

**TECHNICAL**



**UNIVERSITY OF**

**MOMBASA**

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FACULTY OF ENGINEERING AND TECHNOLOGY  
DEPARTMENT OF BUILDING & CIVIL ENGINEERING

**UNIVERSITY EXAMINATION FOR:  
BSC IN CIVIL ENGINEERING**

**EBC 4250 : TECHNICAL DRAWING AND DESIGN**

**END OF SEMESTER EXAMINATION**

**SERIES: AUGUST 2017**

**TIME: 2 HOURS**

**DATE: 22 Sep 2017**

**INSTRUCTIONS TO THE CANDIDATE:**

1. You should have the following for this examination:
    - **Answer booklet.**
    - **Mathematical Table/Pocket Calculator.**
  2. This paper consists of **FIVE** questions.
  3. Answer question **ONE (Compulsory)** and any other **TWO** questions.
  4. This paper consists of **FIVE** printed pages.
  5. **Do not write on the question paper.**
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## TECHNICAL DRAWING AND DESIGN

### SECTION A – COMPULSORY

#### QUESTION ONE – COMPULSORY

Draw the oblique projection and the Third Angle orthographic projection of the casting shown in Figure 1. The arrow points in the direction of the Front elevation. (30 Marks)

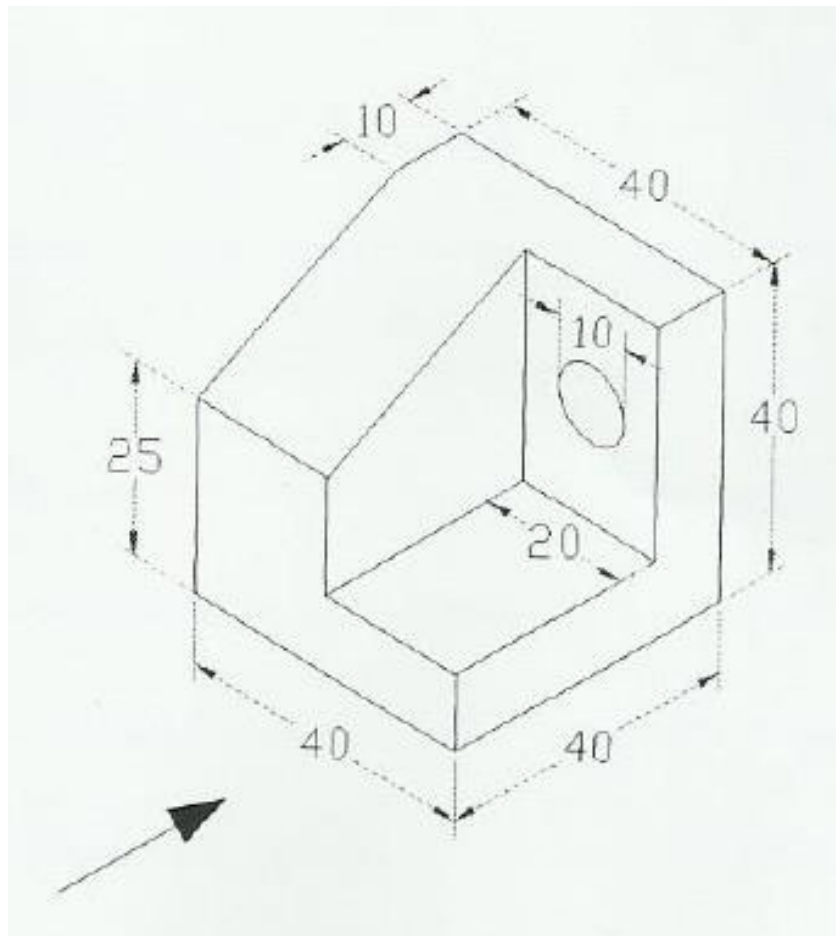


Fig. 1

### SECTION B – ANSWER ANY TWO QUESTIONS

## QUESTION TWO

Draw a regular hexagon of 40mm side, with its two sides vertical. Draw a circle of 40mm diameter in its centre. The figure represents a hexagonal plate with a hole in it and having its surface parallel to the V.P. Draw its projections when the surface is vertical and inclined at  $30^\circ$  to the VP. Assume the thickness of the plate to be equal that of a line.

## QUESTION THREE

A square duct is in the form of a frustum of a square pyramid. The sides of top and bottom are 150mm and 100mm respectively and its length is 150mm. it is situated in such a way that its axis is parallel to the H.P. and lies in a plane inclined at  $60^\circ$  to the V.P. Draw the projections of the duct, assuming the thickness of the duct-sheet to be negligible. (20 Marks)

## QUESTION FOUR

Fig 2 represents a metal casting. Draw the following views: (20 Marks)

- a) Sectional end view A-A
- b) Sectional Plan C-C
- c) Front view

The front elevation is in the direction marked X

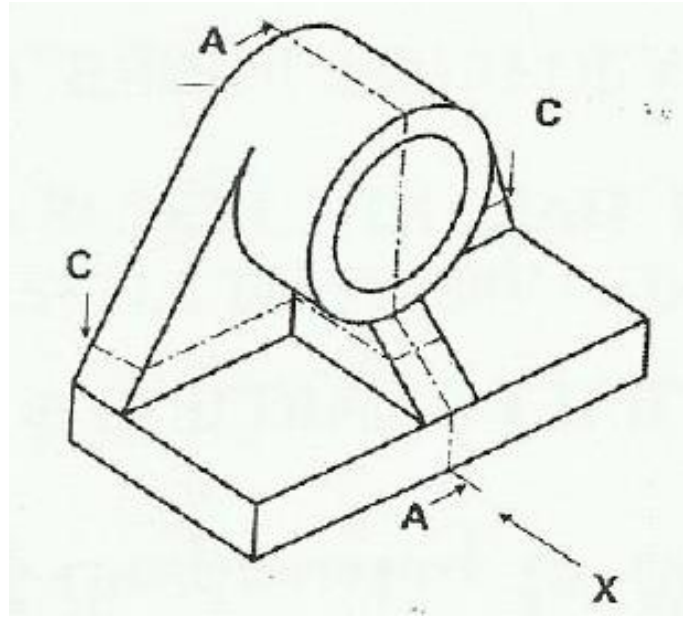


Fig 2

#### QUESTION FIVE

A property developer intends to put up a four storey residential building in Tudor, Mombasa County. Outline all the steps involved in the approval of the building plan clearly stating the role of a public health officer. (20 Marks)