**X033/10/01**

**NATIONAL QUALIFICATIONS**  
**2014**

**THURSDAY, 8 MAY**  
**1.00 PM – 3.00 PM**

**GRAPHIC COMMUNICATION**  
**INTERMEDIATE 1**

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**Fill in these boxes and read what is printed below.**

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70 marks are allocated to this paper

1. Answer all questions.
2. Read each question carefully before you answer.
3. Written answers may be in **ink** or **pencil**.
4. Drawings and sketches must be in **pencil**.
5. Dimensions are given in millimetres or as stated.
6. Orthographic drawings are in third angle projection.

**At the end of the examination**
- Check that your name is on every sheet;
- Put the sheets in correct numerical order;
- Place this sheet on top of the others;
- Join all sheets together by stapling at the top left-hand corner;
- Before leaving the examination room, you must give these sheets to the invigilator (if you do not you may lose all the marks for this paper).

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**Total Marks**
A bed and breakfast is considering using a tint of green to re-decorate one of their bedrooms.

(a) State what would have been added to green to make a tint.
.................................................................................................................................................. 1

(b) State whether green is an advancing or receding colour.
.................................................................................................................................................. 1

(c) State two tertiary colours that would harmonise with green for the furniture.
(i) ............................................................................................................................................... 1
(ii) ............................................................................................................................................... 1

(4 marks) ☐

(a) State a portable storage device that could be used to save a CAD drawing.
.................................................................................................................................................. 1

(b) Other than speed, state one advantage of using Computer-Aided Graphics over manual methods.
.................................................................................................................................................. 1

(2 marks) ☐

(a) State the page orientation that is used in the document above.
.................................................................................................................................................. 1

(b) Identify each of the desktop publishing features, indicated above.
(i) ............................................................................................................................................... 1
(ii) ............................................................................................................................................... 1
(iii) ............................................................................................................................................... 1
(iv) ............................................................................................................................................... 1

(5 marks) ☐

Wind Turbines

A wind turbine is a device that converts kinetic energy from the wind into mechanical energy. If the mechanical energy is used to produce electricity, the device may be called a wind generator or wind charger. If the mechanical energy is used to drive machinery, such as for grinding grain or pumping water, the device is called a windmill or wind pump.

What are they made from?
The towers are tubular and made mainly of steel. The blades are made from glass fibre reinforced polyester or wood-epoxy.

Developed for over a millennium, today's wind turbines are manufactured in a range of vertical and horizontal axis types. The smallest turbines are used for applications such as battery charging or auxiliary power on sailing boats; while large grid-connected arrays of turbines are becoming an increasingly large source of commercial electric power.

What are they made from?

(i) ............................................................................................................................................... 1

(ii) ............................................................................................................................................... 1

(iii) ............................................................................................................................................... 1

(iv) ............................................................................................................................................... 1

(5 marks) ☐
The various stages for creating a CAD drawing of a walkie talkie are shown below. State the single CAD command used for each stage.

A

Command A ....................................................... 1

B

Command B ....................................................... 1

C

Command C ....................................................... 1

A floor plan of a bedroom with an en-suite shower room is shown below.

(a) State how many double sockets are on the plan.

................................................................................................................. 1

(b) Identify the symbols X, Y and Z shown on the plan.

X ........................................................................................... 1
Y ........................................................................................... 1
Z ........................................................................................... 1

(4 marks) □

(3 marks) □
An isometric view and the end elevation of a docking station are given.

**Draw**, full size, in the position indicated:

(a) the elevation;
(b) the plan.

Show all hidden detail. (13 marks)
The end elevation and an incomplete elevation of a wall lamp are given. A pictorial view is shown opposite.

Draw, full size, in the positions indicated:

(a) the complete elevation;
(b) the plan;
(c) the development of the lampshade opened along seam A-A.

Show all hidden detail. (12 marks)
The plan, elevation and end elevation of a bird feeder are given. A pictorial view is shown opposite.

**Draw**, to the same scale, the **planometric** view of the bird feeder, in the position indicated.

**Do not show hidden detail.**  

(14 marks)
The elevation and end elevation of a heater and stand are given. An exploded pictorial view is shown opposite.

Draw, **full size**, in the positions indicated:

(a) the fully assembled elevation of the heater and stand;
   **Show all hidden detail.**

(b) the sectional end elevation on X-X of the assembled heater and stand.
   **Do not show hidden detail.**

(13 marks)