INTI International University & Colleges

FINAL
Examination Paper

(COVER PAGE)

Session	:	**August 2019**
Programme	:	Diploma in Mechanical Engineering (DMEN)
Course	:	**EGM2161 : Engineering Drawing 2-Mechanical Engineering**
Date of Examination	:	December 10,2019 (Tuesday)
Time	:	5:00 pm – 7.00 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 : **Phua Chin Lai** and Tham Chan Seng

Moderator : Ms Audrey Woon Su Fern

*This paper consists of **6** printed pages, including the cover page.*

DIPLOMA IN MECHANICAL ENGINEERING PROGRAMME (DMEN)
EGM 2161 ENGINEERING DRAWING 2
FINAL EXAMINATION: AUGUST 2019 SESSION

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

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

Figure Q1 shows the five detail parts in 1st angle projection. Which together make up a control handle assembly. Assemble the parts and then answer Question 1 and Question 2.

Five detail parts consist of a handle (items 2) which may be moved to either side of its normal vertical position about a pivot stud (item 3) which passes through the central hole in the body (item 1). The pivot stud is secured at the back of the body by a collar (item 4) through which is passed a 2 mm pin (item 5).

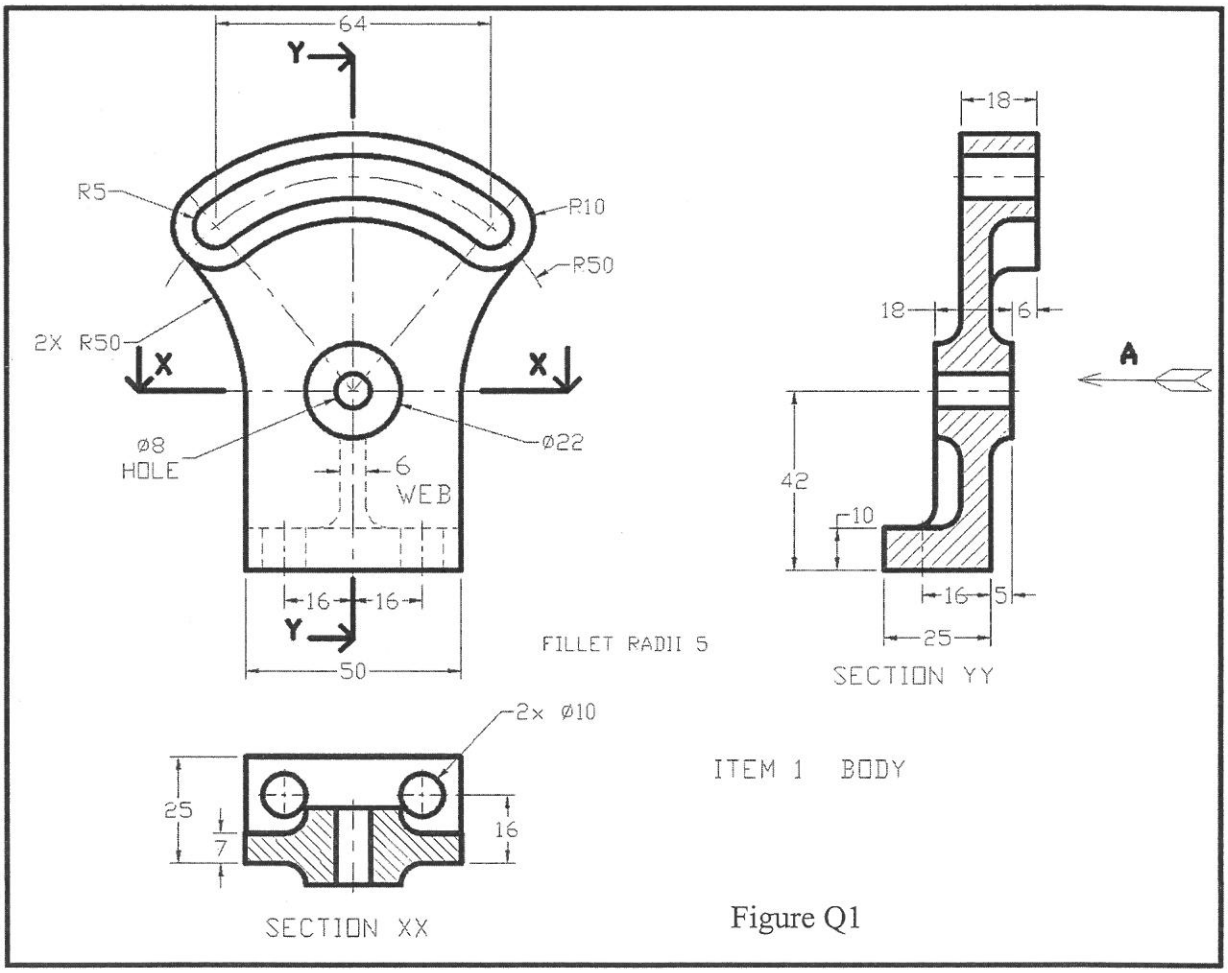

Figure Q1

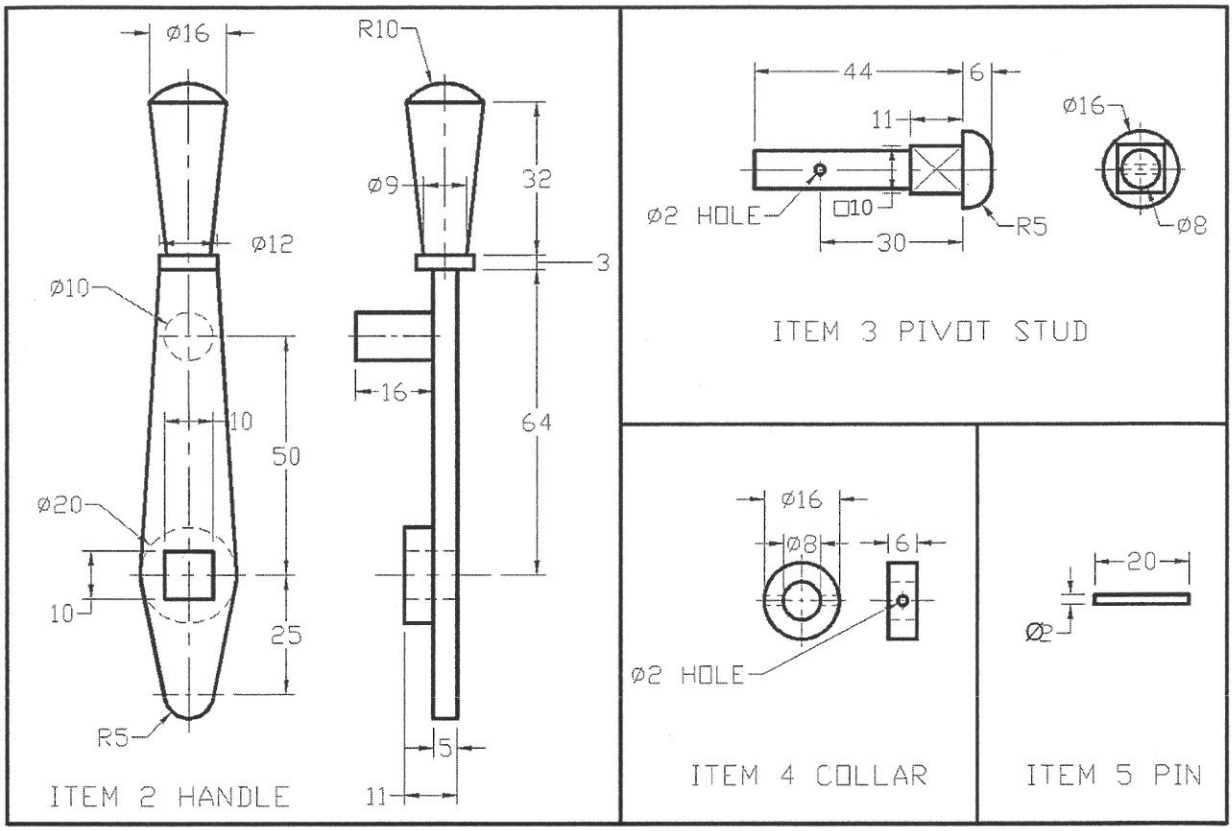

Figure Q1

Question 1

Draw the completely assembled unit of front elevation in the direction of arrow A. The handle being in the vertical position.
Note: Dimensions and hidden lines are not required.

(25 marks)

Question 2

Sectional plan view XX of assembled unit projected from Question 1. Either first angle or third angle method of projection (but not both) may be used.

(25 marks)

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

Question 3

Draw the given front and right-side views of Figure Q3, and add an auxiliary view. (25 marks)

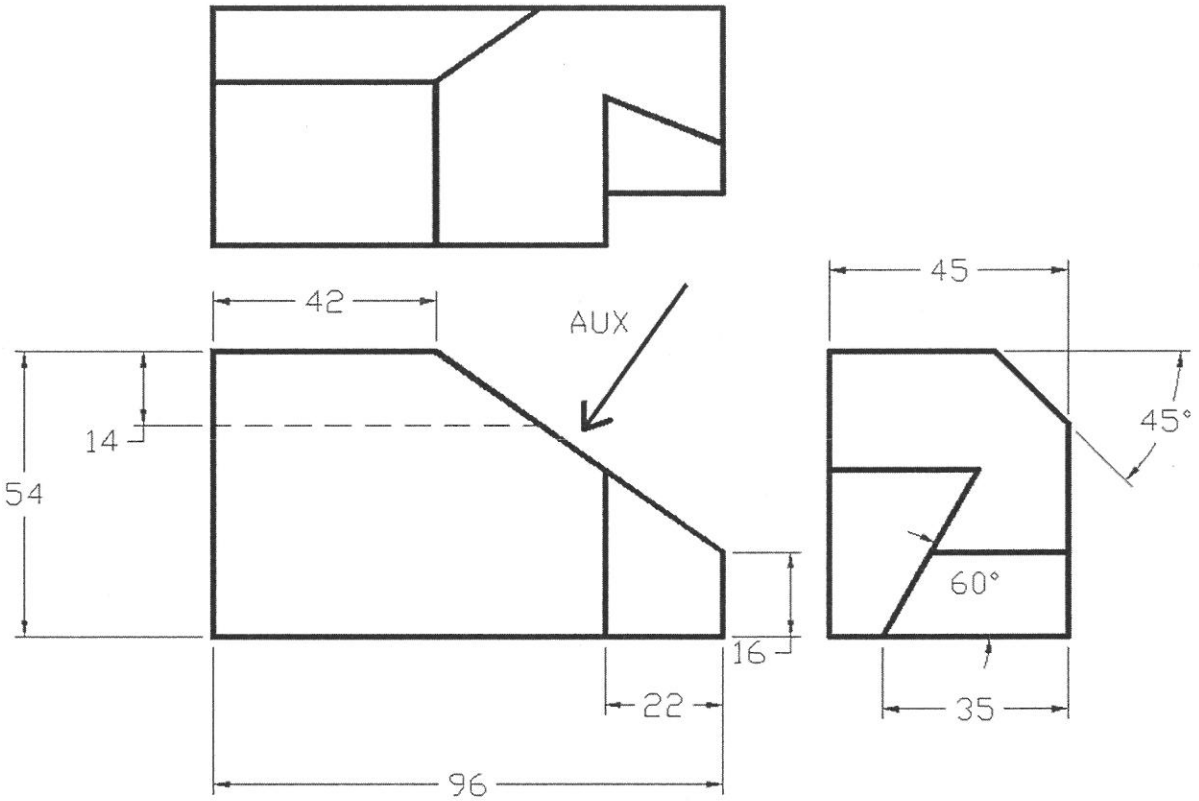

Figure Q3

Question 4

The component in Figure Q4 has be drawn in 3rd angle projection. Draw an isometric view of this component with the corner shown by the letter A in the foreground.

(25 marks)

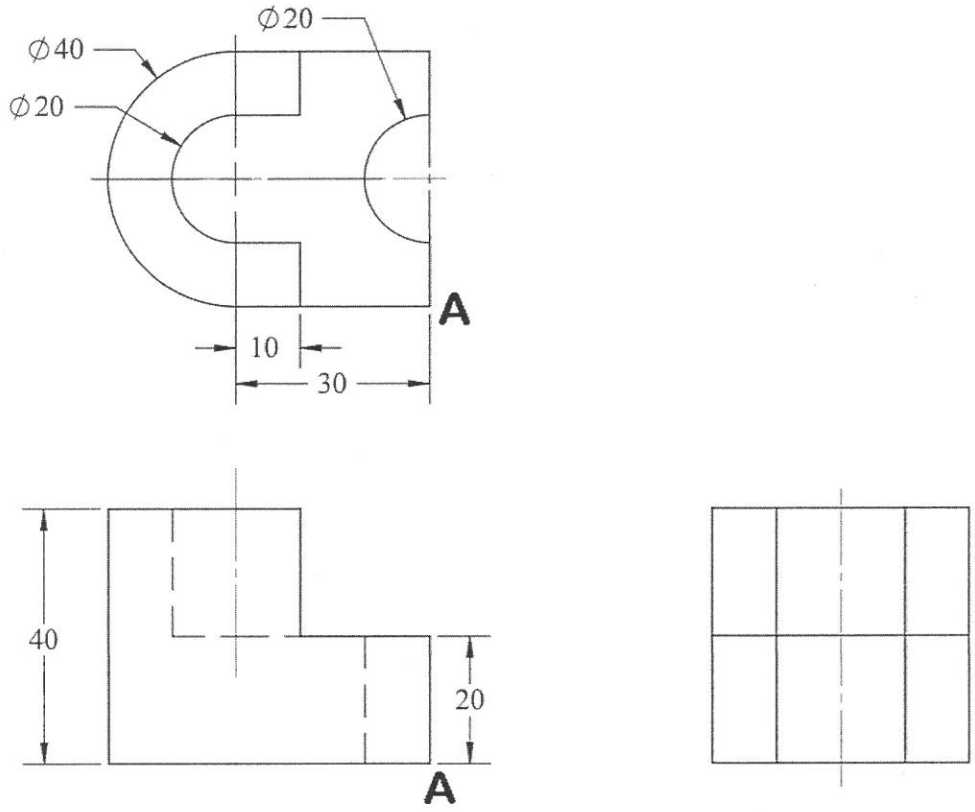

Figure Q4

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 10 mm = 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 uniform velocity

(25 marks)

Question 6

A square pyramid is penetrated by a square prism as shown in Figure Q6 below. Redraw the given the Left End View, complete the incomplete Front View and draw the Plan View in First Angle Projection.

(25 marks)

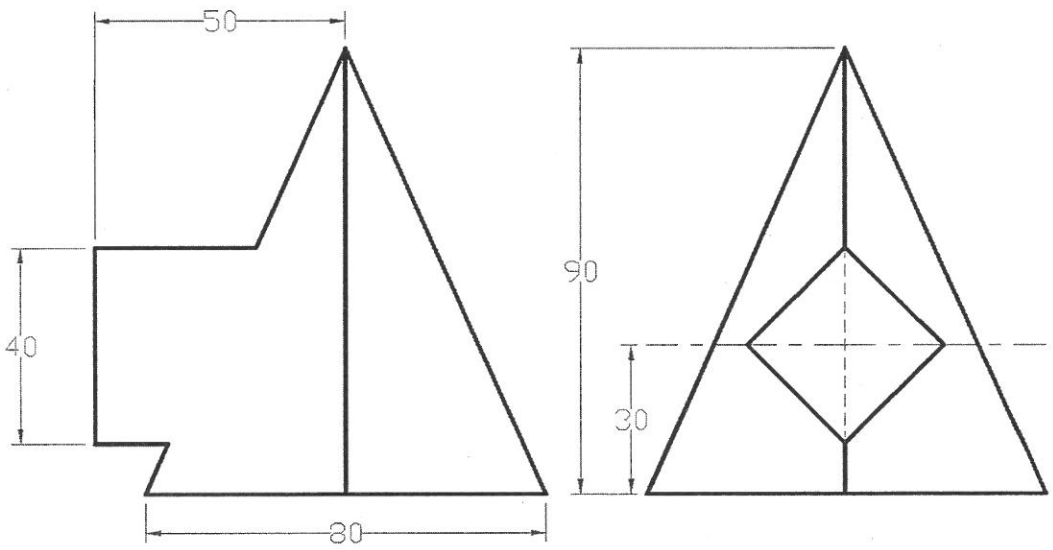

Figure Q6

-THE END-