



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF ENGINEERING AND TECHNOLOGY**

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

**1<sup>ST</sup> YEAR 1<sup>ST</sup> SEMESTER 2018/2019 ACADEMIC YEAR**

**CENTRE: MAIN CAMPUS**

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**COURSE CODE: TCM 3122**

**COURSE TITLE: ENGINEERING DRAWING II**

**EXAM VENUE: STREAM: BSc CONSTRUCTION MGT**

**DATE: ../12/2018 EXAM SESSION:**

**DURATION: ... HOURS**

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### **Instructions**

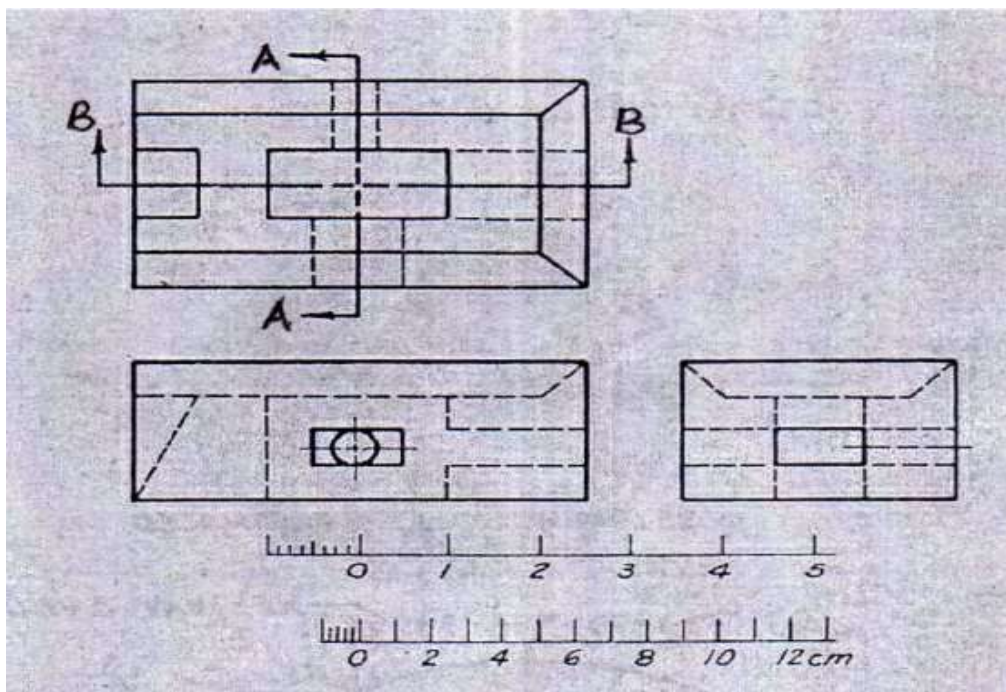
- 1. Answer question 1 (Compulsory) and ANY other two questions**
- 2. Candidates are advised not to write on question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

### QUESTION ONE (20 MARKS)

- i. Explain the process of producing copies of a drawing using blue printing technique (5 marks)
- ii. Mention any circumstance which may necessitate production of copies of a drawing (2 marks)
- iii. Drawings are often used by second or third party and rarely by draftsmen themselves. Therefore the draftsman needs to present the drawing to the user in a standard international format. Each organization however customizes the format to meet its own internal needs.
  - a) Design a suitable format for title block to be used by the school of engineering in its consultancy works (5 marks)
  - b) Why do you think any drawing needs to be checked by a second party before it can be approved for use? (2 marks)
- iv. A view “in section” is obtained by imagining the object to have been cut by a cutting plane and then removing the front section to reveal the interior features
  - a) Mention any three reasons which may make you use sectional view(s) (3marks)
  - b) Differentiate between revolved section and removed section (4marks)

### QUESTION TWO (15 MARKS)

Draw sectional views of the objects shown below along the given cutting planes



### QUESTION THREE (15 MARKS)

Free-hand technical sketching is one of the most widely used forms of communication and is a way of producing drawings quickly without the aid of any mechanical instrument. Sketch pictorial views of the objects whose multi-views are given below

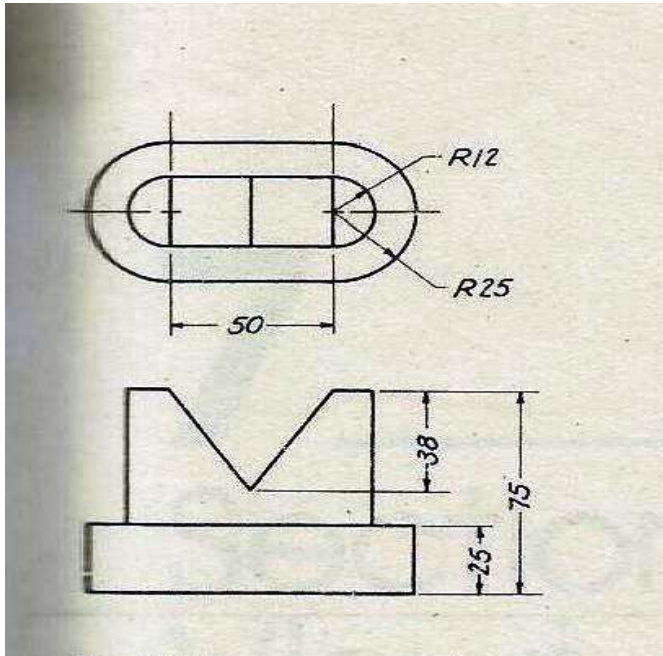


Fig Q3.1

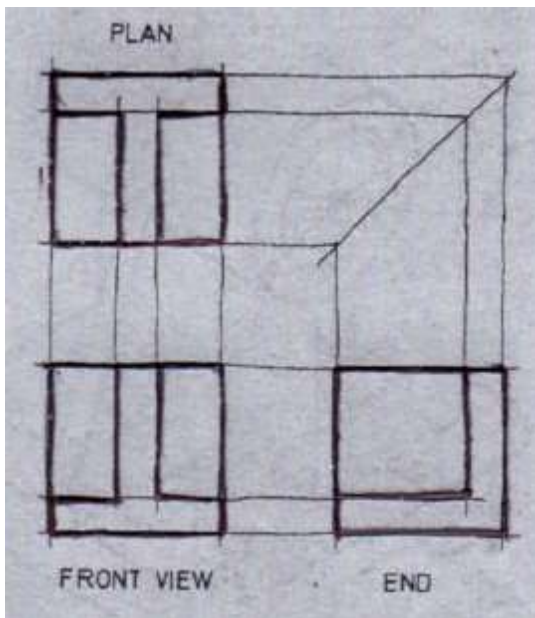


Fig Q3.2

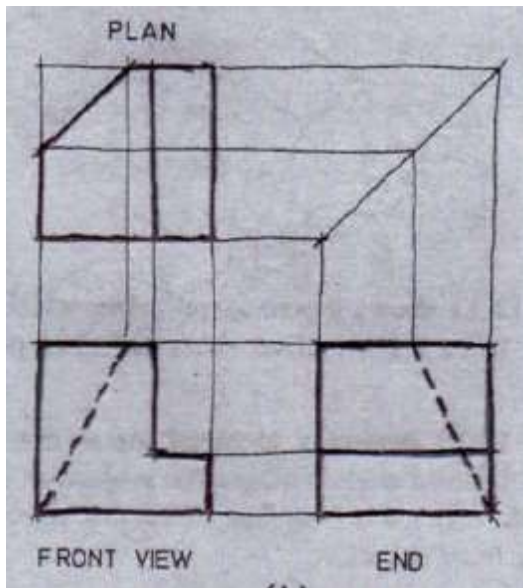


Fig Q3.3

#### **QUESTION FOUR ( 15 MARKS)**

Design and draw to scale a house plan for a single bed room self-contained residential unit to be constructed in a rural village within Nyakasumbi village. The house is expected to have a bedroom, a lounge, a kitchen, bathroom and toilet. Present a floor plan, front elevation and a suitable sectional view

#### **QUESTION FIVE (15MARKS)**

Design and draw to scale a simple box culvert to be used to convey irrigation water across Bondo-Usenge road in Nyangera irrigation scheme near Usigu urban center. The maximum flow in the scheme is 300l/s and the effective width of the road at the point of crossing is 10m. Present a plan, front sectional view and end sectional view. The cutting plane in both cases passes through the center of the culvert.