



MACHAKOS UNIVERSITY

University Examination 2018/2019

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

..... YEAR SEMESTER EXAMINATION FOR

CERTIFICATE IN ELECTRICAL AND ELECTRONIC ENGINEERING (TVET)

VEHICLE TECHNOLOGY

DATE:

TIME:

INSTRUCTIONS:

Answer question one and any other two question in section b

SECTION A

QUESTION ONE (30 MARKS)

- Draw an internal tangent to two circles of diameters 60 mm and 40 mm with centres spaced at 110mm (10 marks)
- draw the isometric projection of a circular plane of diameter 60mm (10 marks)
- Draw an isometric box of 50mm sides (10 marks)

SECTION B

QUESTION TWO (20 MARKS)

- State any three types of sectioning (3 marks)
- Define the following term
 - Cutting plane
 - Sectioning (4 marks)
- using free hand sketch the following hand tools
 - Ball pein hammer
 - Tin snips

- iii. Cold chisel
 - iv. Flat screw driver
 - v. Spirit level (10 marks)
- d) Draw the following electronics symbols as per BS 3939
- i. Variable resistor
 - ii. NPN transistor
 - iii. Loud speaker (3 marks)

QUESTION THREE (20 MARKS)

Figure 1 shows a pictorial view of a block. Draw full size the following views in first angle projection

- a) Plan in the direction of arrow p
- b) Front elevation in the direction of arrow F
- c) End elevation in the direction of arrow E
- d) Insert any six major dimensions

QUESTION FOUR (20 MARKS)

Figure 2 shows an orthographic view draw its isometric view

QUESTION FIVE (20 MARKS)

Figure 3 shows a pictorial view of a block. Draw full size the following views in third angle projection:

- a) Plan in direction of arrow P
- b) Font elevation in the direction of arrow F
- c) End elevation in direction of arrow E
- d) Insert any Six major dimensions