



MACHAKOS UNIVERSITY

University Examinations 2016/2017

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

EXAMINATION FOR DIPLOMA IN MOTOR VEHICLE ENGINEERING

SUPPLEMENTARY EXAMINATION

ENGINEERING DRAWING I

DATE: 31/8/2017

TIME: 2:00 – 400 PM

INSTRUCTIONS

Answer all questions in Section A and choose any other TWO in Section B

SECTION A: COMPULSORY

1. Figure 1 below shows a bracket in isometric projection. Do not copy this but draw to scale of full size the following views:
 - i. A front elevation as seen from the direction of arrow A;
 - ii. A sectional end elevation, the direction of the view and the cutting plane being shown by line X-X;
 - iii. A plan in projection with the front elevation.

Do not show any hidden detail. Add two dimensions to each view.

All fillet radii are 3mm and can be drawn freehand.

(30 marks)

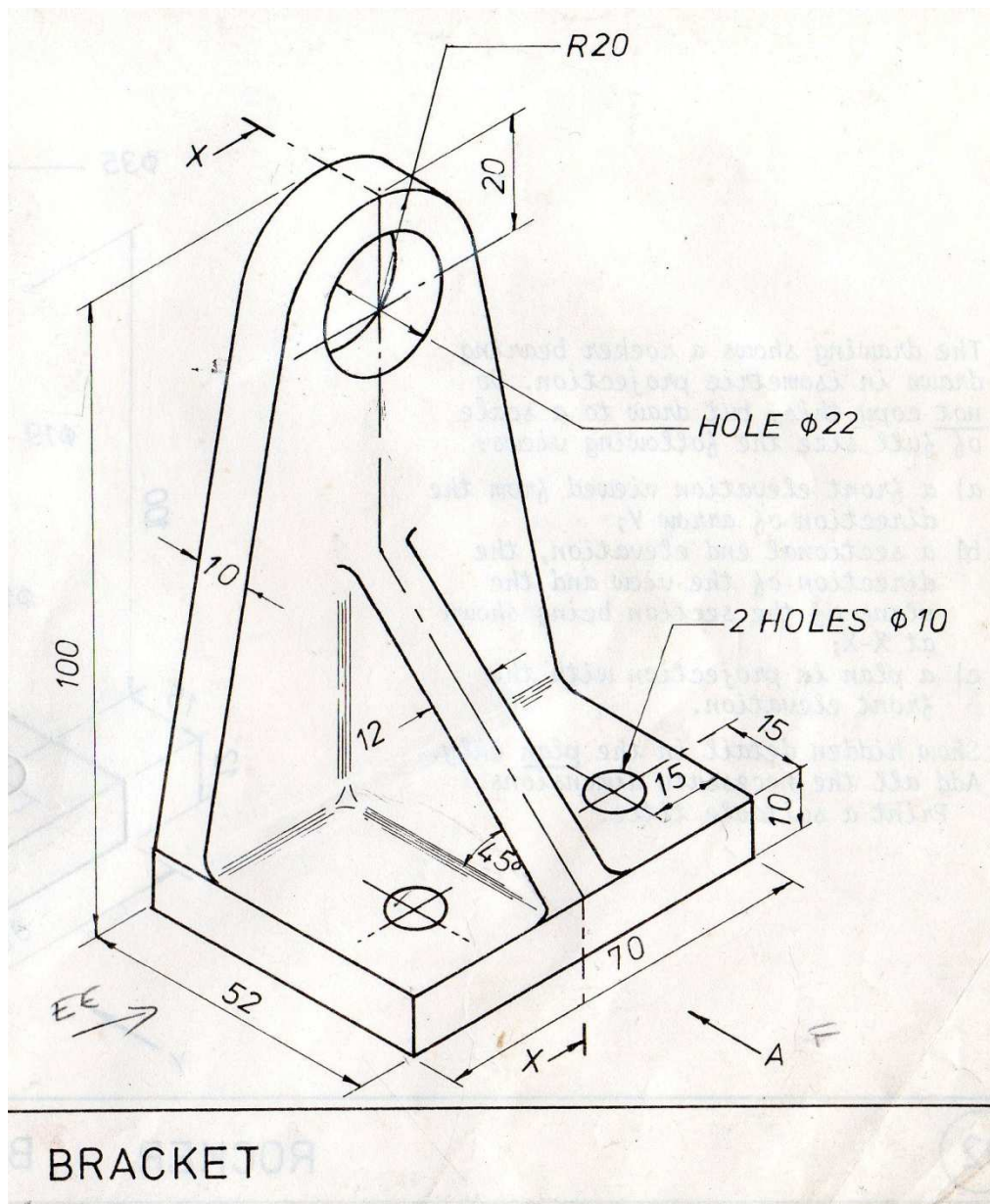


Figure 1

SECTION B: SELECT ANY TWO QUESTIONS

2. Inscribe a circle in a triangle ABC, where AB = 70 mm, BC = 50 mm and CA = 60 mm. draw a tangent at point C. (20 marks)
3. Draw separately (a) an external and (b) an internal tangent to two circles of 50 mm and 30 mm diameters and 80 mm apart. (20 marks)

4. Draw accurately figure 2 below.

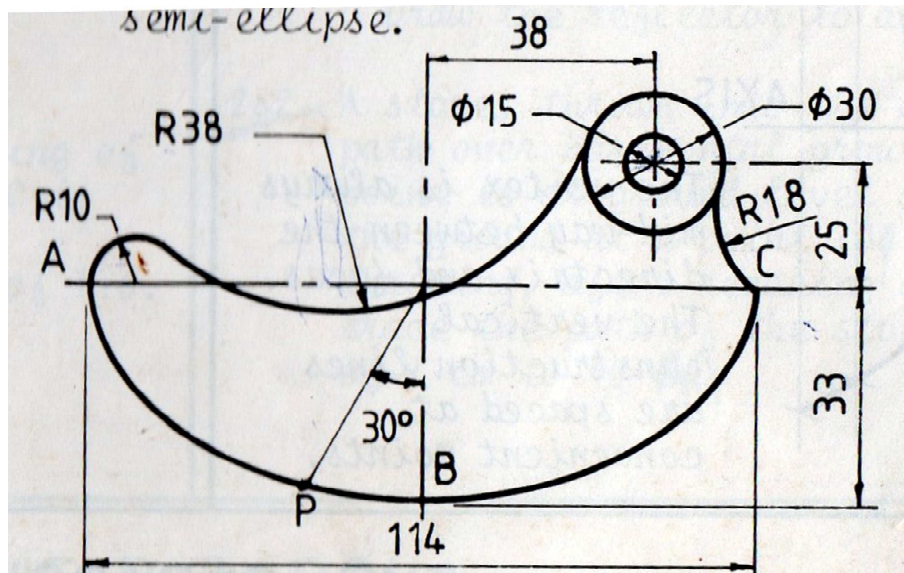


Figure 2

5. Sketch freehand the following workshop tools and label their parts.

- i. Ball pein hammer
- ii. anvil
- iii. Outside caliber
- iv. Centre punch

(20 marks)