



MURANG'A UNIVERSITY COLLEGE

(A Constituent College of Jomo Kenyatta University of Agriculture and Technology)

FACULTY; SCHOOL OF ENGINEERING:
DEPARTMENT: ELECTRICAL ENGINEERING

COURSE : DIPLOMA ; CLASS: MRUC/EEP/14DS ; SEMESTER: I YEAR II

ACADEMIC YEAR: 2014/2015; EXAM : MAIN

UNIT: ENGINEERING DRAWING I; UNIT CODE: SEE1107

DATE: 20TH APRIL 2015

TIME: 3 HOURS

Instructions to candidates

1. This exam paper contains **FOUR Questions**
2. Question **ONE** is **COMPULSORY**
3. Answer all questions in section 'A' and any other two questions in section 'B'.
4. You should have the following for this examination;
 - Drawing instruments(drawing board, the standard set squares, eraser, 2H and HB pencils)
 - Drawing papers
 - Mobile phones not allowed in the exam room
5. All dimension in mm

SECTION 'A' answer all the questions in this section

Q1(a) (i) Print (i) Letters H M W Y G

(ii) Numerals 1 3 7 8 4

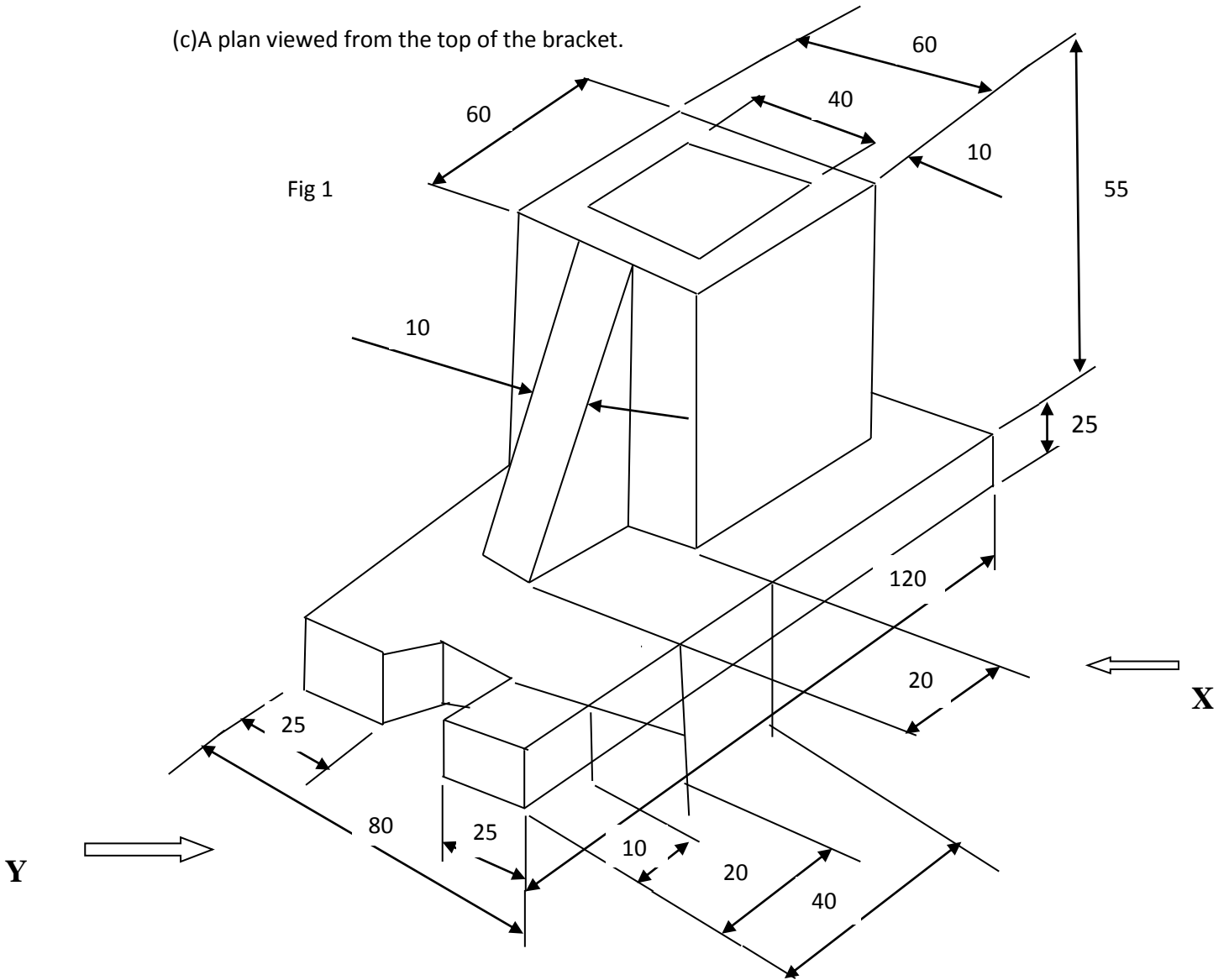
(10marks)

(b) Fig 1 below shows a pictorial view of a mounting bracket, Draw full size, in third angle projection the following views. (20marks)

(a) Front elevation in the direction of arrow X

(b) An end elevation viewed in the direction of arrow Y

(c) A plan viewed from the top of the bracket.



SECTION `B` ANSWER ANY TWO QUESTIONS IN THIS SECTION

Q2 (a) Draw the following lines

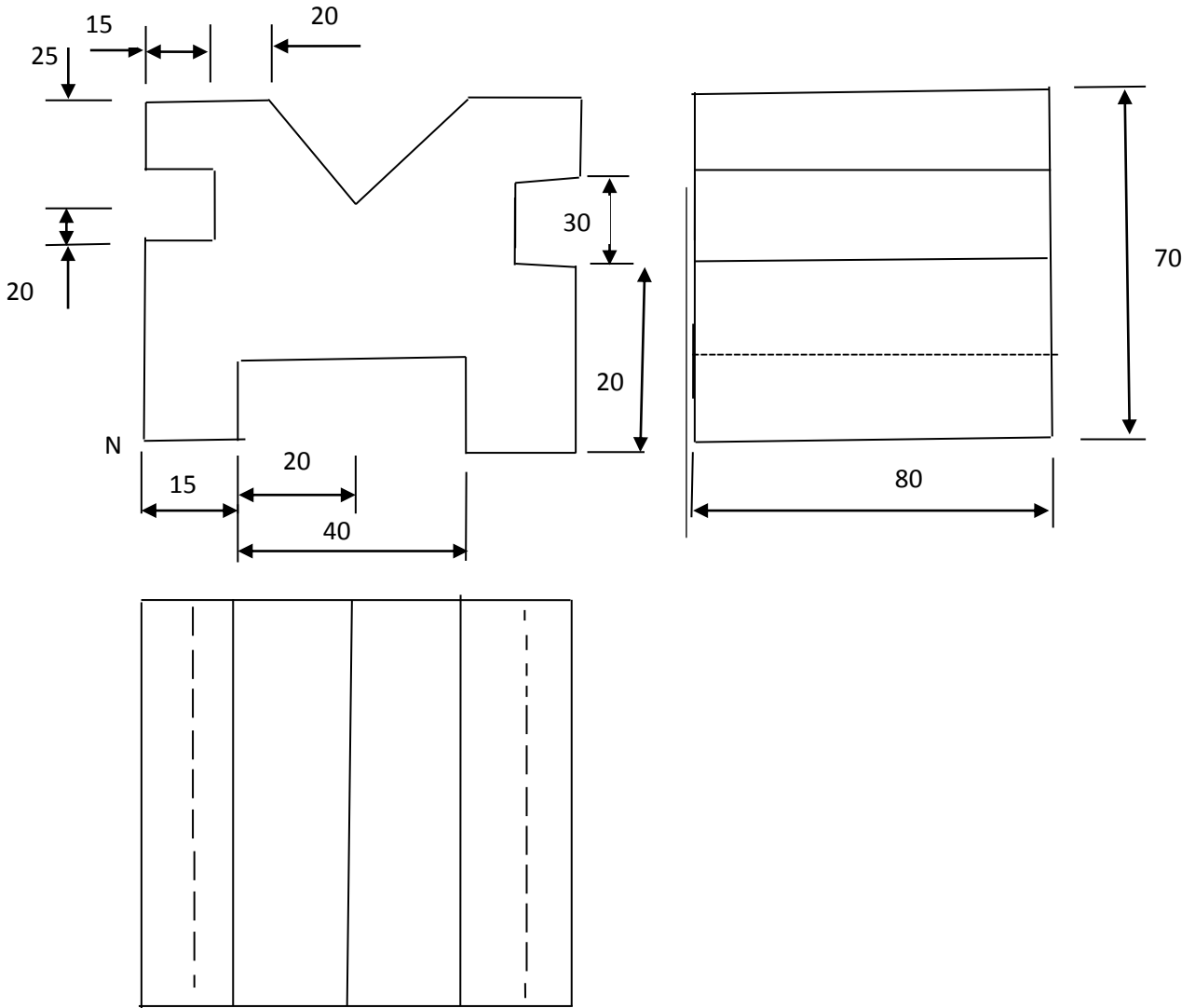
(5marks)

- (i) Object line.
- (ii) Short dashed line.
- (iii) Thin chain line.
- (iv) Straight with Zig Zag, line.
- (v) Thin continuous irregular line.

(b) Figure 2 shows three views of a support block in first angle projection, Draw full size isometric view

Fig 2 Draw the block with N in the forefront of the view.

(15marks)



Q3 Construct a Cam to satisfy the following design specifications.

A disc cam of minimum radius 40mm mounted on a cam shaft 30mm diameter with a Knife-edge follower to have the following displacement and motion.

0° - 180° , rise 70mm with simple harmonic motion.

180° - 360° , fall of 70mm with uniform velocity.

(20 marks)

Q4 Draw free hand sketch of BS 308 conventional representation feature of the following Items

- I. Splined shaft
- II. Compression spring
- III. Holes on circular pitch
- IV. Square on shaft
- V. Loud tibular
- VI. Tension Spring.
- VII. Loud solid.
- VIII. Straight knurling.
- IX. Holes on linear pitch.
- X. Serrated shaft

(20 marks)

Q5 Fig 3 shows a frustrum of a right of a right cone.

Draw (i) The given front elevation,

(ii) A plan and an

(iii) End elevation viewed in the direction of arrow 'P'.

(20marks)

