INTI International University & Colleges

FINAL

Examination Paper

(COVER PAGE)

Session	:	**August 2017**
Programme	:	Diploma in Mechanical Engineering (DMEN)
Course	:	**EGM2161 : Engineering Drawing 2-Mechanical Engineering**
Date of Examination	:	December 8, 2017 (Friday)
Time	:	5:00 pm – 7:00 pm Reading Time : Nil
Duration	:	2 Hours
Special Instructions	:	

This paper consists of **TWO (2)** sections.

Section A consists of TWO (2) questions and **both questions are compulsory.**

Section B consists of FOUR (4) questions, and **answer any TWO (2) questions.**

Materials permitted : Drawing Instruments and Calculator

Material provided : A2 Sized Drawing Paper

Examiner : **Tham Chan Seng** & Phua Chin Lai

Moderator : Mr Teh Thiam Oun

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

DIPLOMA IN MECHANICAL ENGINEERING PROGRAMME (DMEN)
EGM2161 ENGINEERING DRAWING 2
FINAL EXAMINATION: AUGUST 2017 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

Figure Q1 shows a pictorial view of a guide bracket which incorporates a separate inspection plate. Draw the plan view C of the guide bracket with the inspection plate fitted into its slot.
(25 marks)

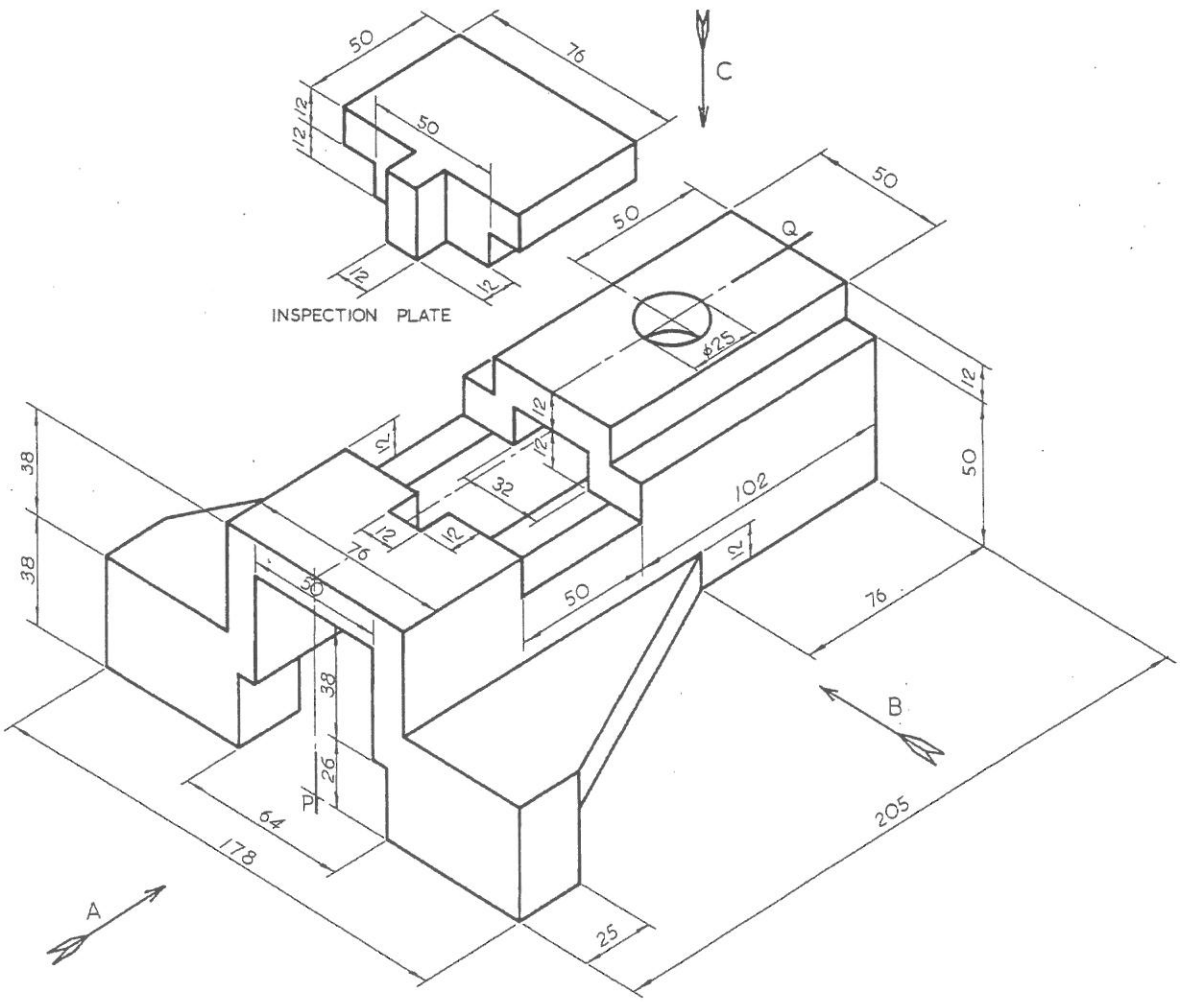


Figure Q1

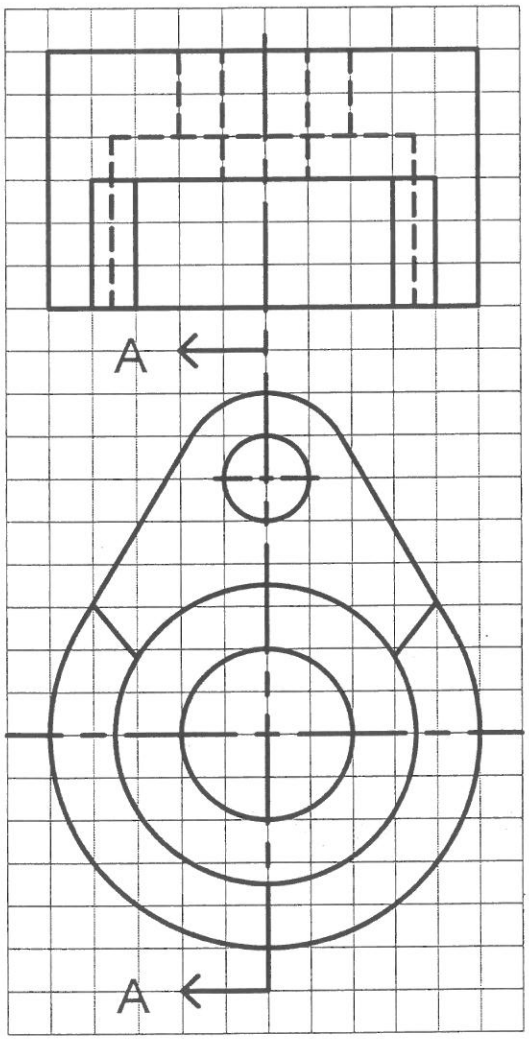
Question 2

Refer to Figure Q2 and draw the following views in 3rd Angle Projection:

(a) the front view as given (4 marks)

(b) a top view as given (2 marks)

(c) a sectional A-A (19 marks)



1 grid = 10 mm

Figure Q2

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

Question 3

Figure Q3 shows a cylinder drawn in 1st angle projection. It is pierced by a hole which in plan view appears as an equilateral triangle of side 35 mm.

(a) Redraw the given front view & plan view.

(6 marks)

(b) Add an auxiliary in the direction of arrow A, include all hidden lines where applicable.

(19 marks)

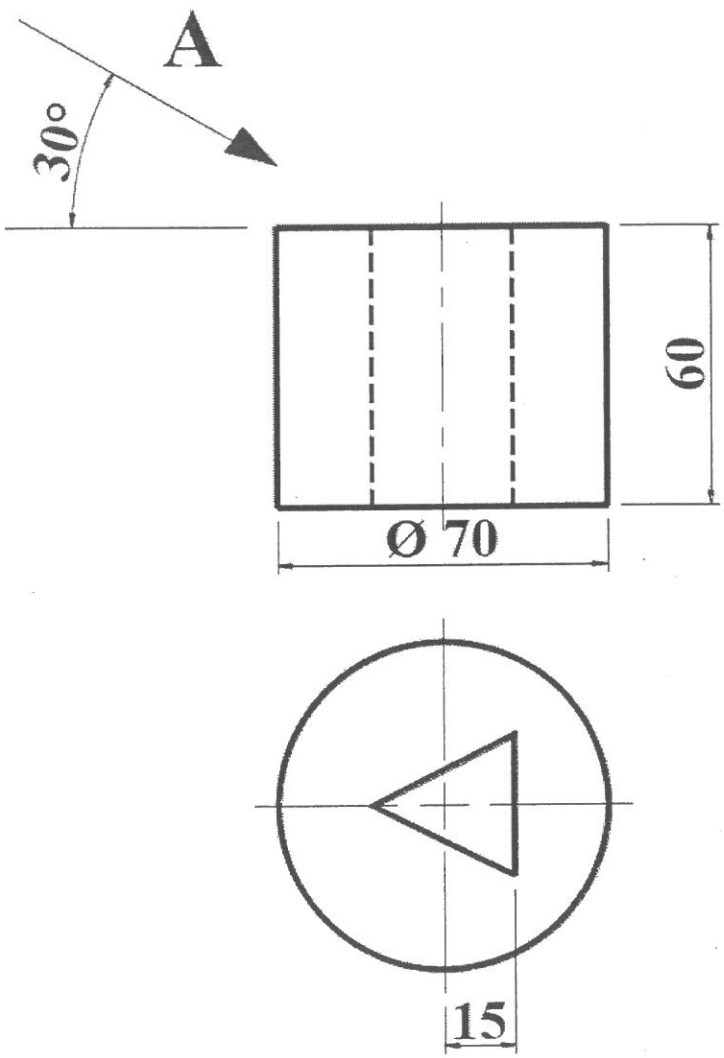


Figure Q3

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)

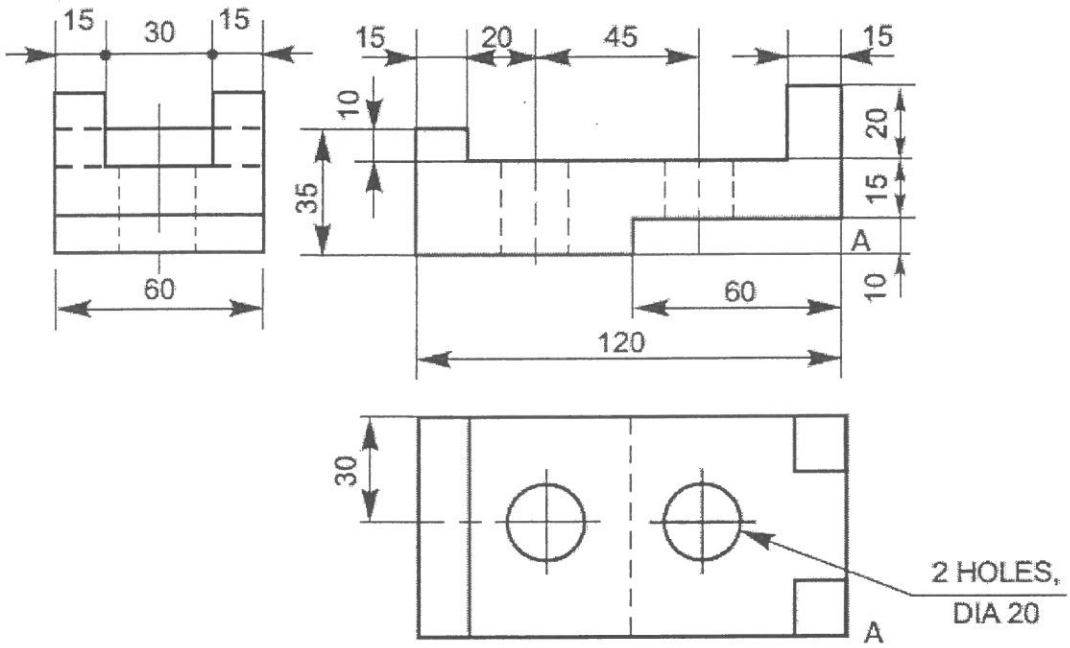


Figure Q4

Question 5

A cylinder 70 mm dia. and 100 mm axis is completely penetrated by a square prism of 42 mm sides and 100 mm axis, horizontally. Both axes intersect & bisect each other. All faces of the prism are equally inclined to horizontal plane. Example of its front and plan views as shown in Figure Q5. Draw the front, plan and right views in 3rd angle projection.

(25 marks)

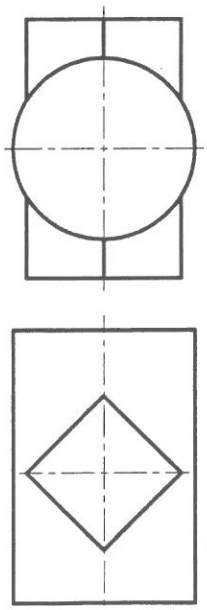


Figure Q5

Question 6

Draw the profile of a cam which gives the following motion to roller follower of 24 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 = 20°.

0° to 90° : Bottom dwell

90° to 180° : Rise 40 mm and have simple harmonic motion

180° to 270° : Top dwell

270° to 360° : Fall 40 mm with simple harmonic motion

(25 marks)

-THE END –