Junior Certificate Examination, 2017

Technical Graphics
Ordinary Level
Section A
(120 marks)

Monday, 19 June
Morning 9:30 - 12:00

Instructions

(a) Answer any ten questions in the spaces provided. All questions carry equal marks.

(b) Construction lines must be clearly shown.

(c) All measurements are in millimetres.

(d) This booklet must be handed up at the end of the examination.

(e) Write your examination number in the box provided below and on all other pages used.

Examination Number: 

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SECTION A. Answer any ten questions. All questions carry equal marks.

1. Shown is the elevation and incomplete end view of a computer printer. Also shown is a 3D graphic of the printer.

Insert the missing lines in the end view.

2. In the space provided, make a freehand pictorial sketch of the sports cone shown below.

Colour or shade the completed sketch.

3. Name the computer related items A and B shown below.

A_________________________  B_________________________

Give one advantage of item A over item B.
_________________________________________________________________
_________________________________________________________________
4. **Fig. 1** shows a logo for a car clamping company inscribed in the square **ABCD**.

Draw the enlarged logo in the given square **ABCD** in **Fig. 2**.

![Fig. 1](image)

![Fig. 2](image)

5. **Fig. 1** shows the outline of a chef’s hat based on an ellipse and a rectangle.

F$_1$ and F$_2$ are the focal points of the ellipse.

Locate the focal points in **Fig. 2** and complete the outline by drawing the rectangle **ABCD** as shown.

![Fig. 1](image)

![Fig. 2](image)

6. The elevation and end view of an electric car charging point are shown.

Make a well proportioned **freehand sketch** of the charging point in the space provided.

Colour or shade the completed sketch.

![Sketch](image)
7. The outline of a label for a bottle is shown. Also shown is a 3D graphic of the label on the bottle.

Write down the area of the label in square units.

1 square = 1 square unit.

Area of the label = ______square units.

8. Using the scale provided, measure and write down the dimensions A and B for the basketball stand shown.

A: ______________

B: ______________

9. Fig. 1 shows a set of blocks.

Choose the correct elevation for Fig. 1 from the options shown in Fig. 2 below.

Answer: _______
10. The figure shows the incomplete outline of a golf club. Also shown is a 3D graphic of the club.

Complete the drawing of the golf club by constructing a tangent from point P to the circle C.

Show all construction and the point of contact.

11. Write down any two CAD commands used to create the drawing of the try-square.

Any two CAD commands:

12. Twelve students were surveyed about the type of music that they listened to.

Shade the pie chart to represent the following results from the survey.

- Pop - 6 students
- Rock - 4 students
- R & B - 2 students
13. Fig. 1 shows a design for a windfarm logo. The design is based on a regular hexagon and arcs as shown.

Fig. 2 shows an incomplete drawing of the design. Complete the drawing showing all constructions.

![Fig. 1](image1.png)  
![Fig. 2](image2.png)

14. The figure shows an incomplete two point perspective drawing of a table-tennis table. A 3D graphic of the table is also shown.

Complete the perspective drawing of the table.

![Fig. 1](image3.png)  
![Fig. 2](image4.png)

15. Fig. 1 shows a logo for a badminton club. Complete the design of the logo in Fig. 2 by constructing an axial symmetry in the line $LL_1$.

Colour or shade the completed logo.

![Fig. 1](image5.png)  
![Fig. 2](image6.png)
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