INTI International University & Colleges

FINAL
Examination Paper

(COVER PAGE)

Session	:	**April 2019**
Programme	:	Diploma in Mechanical Engineering (DMEN)
Course	:	**EGM2161 : Engineering Drawing 2-Mechanical Engineering**
Date of Examination	:	July 25, 2019 (Thursday)
Time	:	2:00 pm – 4:00 pm Reading Time : Nil
Duration	:	2 Hours
Special Instructions	:	

This paper consists of **TWO (2)** sections,**A and B**. **Section A** consists of **TWO (2)** questions and both questions are compulsory. **Section B** consists of **FOUR (4)** questions of which you are in required to Answer any **TWO (2)** questions. All drawings are to be drawn in full size unless otherwise stated. Dimensions are not required unless the question explicitly asks for them.

Materials permitted : Drawing Instruments and Calculator

Material provided : A2 Sized Drawing Paper

Examiner : **Tham Chan Seng**

Moderator : Ms Audrey Woon Su Fern

This paper consists of 7 printed pages, including the cover page.

DIPLOMA IN MECHANICAL ENGINEERING PROGRAMME (DMEN)
EGM2161 ENGINEERING DRAWING 2
FINAL EXAMINATION: APRIL 2019 SESSION

Instructions: This paper consists of **TWO (2)** sections, A and B. **Section A** consists of **TWO (2)** questions and both questions are compulsory. **Section B** consists of **FOUR (4)** questions of which you are in required to answer any **TWO (2) questions**. All drawings are to be drawn in full size unless otherwise stated. Dimensions are not required unless the question explicitly asks for them.

Note: **All dimensions are given in mm.**

Section A: Compulsory section. Answer **ALL** questions in this section.

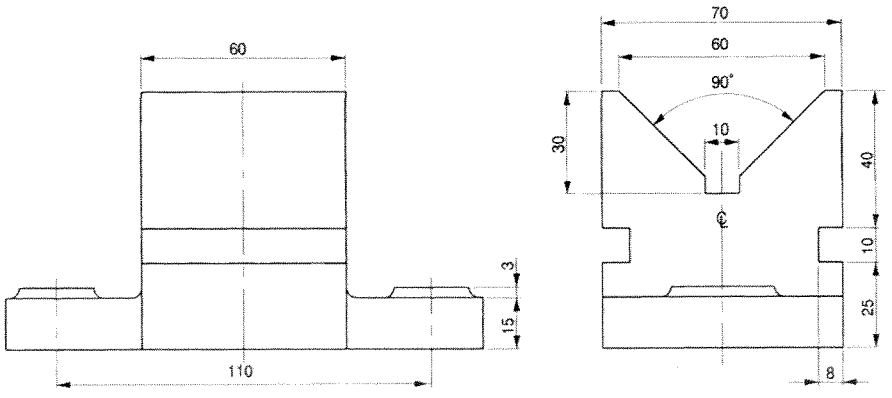
Question 1

Using First Angle Projection, Draw the full assembly drawing of the Front View for the part list given below. DO NOT DRAW HIDDEN LINES.

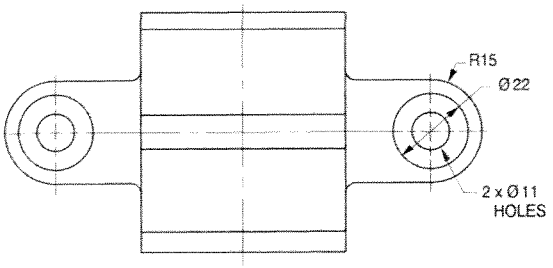
(25 marks)

PART LIST

PART NO	PART	NO. REQUIRED
1	CLAMP	1
2	V BLOCK	1
3	CLAMP SCREW	1
4	COMPONENT	1

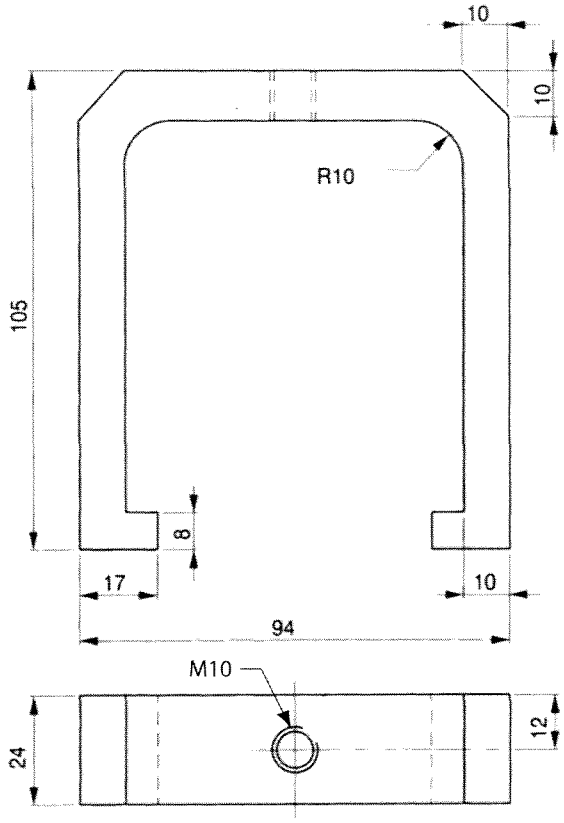


Front View

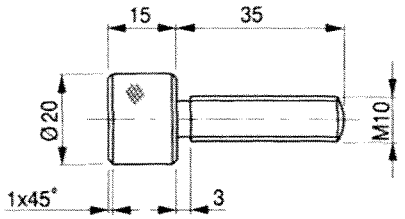


PART 2
'V' BLOCK
NOTE: ALL UNSPECIFIED
RADII 3mm

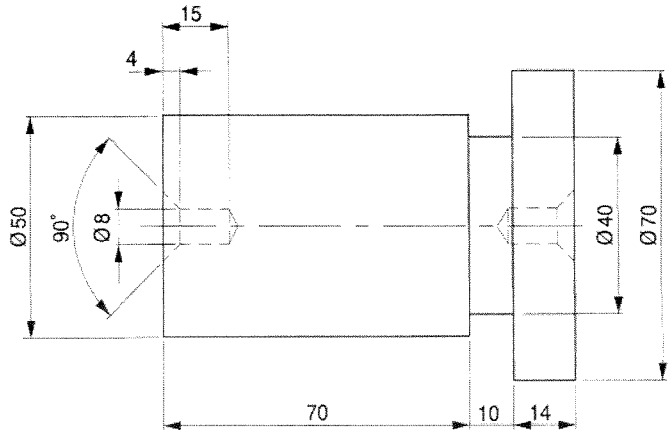
Plan View



PART 1 - CLAMP



PART 3 - CLAMP SCREW
MINOR DIAMETER
OF THREAD 8mm



PART 4
COMPONENT

Figure Q1

Question 2

Figure Q2 shows a bearing bracket, draw the following views in 1st Angle Projection:

(a) Plan View

(10 marks)

(b) Right End Sectional View X-X

(15 marks)

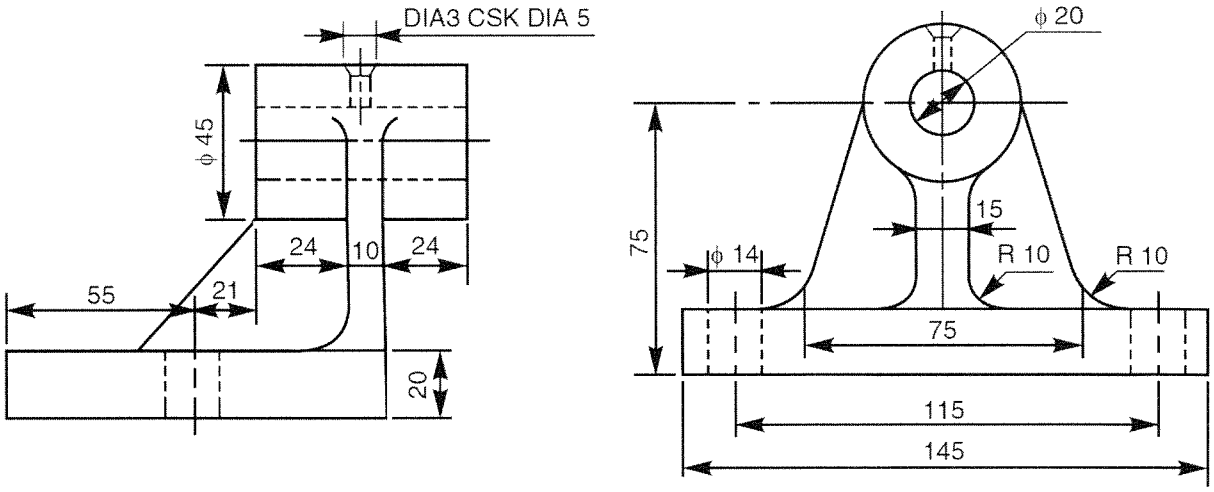


Figure Q2

Section B: Answer any **TWO (2)** questions.

Question 3

Figure Q3 below shows a cylinder drawn in First Angle Projection. It is pierced by a hole in which in plan view appears as an equilateral triangle of side 30 mm. Redraw the two given views and then project an auxiliary view in the direction of arrow A.

(25 marks)

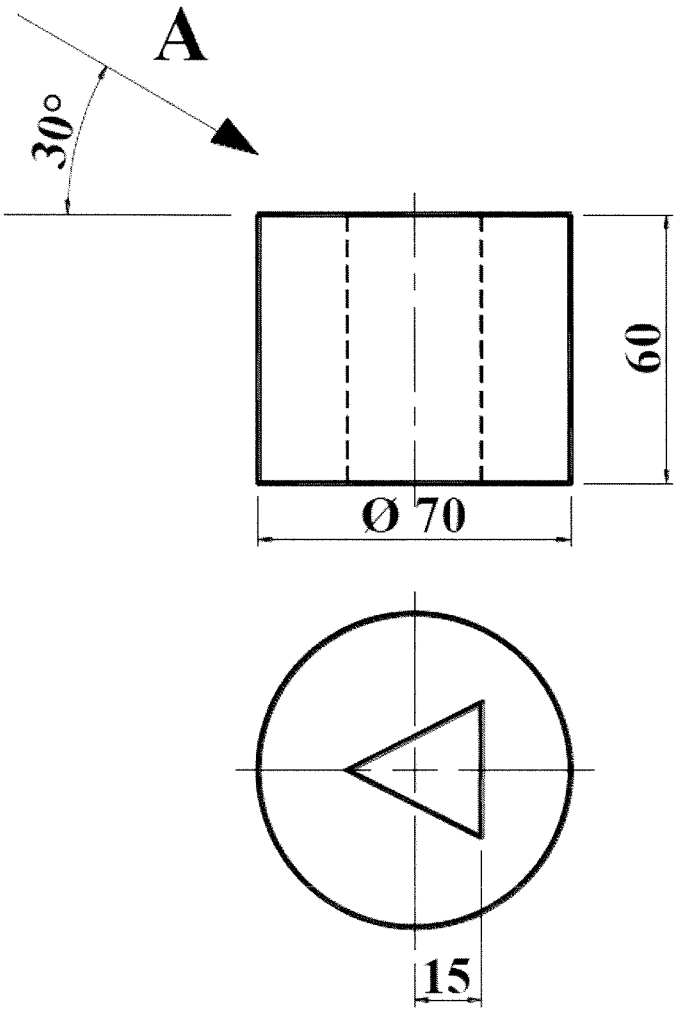


Figure Q3

Question 4

Draw the isometric view of the component given in Figure Q4 with the corner shown by the letter A in the foreground. The object has been drawn using First Angle Projection. All dimensions are in mm.

(25 marks)

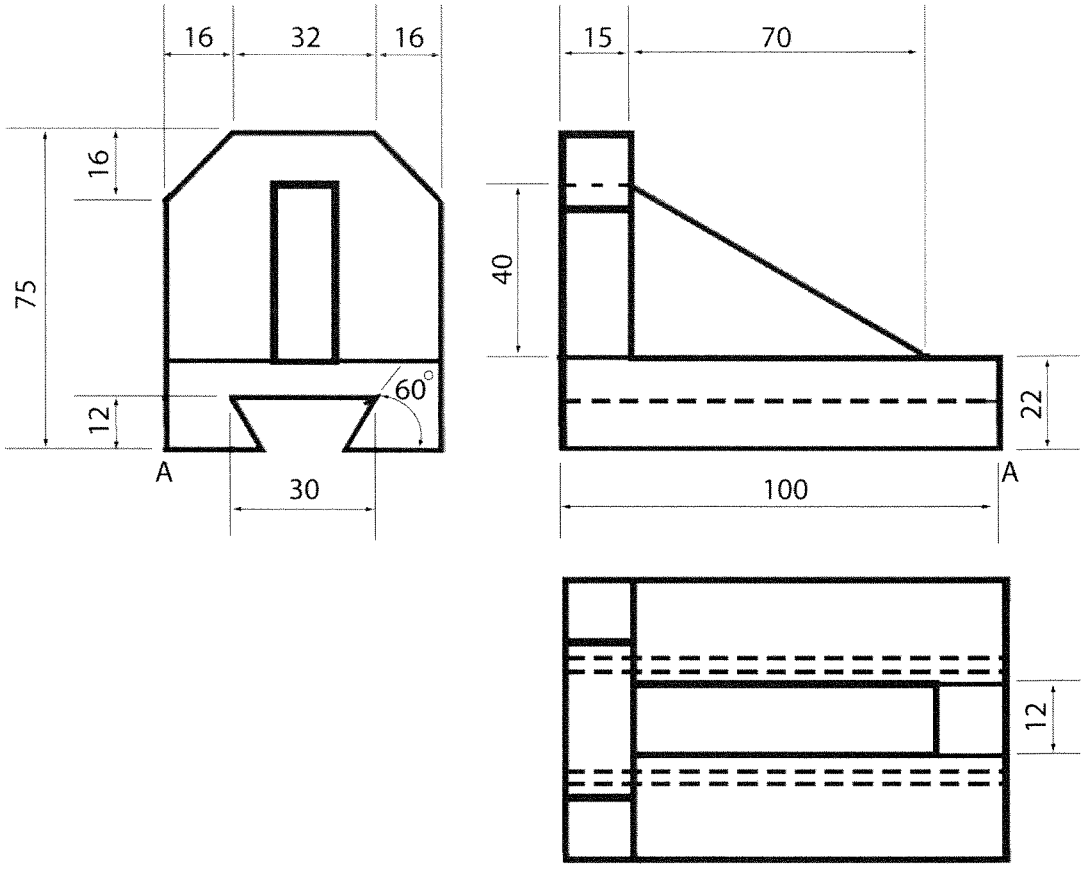


Figure Q4

Question 5

Draw the profile of a cam which gives the following motion to roller follower of 12 mm diameter in one revolution of the cam shaft in clock wise direction. The minimum cam radius is 25 mm. Draw the displacement diagram to a scale of 10mm =30°.

0-90 degrees: Bottom dwell

90-180 degrees: Rise 40 mm and have simple harmonic motion

180 to 270 degrees: Top dwell

270 – 360 degrees: Falls 40 mm with simple harmonic motion

(25 marks)

Question 6

An octagonal prism across corner 50 mm diameter and 76 mm axis is completely penetrated by hexagonal prism across corner 36 mm diameter and 102 mm axis, both consist from a single component object.

(a) Draw the given Front view; add a Plan view and Left End view in Third Angle Projection.
(8 marks)

(b) Complete the Front view showing clearly the construction for intersection of the polygon. horizontally.
(17 marks)

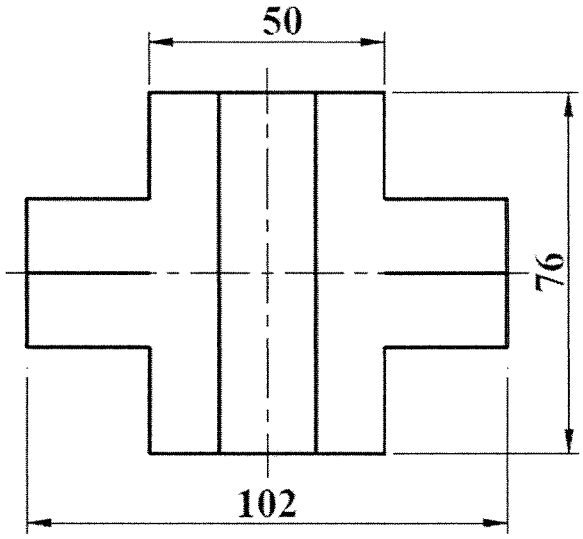


Figure Q6

-THE END-

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