



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF ENGINEERING AND TECHNOLOGY

**UNIVERSITY EXAMINATION FOR THE DEGREE IN SCIENCE IN
CONSTRUCTION MANAGEMENT**

3RD YEAR 2ND SEMESTER 2023/2024 ACADEMIC YEAR

CENTRE: MAIN CAMPUS

COURSE CODE: TCB 1304

COURSE TITLE: CAD DRAFTING FOR CONSTRUCTION MANAGEMENT

EXAM VENUE: STREAM: BSc. CONSTRUCTION MGT

DATE: /04/2024 EXAM SESSION:

DURATION: 2 HOURS

Instructions

- 1. Answer question 1 (Compulsory) and ANY other two 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

- a) As a Construction Manager, give FOUR advantages of preparing engineering drawings using a CAD software. **(4 Marks)**
- b) Differentiate between the following as applied in AUTOCAD:
- i. Line types and Line weights **(2 Marks)**
 - ii. Copying selection and off setting **(2 Marks)**
 - iii. Turning off and freezing layers **(2 Marks)**
- c) What are the main specifications of a computer that you would be looking for while considering one for CAD software installation and use. **(3 Marks)**
- d) Using neat sketches, explain the use of the following modify tools in AUTOCAD displays. **(6 Marks)**
- i) Chamfer
 - ii) Extend
 - iv) Fillet
 - v) Hatch
- e) What are the preliminary settings for dimensions while drafting using AUTOCAD **(5 Marks)**
- f) Describe the following CAD modeling systems:
- i. Wireframe **(2 Marks)**
 - ii. Surface modelers **(2 Marks)**
 - iii. Solid **(2 Marks)**
- g) With the aid of a sketch, show the main components of an AutoCAD drafting environment. **(6 Marks)**
- h) Distinguish between the ArchiCAD drafting library and AutoCAD blocks. **(4 Marks)**

QUESTION TWO

- i. Give FIVE benefits of drawing a house plan using an ArchiCAD software. **(5 Marks)**
- ii. Explain the use and importance of layers in AutoCAD drafting. **(4 Marks)**
- iii. Explain the drawing tools that you would use in AUTOCAD to develop the drawing in figure Q2. **(6 Marks)**

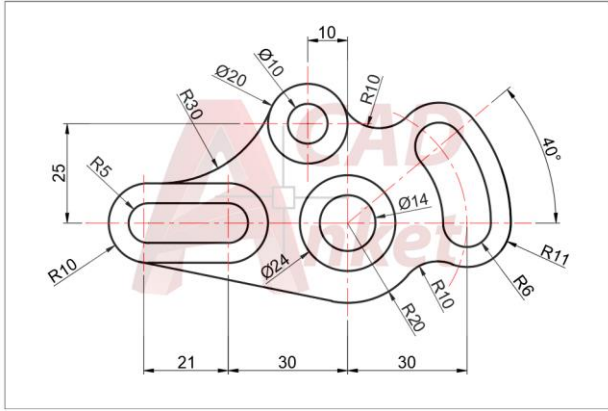


Figure Q2

QUESTION THREE

- i. Describe the procedure for creating blocks in AUTOCAD. **(3 Marks)**
- ii. Describe any five main drawing tools in the ArchiCAD drawing interface. **(5 Marks)**
- iii. State any two system requirements for the installation of ArchiCAD software. **(2 Marks)**
- iv. Outline the procedure of publishing a working drawing when using an archiCAD software. **(5 Marks)**

QUESTION FOUR

- i. Explain any THREE functions of the mouse during a CAD drafting process. **(3 Marks)**
- ii. In ArchiCAD drafting what are the main details that you would show in a SECTION of a one storey residential building. **(5 Marks)**
- iii. By use of a sketch, show a 3D wireframe for a cube. **(2 Marks)**
- iv. With the aid of a sketch, show the main components of an ArchiCAD drafting environment. **(5 Marks)**

QUESTION FIVE

- i. Give FIVE benefits of drawing a house plan using an archiCAD software. **(5 Marks)**
- ii. Figure Q5 shows part of a house plan drawn using an ArchiCAD software

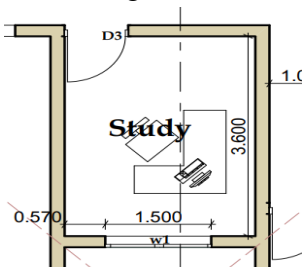


Figure Q5

Outline the procedure of drawing and editing the symbol for the door D3, window W1, and the study table **(5 Marks)**

- iii. The ArchiCAD package comes with a variety of tools, explain how you would generate a door schedule for a designed project. **(5 Marks)**