



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF ENGINEERING AND TECHNOLOGY

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

1ST YEAR 1ST SEMESTER 2017/2018 ACADEMIC YEAR

CENTRE: MAIN CAMPUS

COURSE CODE: TCM 3111

COURSE TITLE: ENGINEERING DRAWING I

EXAM VENUE: STREAM: BSc CONSTRUCTION MGT

DATE: 13/12/2017 EXAM SESSION: 9.00 – 11.00AM

DURATION: 3 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 (20 MARKS)

- i. What is engineering drawing? **(1Mark)**
- ii. How do you expect to apply drawing in your professional field? **(2 Marks)**
- iii. Explain how you can effectively use the following drawing instruments in the production of an engineering drawing
 - a) Tee Square **(2Marks)**
 - b) Squares **(4 Marks)**
- iv. A *scale* is always presented in every engineering drawing
 - a) Explain the purpose of a scale in a drawing **(1Mark)**
 - b) Calculate the corresponding plan/paper distance for a ground distance of 1.20km for a plan whose scale is 1:2500.**(2 Marks)**
- v. Differentiate between pictorial and orthographic projections as used in engineering drawing.**(8 Marks)**

QUESTION TWO (15 Marks)

Draw orthographic views using first angle method of projection from the pictorial view given in Fig Q2

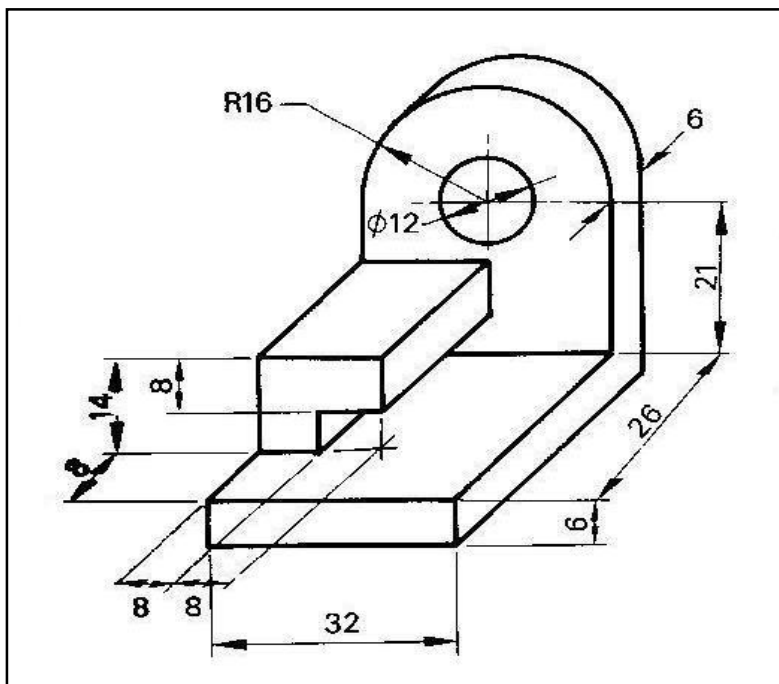


Figure Q2

QUESTION THREE (15 Marks)

Given the orthographic multi-views of an object in Figure Q3, develop the pictorial view using the isometric method

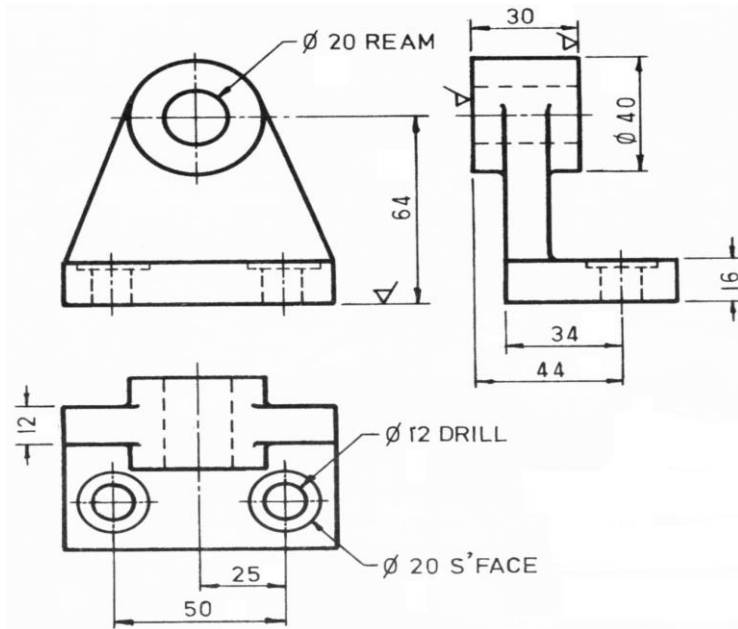


Figure Q3

QUESTION FOUR (15 Marks)

- i. Construct a triangle given Perimeter, $P=20\text{cm}$, Altitude, $L=4\text{cm}$ and vertical angle, $\theta=40^\circ$
- ii. Construct a hexagon within a circle of diameter 6cm.
- iii. Draw a regular heptagon with sides 38mm long.

QUESTION FIVE (15 Marks)

Draw the isometric view of the orthographic views given in drawing labelled 1 below

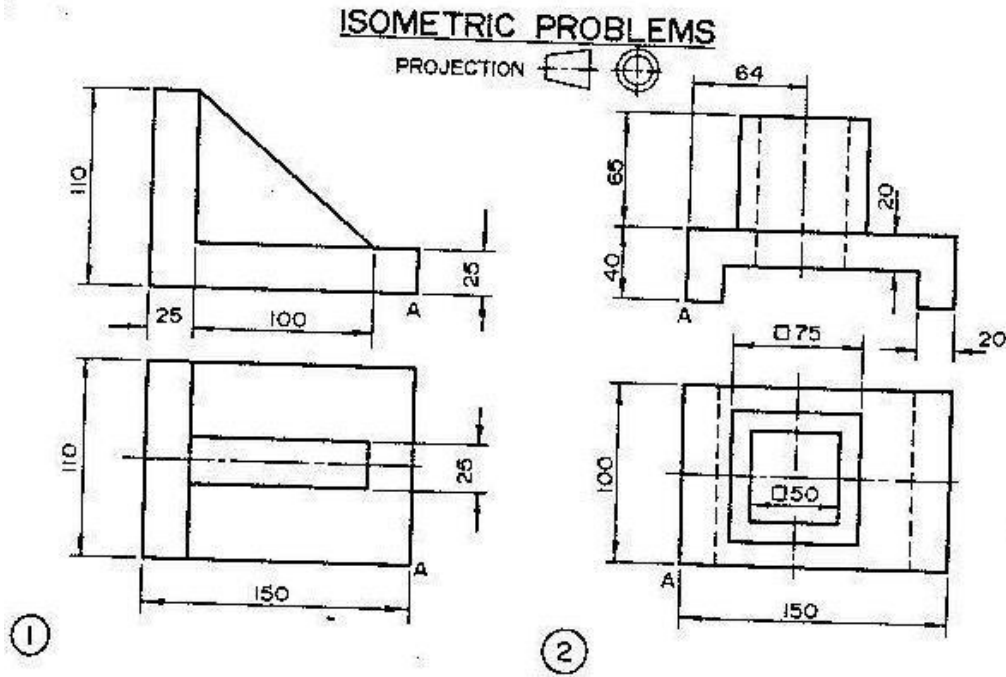


Figure Q5