



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)  
*Faculty of Engineering and Technology*

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING  
**DIPLOMA IN CIVIL ENGINEERING (DCE)**  
**DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBC)**

EBC 2203: ENGINEERING DRAWING II  
SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: MAY/JUNE 2012

**TIME: 2 HOURS**

## **Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*
- *Drawing paper size A2*
- *A set of drawing instruments*

This paper consists of **FIVE** questions. Answer any **THREE** questions

Maximum marks for each part of a question are clearly shown

This paper consists of **THREE** printed pages

**Question 1 (20 marks)**

- a) Figure 1 shows the two views of an object in “FIRST ANGLE PROJECTION”, copy the figures and draw, a first auxiliary plan view of the object in the view of arrow ‘X’ (10 marks)
- b) The in-complete plan and front view of a right truncated octagonal pyramid are as shown in figure 2. Draw the following for the pyramid.
- (i) A complete plan
  - (ii) The given front view
  - (iii) An auxiliary elevation of the pyramid as seen in direction ‘T’ (10 marks)

**Question 2 (20 marks)**

- a) Shown in figure 3 are the three views of an object in ‘FIRST ANGLE PROJECTION’. Draw a free hand sketch isometric drawing of the object. (10 marks)
- b) Figure 4 shows a pictorial drawing of an ornamental stone. Draw the following free hand sketch and in first angle orthographic the following views of the stone.
- (i) Plan in view of direction ‘B’
  - (ii) Front elevation in view of direction ‘A’
  - (iii) End elevation in view of direction ‘C’ (10 marks)

**Question 3 (20 marks)**

Figure 5 shows the plan and a front elevation of a pyramid intersected by a cylinder in ‘FIRST ANGLE PROJECTION’

Draw the curves of interpenetration both in plan and elevation (20 marks)

**Question 4 (20 marks)**

- a) State the function of the of the following types of drawings: (20 marks)
- (i) Site plan
  - (ii) Location plan
  - (iii) As built plans
  - (iv) Assembly drawings
- b) Figure 6 refers to the ground floor plan of a proposed dwelling house. Given the following information:
- Strip footing 600 x 200mm deep
  - 200mm thick masonry walls
  - 100mm thick concrete ground floor slab
  - Ceiling height 3000mm
  - Lintel 200 x 300mm thick
  - Timber windows 1500 x 1500mm high
  - Roof of slope 25°
  - Trussed gable roof
  - 600mm eaves over hang

- GCI roofing sheets
- Assume any other information not given
- (i) Draw, to a scale of 1:10 a vertical section R---R to show foundation detail up to and including the DPC. (8 marks)
- (ii) Using a scale of 1:20 draw elevation '09'

**Question 5 (20 marks)**

The following information refers to the staircase of the house shown in figure 5:

- Floor to floor height 3000mm
  - Threads = 150mm wide
  - Risers = 250mm wide
  - Landing and flight width = 900mm
  - 100 x 50mm thick hardwood handrail on metal balustrades
  - 20mm thick terrazzo floor finish
- Assume any other information not given

Draw the following for the tank:

- a) Section G-G (13 marks)
- b) Section H-H (7 marks)