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(University of Choice)

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY**

**(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS**

**2023/2024 ACADEMIC YEAR**

**FIRST YEAR FIRST SEMESTER EXAMINATIONS**

**FOR THE DEGREE**

**OF**

**BACHELOR OF EDUCATION IN TECHNOLOGY EDUCATION**

**COURSE CODE: TEC 103**

**COURSE TITLE: TECHNICAL DRAWING**

**DATE: 13/12/2023**

**TIME: 8:00 AM – 10:00 AM**

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**INSTRUCTIONS TO CANDIDATES**

1. This paper consists of **FOUR** questions
2. Answer Questions **ONE, TWO** and any other one Question
3. All symbols have their usual meaning
4. All dimensions are in mm unless otherwise stated

**TIME: 3 Hours**

MMUST observes **ZERO** tolerance to examination cheating

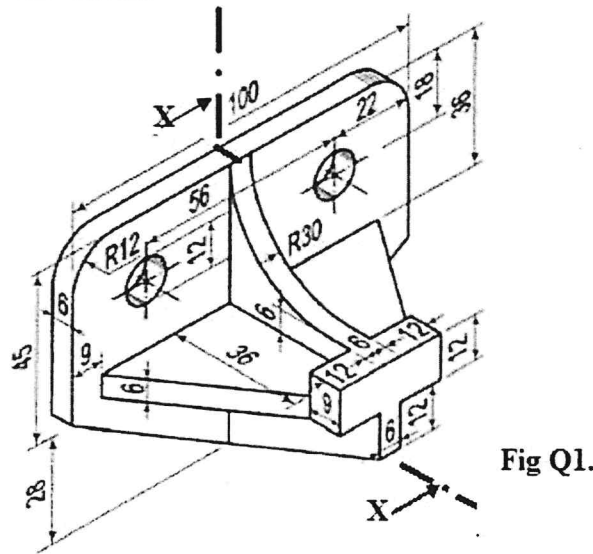
This Paper Consists of **3** Printed Pages. Please Turn Over

**QUESTION ONE**

Pictorial drawing of a machine part is shown in figure Q1. Study the part and draw, full size and in first angle orthographic projection the following views:-

- i) Sectional end on the cutting plane X-X
  - ii) Front elevation viewed from the right hand side of i) above
  - iii) Complete plan
- Insert six leading dimensions.

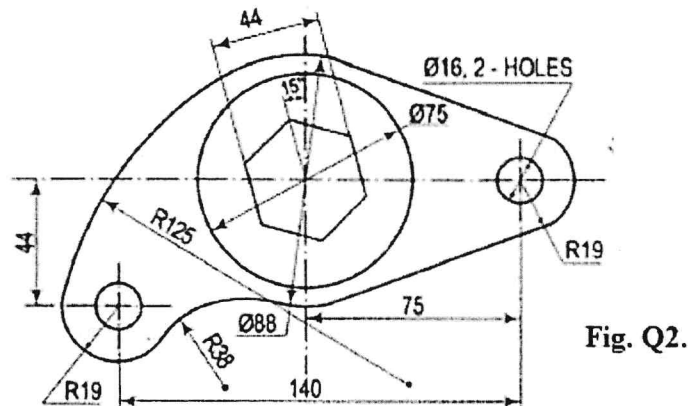
(40 marks)



**Fig Q1.**

**QUESTION TWO**

- a) Drawing of a machine spare part is given in fig. Q2. To a scale of 1:1 construct the part showing all the construction details. (22 marks)



**Fig. Q2.**

- (b) With aid of sketches show what is meant by
  - (i) Full section
  - (ii) 30 CRS

(iii) Part section

(3 marks)

### QUESTION THREE

- a) Suppose MMUST's play field has an area of  $72000 \text{ M}^2$ . The length and the breadth of the field on the map are 16cm and 5cm respectively. Construct a diagonal scale which is capable of reading a maximum of 600M and a minimum of 1M. Mark off a reading of 465M. (8 marks)
- b) Construct a triangle given base angle as  $52.5^\circ$ , base of 50 and perimeter is 130. (7 marks)

### QUESTION FOUR

Figure Q4 shows shaped blocks in pictorial projection. Study the blocks, using freehand and in good proportions sketch the blocks in their respective orthographic projection angles the following views:-

- (i) Front elevation in direction **F**  
(ii) End elevation in direction **E**  
(iii) Plan

(15 marks)

