JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF ENGINEERING AND TECHNOLOGY

UNIVERSITY EXAMINATION FOR DIPLOMA IN BUILDING AND CIVIL ENGINEERING

1ST YEAR 1ST SEMESTER 2015/2016 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: TBC 2112

COURSE TITLE: ENGINEERING DRAWING I

EXAM VENUE: **STREAM: (Dip. Building & Civil Eng.)**

**DATE:**   **EXAM SESSION:**

TIME: 1 ½ HOURS

Instructions:

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

QUESTION ONE (20 MARKS)

i.   What is engineering drawing?   (1 marks)
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   (2 marks)
      b) Squares   (4 marks)
iv.   A *scale* is always presented in every engineering drawing
      a) Explain the purpose of a scale in a drawing   (1 marks)
      b) Calculate the corresponding plan/paper distance for a ground distance of 1.20km for a plan whose scale is 1:2500.   (2 marks)
         2500mm on ground = 1mm on plan
v.   Differentiate between pictorial and orthographic projections as used in engineering drawing. Which of the two would you recommend for use in working/design drawings and why?   (4 marks)
vi.   Below are various types of lines used in engineering drawing. Name the lines represented by the letters b, c, e and g stating also how they are used.   (4 marks)
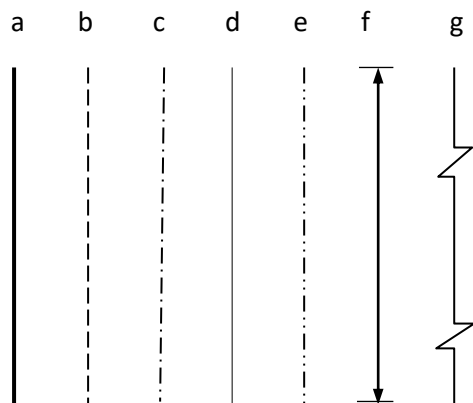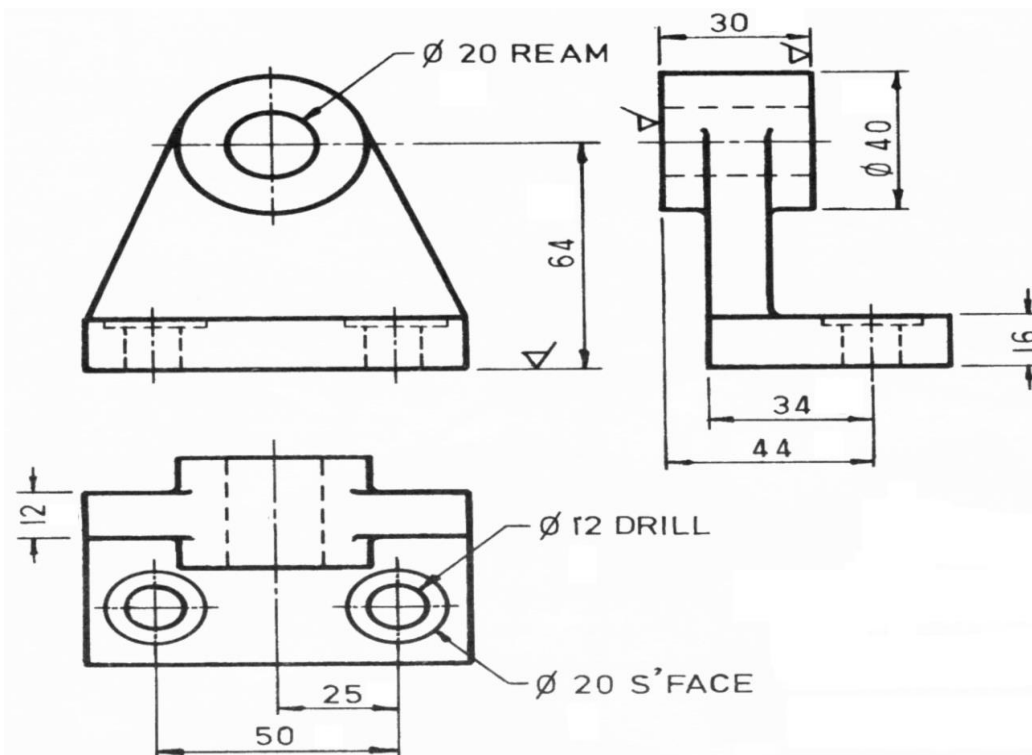
QUESTION TWO (15 MARKS)

Draw orthographic views using first angle method of projection from the pictorial view given below
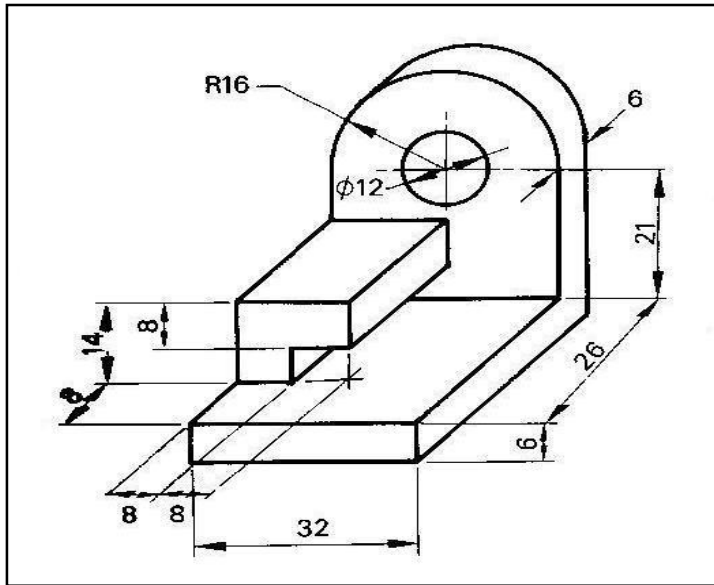
QUESTION THREE (15 MARKS)

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

QUESTION FOUR (15 MARKS)

    i.   Construct a triangle given Perimeter, P=20cm, Altitude, L=4cm and vertical angle, $\Theta = 40^O$

    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

ISOMETRIC PROBLEMS