Coimisiún na Scrúduithe Stáit
State Examinations Commission

Leaving Certificate Examination, 2018

Design & Communication Graphics

Ordinary Level

Section A (60 marks)

Wednesday, 20 June
Afternoon, 2:00 - 5:00

This examination is divided into three sections:

SECTION A	(Core - Short Questions)
SECTION B	(Core - Long Questions)
SECTION C	(Applied Graphics - Long Questions)

SECTION A

- Four questions are presented.
- Answer **any three** on the A3 sheet overleaf.
- All questions in Section A carry **20 marks** each.

SECTION B

- Three questions are presented.
- Answer **any two** on drawing paper.
- All questions in Section B carry **45 marks** each.

SECTION C

- Five questions are presented.
- Answer **any two** (i.e. the options you have studied) on drawing paper.
- All questions in Section C carry **45 marks** each.

General Instructions:

- *Construction lines must be shown on all solutions.*
- *Write the question number distinctly on the answer paper in Sections B and C.*
- *Work on one side of the drawing paper only.*
- *All dimensions are given in metres or millimetres.*
- *Write your Examination number in the box below and on all other sheets used.*

Examination Number:

SECTION A - Core - Answer **any three** of the questions on this A3 sheet.

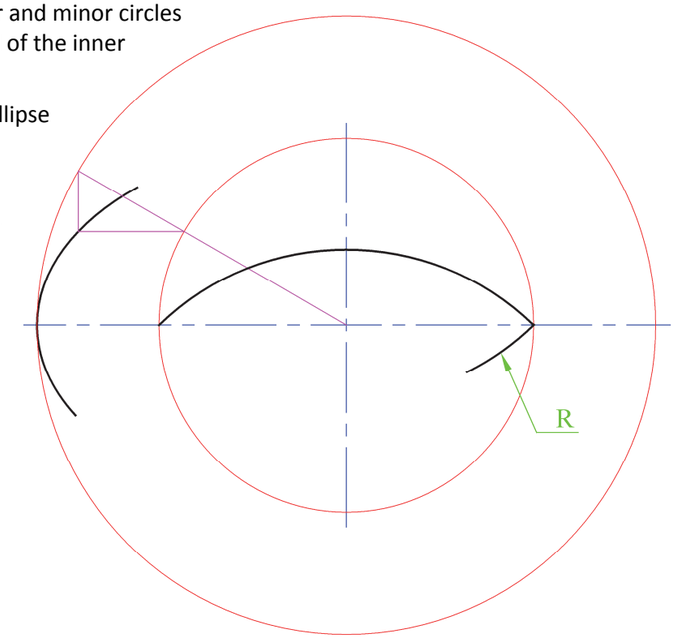
A-1. The 3D graphic below shows the proposed design for the new children's hospital in Dublin. It consists of an ellipse and two inner circular arcs.

The drawing on the right shows the major and minor circles for the ellipse. Portions of the ellipse and of the inner arcs are also shown.

(a) Locate the remaining points on the ellipse and draw the curve.

(b) Locate the focal points of the ellipse.

(c) Locate the centre point for the lower arc and complete the drawing.



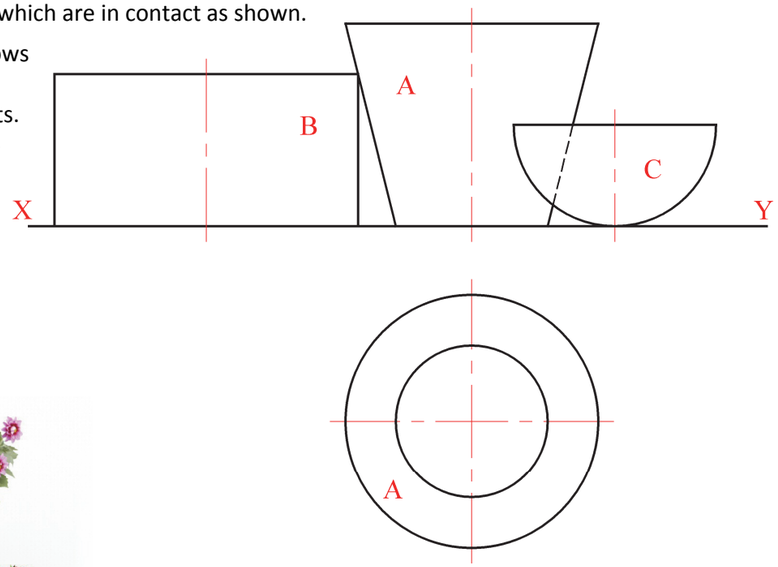
A-2. Three stone containers for growing flowers are shown in the 3D graphic below. The containers are in the form of geometrical objects which are in contact as shown.

The drawing on the right shows the elevation and partially completed plan of the objects.

The arrangement consists of a cylinder, a truncated cone and a hemisphere.

(a) Draw the plan of the cylinder **B**.

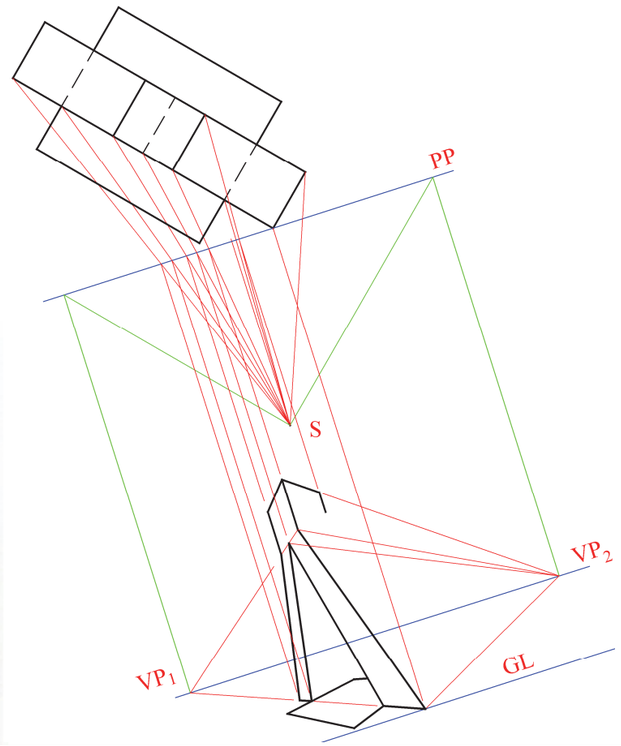
(b) Draw the plan of the hemisphere **C**.



A-3. The image below shows the *Mary McAleese Boyne Valley Bridge*, a suspension bridge across the river Boyne in County Meath.

The drawing on the right shows the plan and a partially completed perspective view of the concrete tower part of the bridge.

Complete the perspective drawing of the bridge tower.

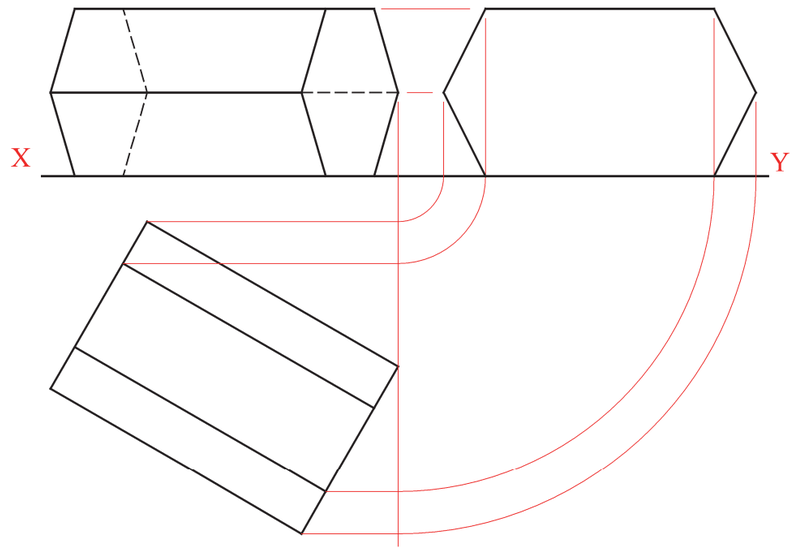


A-4. The image below shows a concertina. The instrument is hexagonal in cross-section.

The plan, elevation and the partially completed end view of the instrument are also shown.

(a) Complete the end view.

(b) Draw the true shape of the end of the instrument.



This examination paper must be returned at the end of the examination – You must include your Examination Number on the front cover.

This Contour Map is part of Section C and should only be used for the answering of the Geologic Geometry Option (Question C-1).

(Scale 1:1000)