



## ***Leaving Certificate Examination***

# ***Design & Communication Graphics*** ***Higher Level***

## ***Section A (60 marks)***

**3 hours**

Centre No.

**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** questions on the A3 sheet overleaf.
  - All questions in Section A carry **20 marks** each.

- SECTION B**
- Three questions are presented.
  - Answer **any two** questions on drawing paper.
  - All questions in Section B carry **60 marks** each.

- SECTION C**
- Five questions are presented.
  - Answer **one** question (i.e. the option you have studied) on drawing paper.
  - All questions in Section C carry **60 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.*

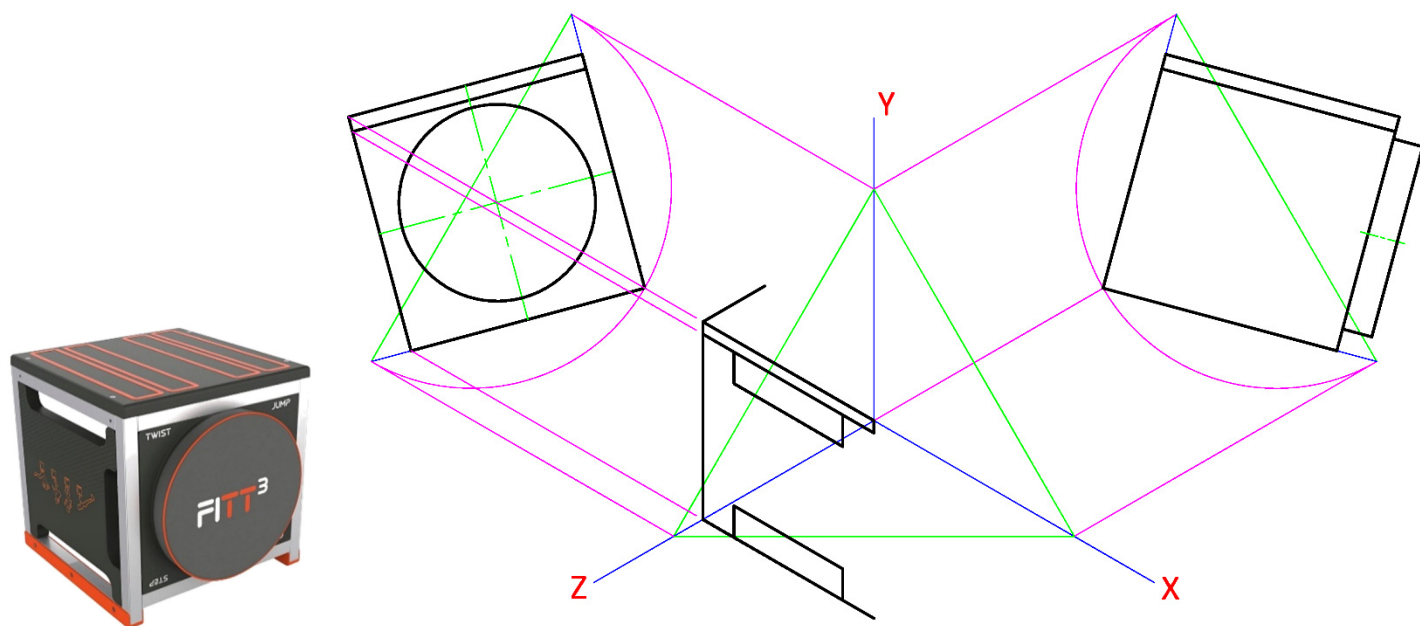
**Examination Number**

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

**A-1.** The image below shows a fitness cube which can be used in a home gym. It consists of a cube with a cylindrical disk on the front surface.

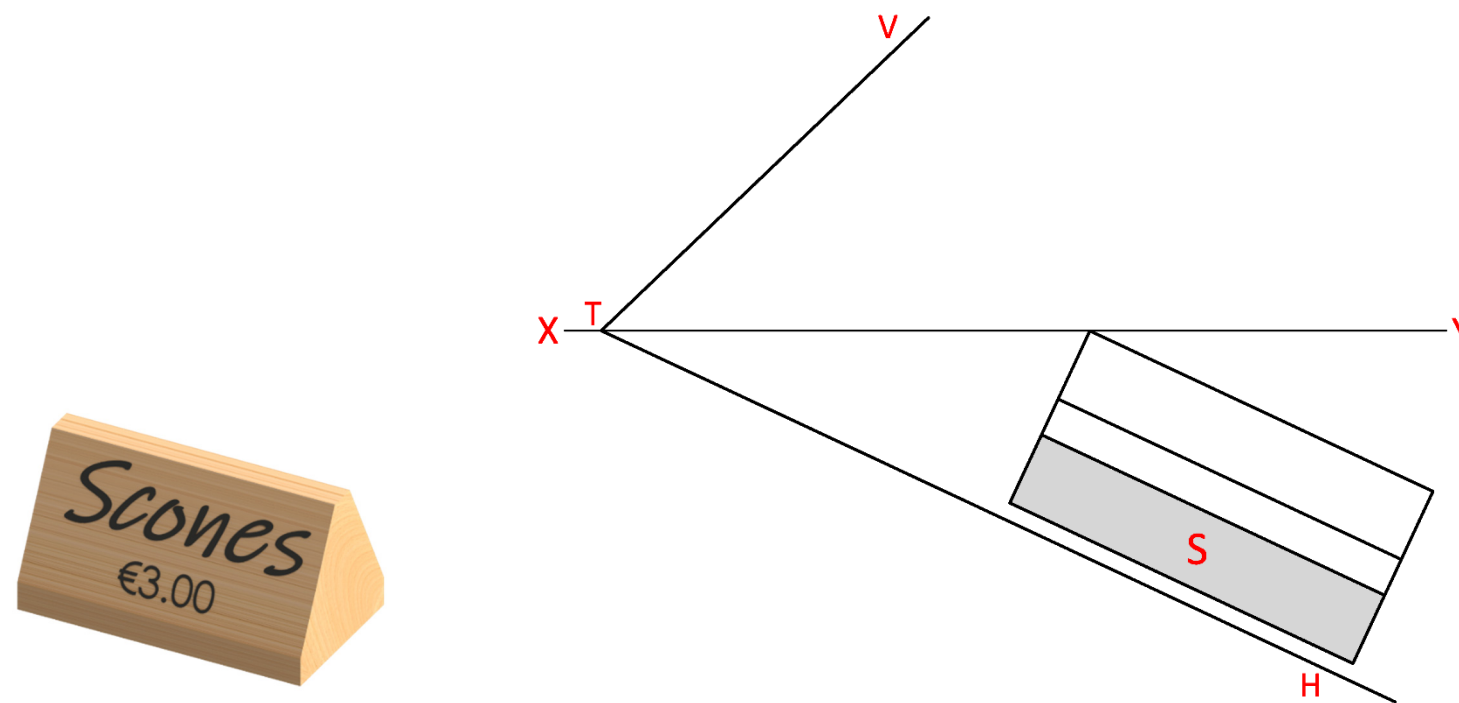
The drawing shows an incomplete isometric projection of the fitness cube. The elevation and incomplete end view are shown in their required positions.

- (a) Complete the isometric view of the fitness cube.
- (b) Using the isometric view, complete the end view.



**A-3.** The graphic below shows a food product display marker used in a cafe. The incomplete drawing below shows the plan of the display marker and the oblique plane **VTH** which contains surface **S**.

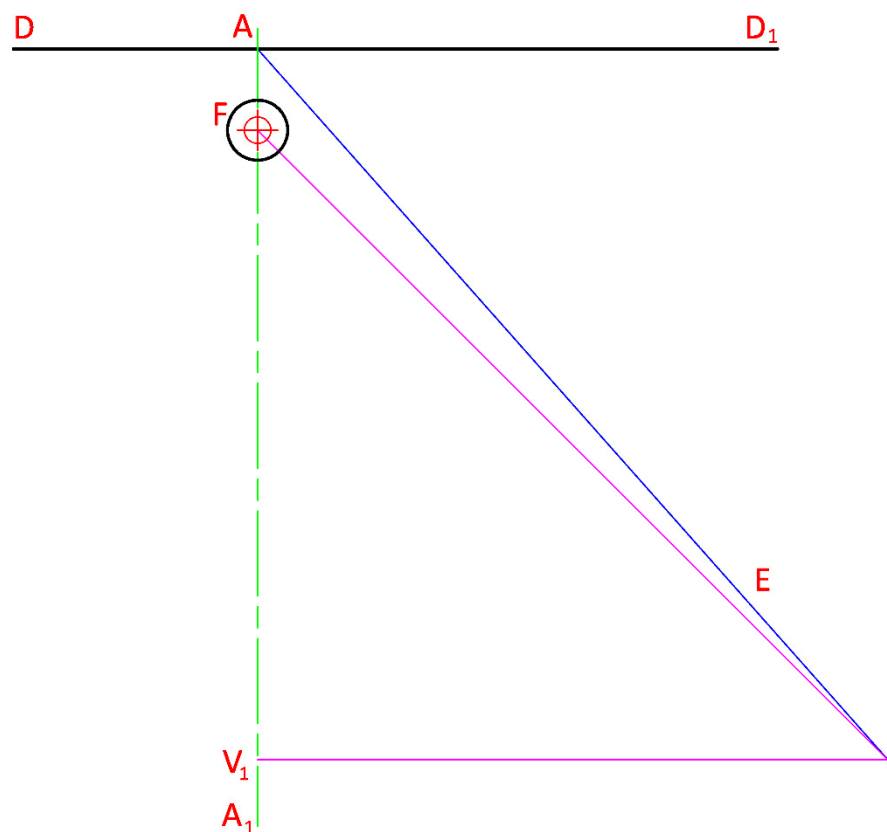
- (a) Complete the elevation of the display marker including all hidden detail.
- (b) Determine the angle of inclination of surface **S** to the horizontal plane.



**A-2.** The image below shows a pair of earrings which are elliptical in shape and have two holes of the same radius.

The drawing on the right shows axis **AA<sub>1</sub>**, directrix **DD<sub>1</sub>**, eccentricity line **E**, focal point **F**, and vertex **V<sub>1</sub>** of a similar ellipse.

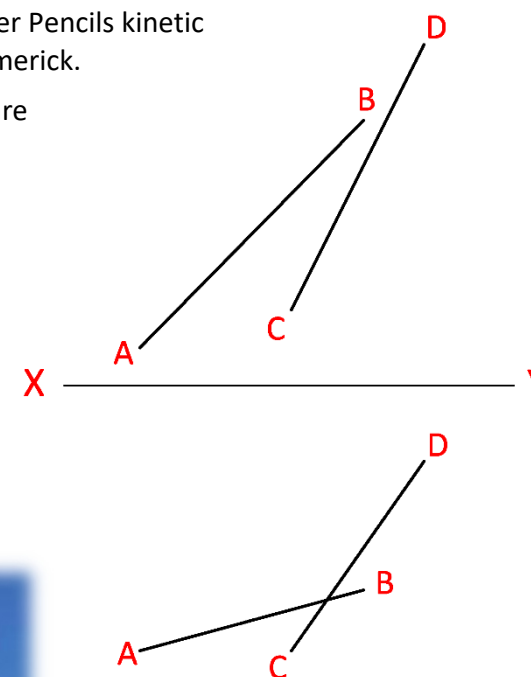
- (a) Locate the second vertex and draw the ellipse.
- (b) Complete the earring by locating the second focal point and drawing the circular hole.



**A-4.** The image below shows the Silver Pencils kinetic sculpture at the University of Limerick.

Two elements of the sculpture are represented by the skew lines **AB** and **CD** on the right.

- (a) Determine the projections of the shortest horizontal line between the skew lines.
- (b) Determine, and indicate in millimeters, the height of this line from the horizontal plane.



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)

