used in AUTOCAD 3D drafting. **(6 Marks)**
  - i. Press Pull
  - ii. Extrude
  - iii. Sweep

- c) Enumerate any five preliminary settings for dimensions while drafting using AUTOCAD (5 Marks)
- d) Using neat sketches describe three ways you would use to draw an arc in AUTOCAD 2D surface. (6 Marks)

**Question four (20 Marks)**

- a) Give FIVE benefits of drawing a house plan using an archiCAD software (5 Marks)
- b) Figure 4 shows part of a house plan drawn using an ArchiCAD software

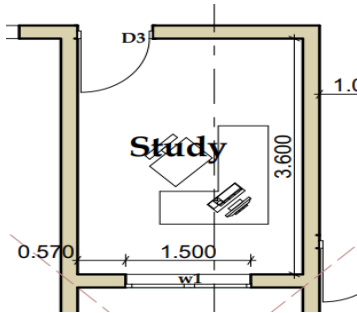


Figure 4

Describe how you would draw and edit the walls, the window W1, the door D3, and the study table (10 Marks)

- c) Describe the elements you would edit using the roof tool in ArchiCAD environment. (5 Marks)

**Question five (20 Marks)**

- a) Explain the three main steps of creating animation for an ArchiCAD project (6 Marks)
- b) Outline the procedure of publishing a working drawing when using an ArchiCAD software. (9 Marks)
- c) Explain any FIVE important details you would include in the section of ArchiCAD architectural drawing (5 Marks)

**Question six (20 Marks)**

- a) Using neat sketches outline the procedure of creating a complete staircase using the Stair Tool when using ArchiCAD software. (15 Marks)
- b) Explain how the following solid editing commands are used AUTOCAD 3D drafting. (5 Marks)