



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2021/2022 ACADEMIC YEAR

SECOND YEAR SECOND SEMESTER EXAMINATIONS

FOR THE DEGREE OF

BACHELOR OF TECHNOLOGY EDUCATION (MECHANICAL)

COURSE CODE: TEM 262

COURSE TITLE: TECHNICAL DRAWING III

DATE: 20TH APRIL 2022

TIME: 8.00-11.00 A.M

INSTRUCTIONS

- Attempt questions 1, 2 and any other **one** questions.
- 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

Exploded pictorial view of COIL MACHINE is shown in fig. Q1. Draw, full size in first angle orthographic

- i) Front elevation in direction F
- ii) Sectional end elevation viewed from the left hand side of i) above and cutting plane located mid-way.

Give five main dimensions.

Dimensions not given are left to candidates discretion.

(45marks)

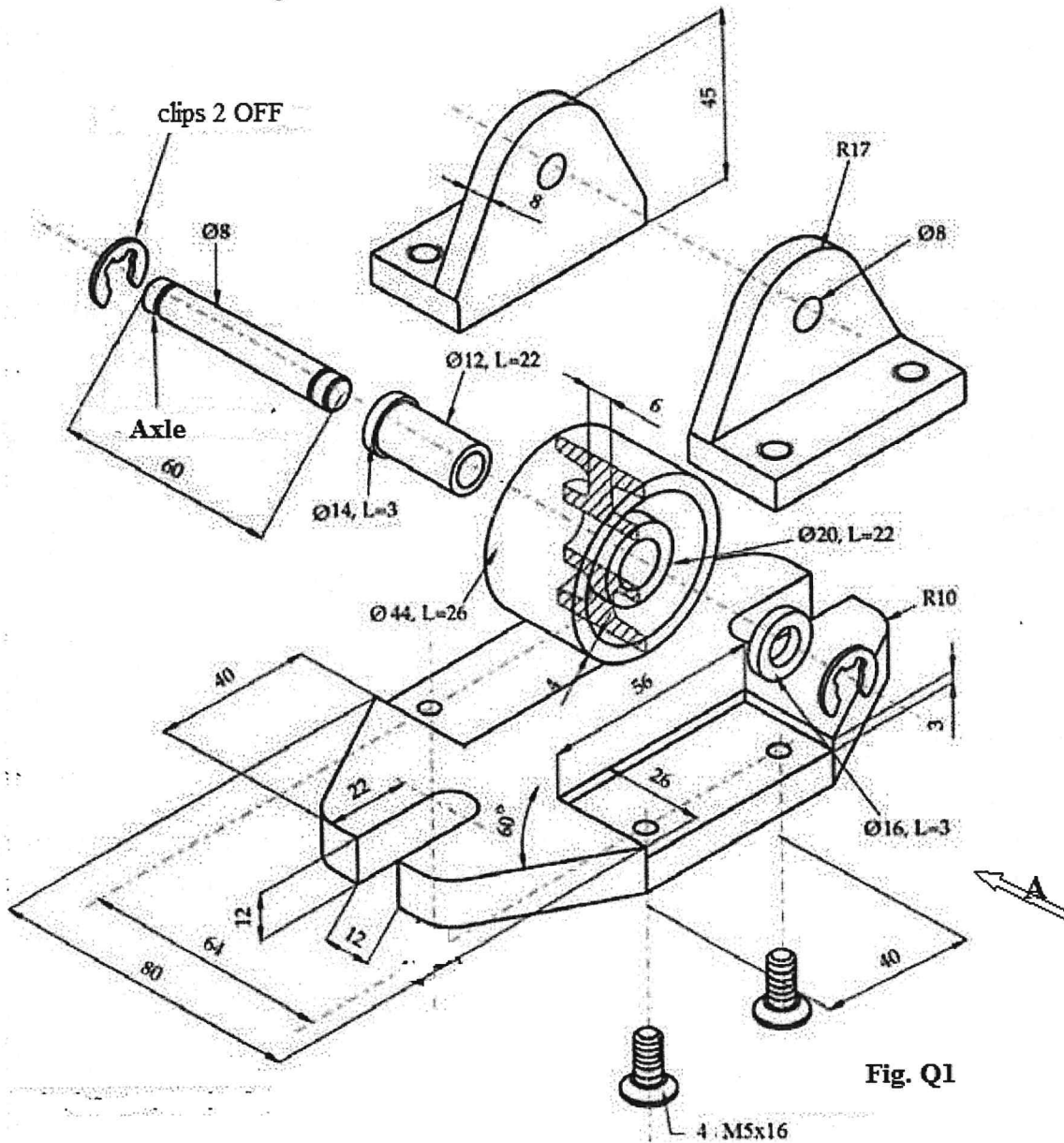


Fig. Q1

QUESTION TWO

Front and plan of a truncated pentagonal pyramid are shown in figQ2. Copy the views and then draw the projections of the solid if the solid is turned about base edge A-B so that the base is

inclined at an angle of 30° to the horizontal plane and the same time the edge is rotated anticlockwise so that it makes an angle of 60° to the vertical plane. (25 marks)

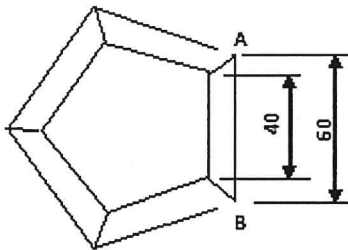
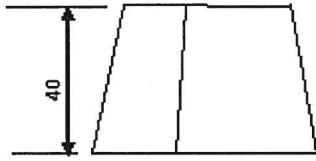


Fig. Q2

QUESTION THREE

- a) What is the significance of placing geometrical tolerance on a detailed drawing of a part (2 marks)
- b) Describe the following geometrical tolerances
 - i) Roundness tolerance
 - ii) Cylindricity tolerance. (4 marks)
- c) The following were instructions that a component to be produced in the workshop was to meet. With aid of sketches show how the same instructions would have been indicated drawing,
 - i) *The surface must be within the specified tolerance of size and must lie between two parallel 0.15 apart which must be perpendicular to the datum plane A.*
 - ii) *The surface must be within the specified tolerance of size and must lie between two planes 0.15 apart which on a draw are parallel to the datum plane A.* (4 marks)

QUESTION FOUR

- a) Show by using sketches any three methods used in preventing nuts from getting loose on account of vibrations. (3 marks)
- b) Identify any three types of spanners and stating the general method of sizing the spanners. (4 marks)
- c) Define the following terms as used in reference to surface texture.
 - i) Roughness
 - ii) Waviness
 - iii) Lay (3 marks)

