

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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**University Examinations 2016/2017**

FOURTH YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN PUBLIC HEALTH.

**EMT 3413: TECHNICAL DRAWING**

**DATE: DECEMBER, 2016 TIME: 3 HOURS**

**INSTRUCTIONS: -** *Answer question* ***one*** *and any other* ***two*** *questions*

* *You should have drawing instruments for this examination*

**QUESTION ONE (30 MARKS)**

A floor plan of a bed-sitter unit is shown in figure 1 using a scale of 1:50

1. Redraw to the scale shown (12 marks)
2. Indicate all permanent vents (pv) (3 marks)
3. Insert a gulley trap, soil vent pipe (svp) and a manhole. Indicate also the destination of the expected waste from the manhole. (12 marks)

Assume all walls are 200 mm thick. A complete title block is expected along with this solution. (3 marks)

**QUESTION TWO (20 MARKS)**

Figure 2 shows an isometric block. Study the block and produce a first angle projection of the block with;

1. A front elevation in the direction of arrow A (7 marks)
2. A plan in the direction of arrow B (6 marks)
3. An end elevation in the direction of arrow C (7 marks)

**QUESTION THREE (20 MARKS)**

Two types of drawings; isometric drawings and third angle projections of ten blocks are shown. Study the drawings and match the numbered orthographic drawings with the correct isometric views then complete the table provided. (20 marks)

**QUESTION FOUR (20 MARKS)**

Print the following passage using upper case letters in guidelines 6 mm apart and with a line spacing of 10mm.

‘Isometric drawing is a pictorial representation of an object in which all three dimensions are shown at full scale rather than foreshortening then to the true projection. An isometric drawing looks like an isometric projection but all its lines parallel to the three major exes are in measurable.’ (20 marks)

**QUESTION FIVE (20 MARKS)**

1. Explain why it is important for a public health practitioner to have a working knowledge of technical drawing (5 marks)
2. Illustrate the following types of lines used in technical drawing’
3. Centre-line
4. Hidden detail line
5. Projection line
6. Dimension line
7. Guide-line. (10 marks)
8. State the meaning of the following symbols and abbreviations; (5 marks)
9. SvP
10. DIA
11. ɖ
12. MH
13. GT