



MACHAKOS UNIVERSITY

University Examinations 2017/2018

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

FIRST YEAR SECOND SEMESTER EXAMINATION CERTIFICATE IN
ELECTRICAL ENGINEERING

EPC 112: TECHNICAL DRAWING II

DATE: 18/12/2017

TIME: 2:00 – 4:00 PM

INSTRUCTIONS:

- This Examination contains two sections A and B
- Section A is compulsory
- Attempt any other two questions from section B

SECTION A: COMPULSORY (30 MARKS)

1. a) Draw a line 90mm and divide it in the ratio of 2:1:4. (5 marks)
b) Draw and name FIVE types of lines. (5 marks)
c) Draw full size in First-angle projection the following views of the bracket shown in figure 1 below.
(i) A front view from direction A,
(ii) An end view,
(iii) A plan view,
All fillet radii are 3mm.
Include SIX major dimensions. (20 marks)

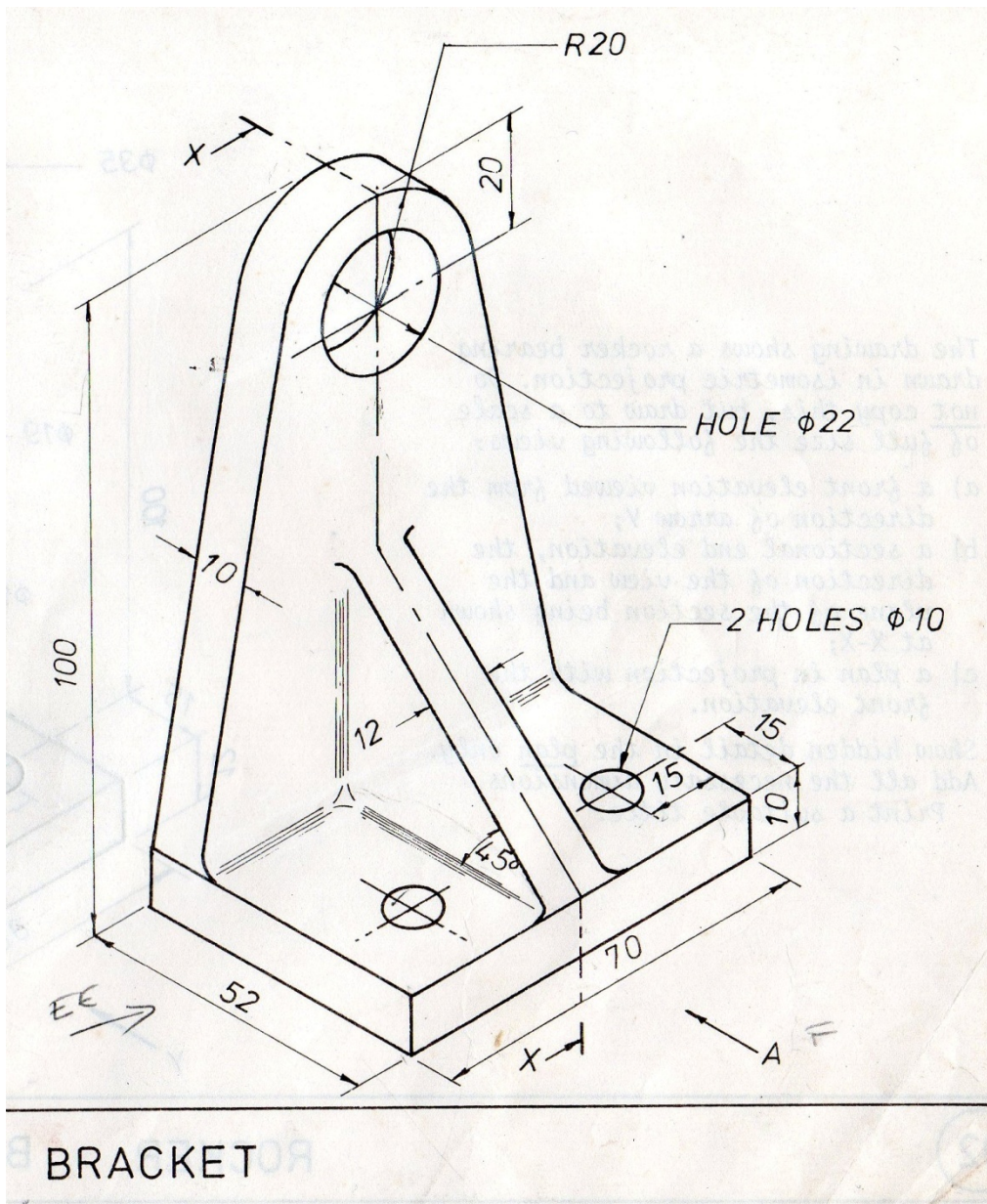


Figure 1

SECTION B: SELECT ANY TWO QUESTIONS

2.
 - a) Circumscribe a circle around a triangle ABC, where $AB = 70$ mm, $BC = 50$ mm and $CA = 60$ mm. draw a tangent at point C. (12 marks)
 - b) Construct a regular heptagon in a circle of diameter 70mm (8 marks)

3. a) Draw separately;
- (i) an external and
 - (ii) an internal tangent to two circles of 70 mm and 50 mm diameters and 100 mm apart. (10 marks)
- b) Sketch freehand the following workshop tools and label their parts.
- (i) Ball peen hammer
 - (ii) Vernier caliper
 - (iii) Adjustable (screw) spanner
 - (iv) Hacksaw
 - (v) Flat chisel (10 marks)
4. Draw accurately figure 2 below. (20 marks)

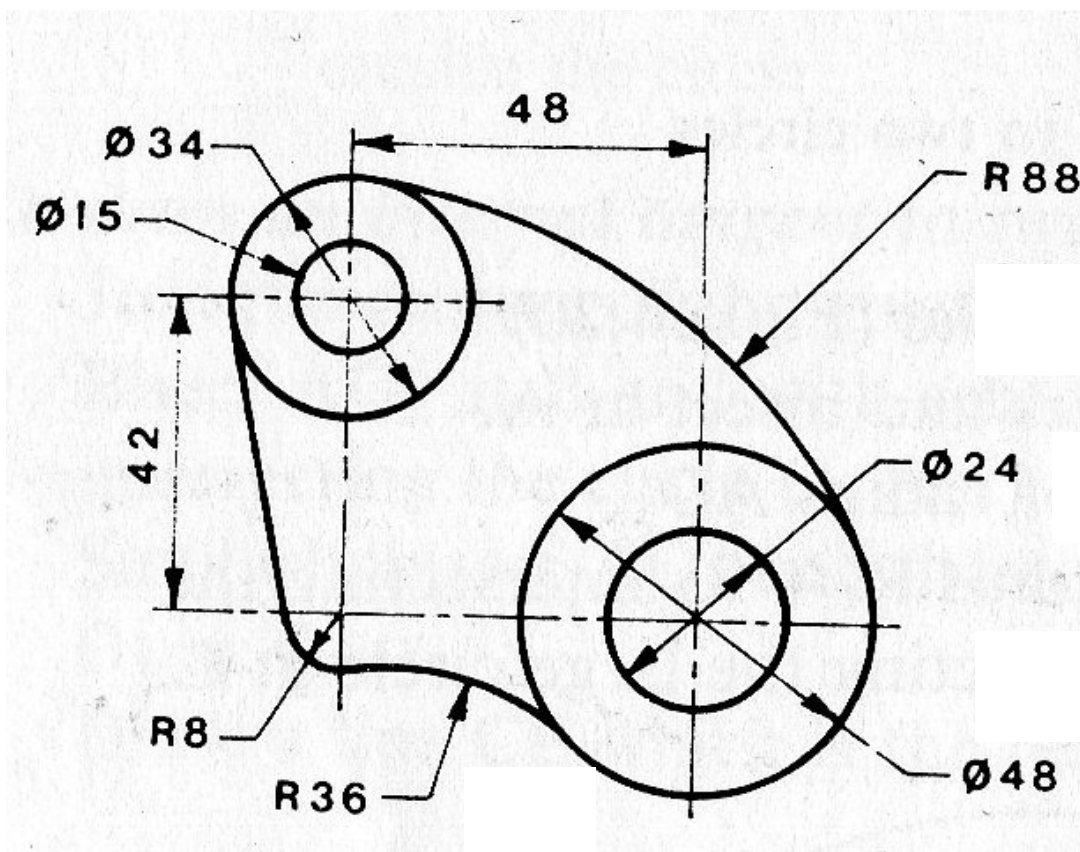


Figure 2

- (20 marks)

