TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering and Technology
Department of Mechanical & Automotive Engineering
UNIVERSITY EXAMINATION FOR:
Diploma in Mechanical Engineering (Y1S1)
EME 2105 : Engineering Drawing & Design I (Paper 1)
SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: SEPTEMBER 2018
TIME: 2 HOURS
DATE: Sep 2018

Instruction to Candidates:

You should have the following for this examination

- *Examination Pass & Student ID Card*
- *Drawing Paper Size A2*
- *Drawing Instruments*

This paper consists of **FIVE** questions. Attempt question **ONE (Compulsory)** and any other **TWO** questions.

Maximum marks for each part of a question are as shown.

Do not write on the question paper.

Question ONE

Fig. 1 shows the pictorial view of an engineering component. Draw full size using first angle orthographic projection the following views: **(30 marks)**

a) Front elevation in the direction of arrow F.

b) The end elevation and plan.

c) Insert any FOUR main dimensions and the symbol of projection.

Question TWO

Fig. 2 shows three views of a metal block in orthographic projection. Construct the isometric view of the block. Take corner Z as the lowest point. **(15 marks)**

Question THREE

Fig. 3 shows the profile of a wing nut. Construct the nut to scale and show the construction work. **(15 marks)**

Question FOUR

Fig. 4 shows the elevation of a hexagonal based pyramid sectioned along A_B. Copy the elevation and construct: **(15 marks)**

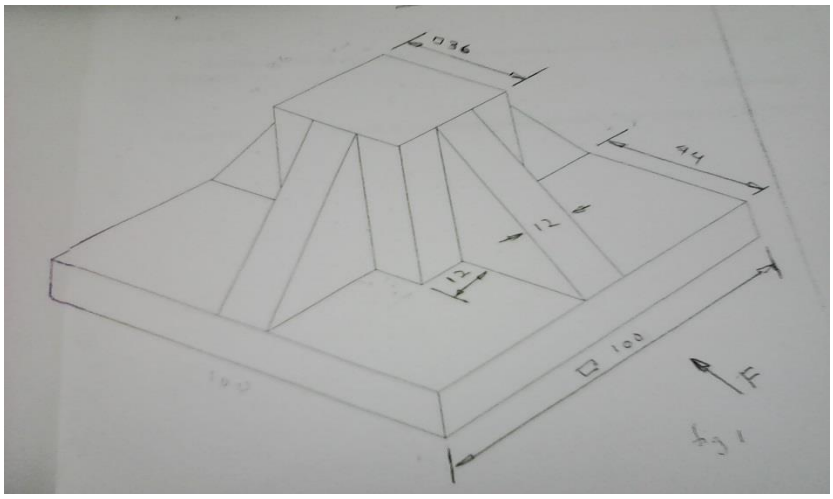
a) The plan for X
b) The true shape of AB
c) The surface development of Y
d) The end elevation in the direction of arrow E

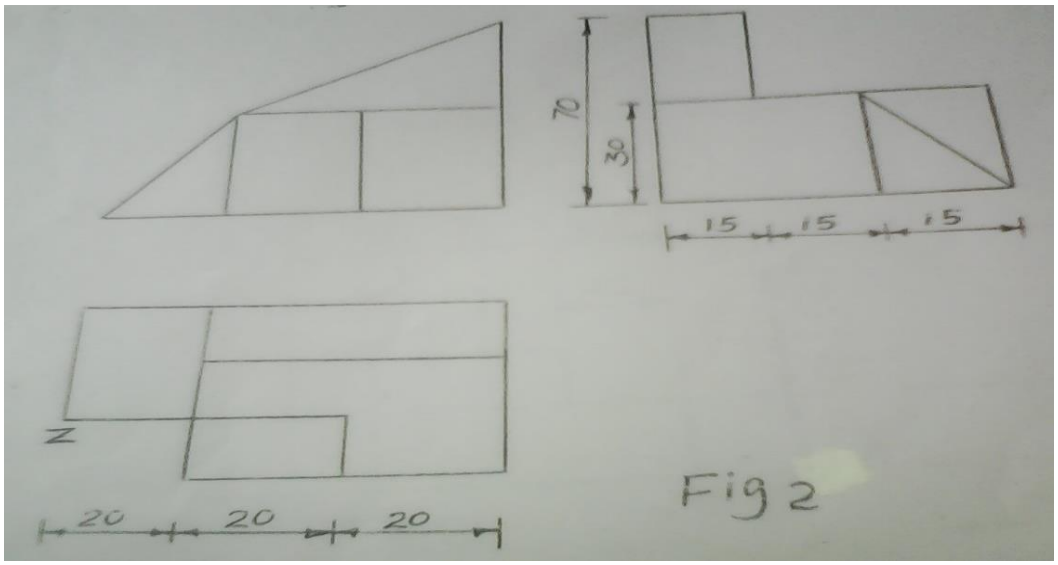
Question FIVE

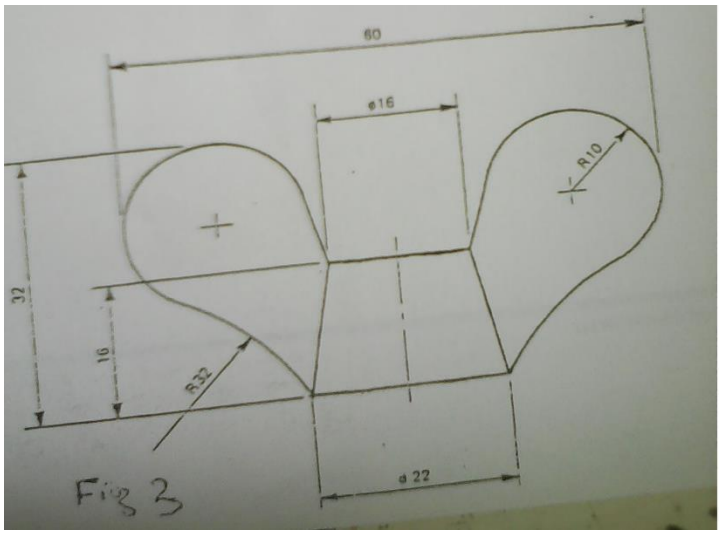
Fig. 5 shows TWO views of a cast iron machine bracket. Draw free hand an oblique view of the bracket. Make M¬N as the lowest edge and use arbitrary dimensions.

(15 marks)

FIGURES






60
ø16
R10
32
16
R32
ø 22
Fig 3

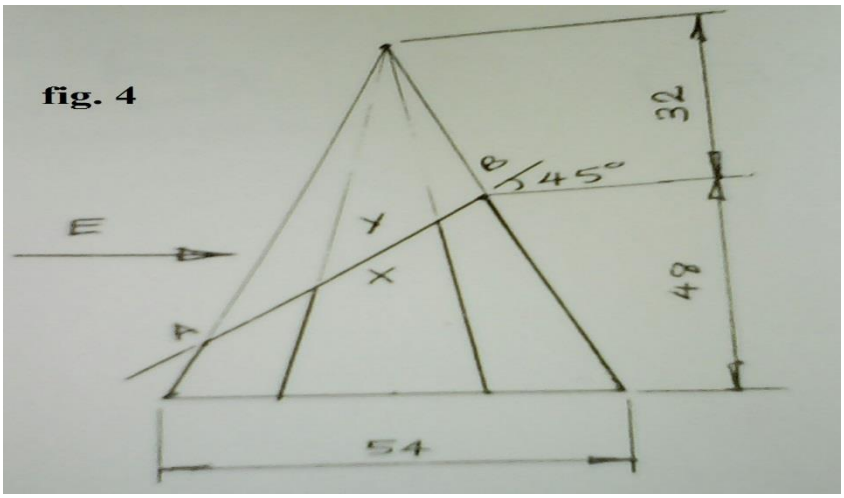


fig. 4
32
B
45°
E
Y
X
A
48
54

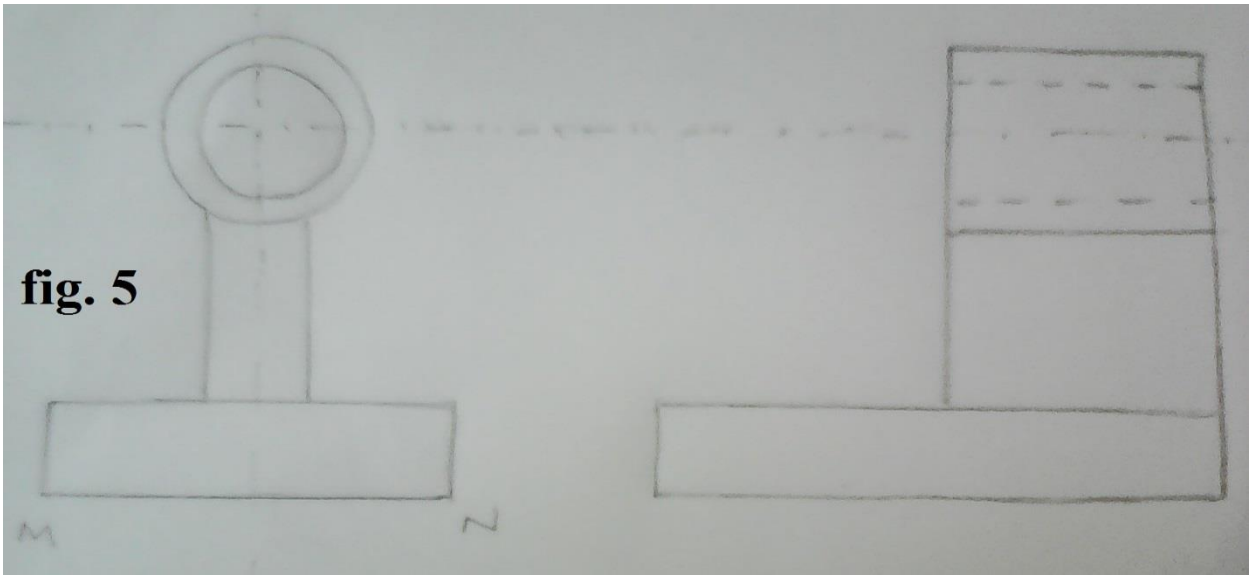


fig. 5
M
N