

Tuesday 29 May 2012 – Afternoon

GCSE DESIGN AND TECHNOLOGY Graphics

A534/01 Technical Aspects of Designing and Making

Candidates answer on the Question Paper.

OCR supplied materials:

None

Other materials required:

None

Duration: 1 hour 15 minutes



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Answer **all** the questions **in Section A and Section B**.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is **60**.
- Your Quality of Written Communication will be assessed in questions marked with an asterisk (*).
- This document consists of **12** pages. Any blank pages are indicated.

Section A

Answer all questions.

1 Fig. 1 shows a fruit tray.

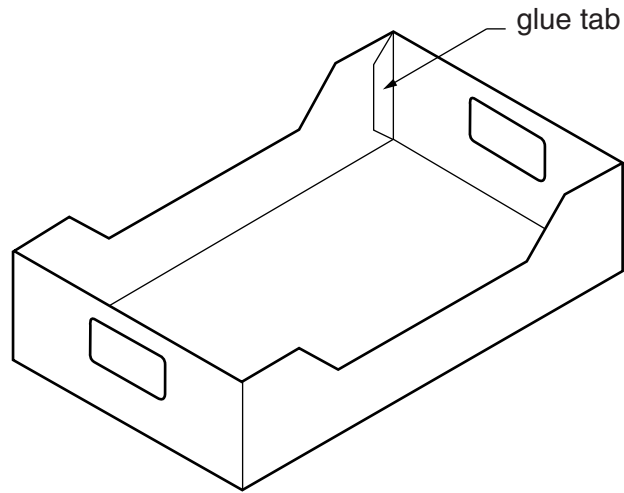
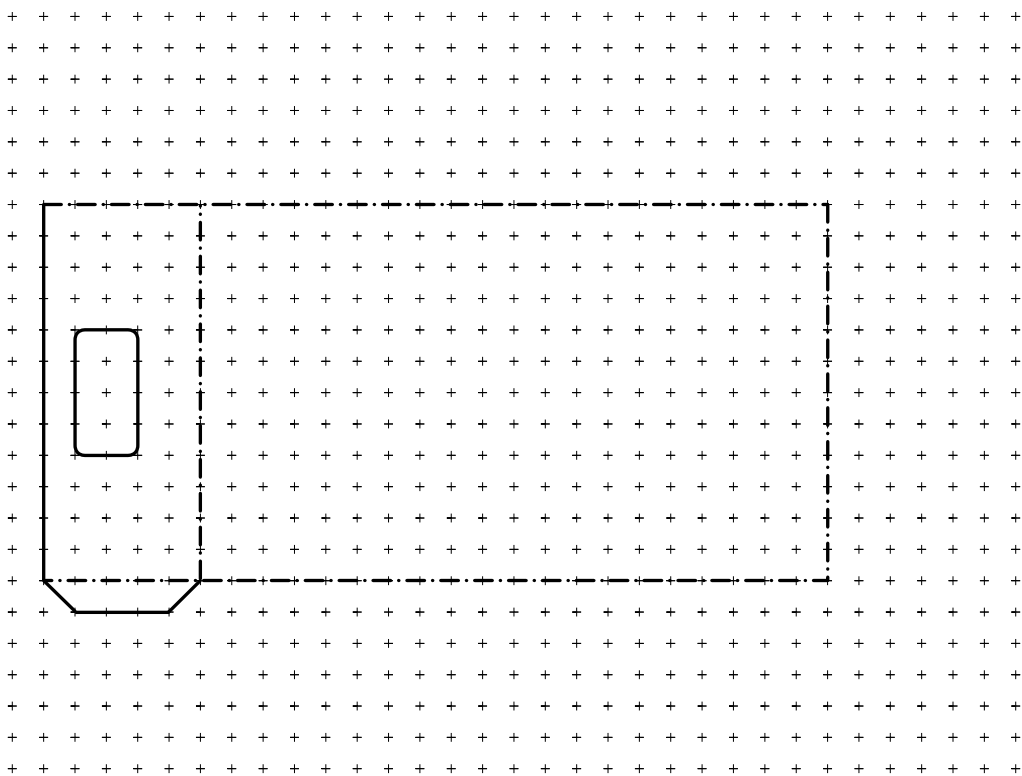


Fig. 1

(a) Complete the sketch below to show the development (net) of the fruit tray.



[4]

(b) The fruit tray is made from corrugated card. In the space below sketch a sectional view of corrugated card.

[2]

(c) Corrugated card has physical and aesthetic properties that make it suitable for a fruit tray. State **one** physical property and **one** aesthetic property of corrugated card.

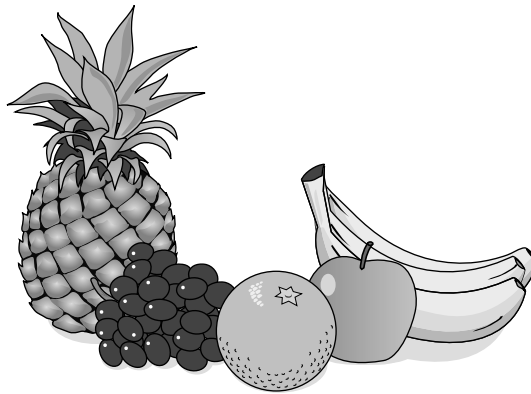
Physical property

..... [1]

Aesthetic property.....

..... [1]

(d) The image below is to be printed on the fruit tray in colour using the CMYK colour process.



(i) State what the letters **CMYK** stand for:

C **M** **Y** **K** [2]

(ii) Explain how the CMYK colour process is used to achieve the colours needed in the design.

.....
.....
.....
..... [2]

[Total: 12]

2 Orthographic views of a prototype point of sale display stand are shown in Fig. 2.

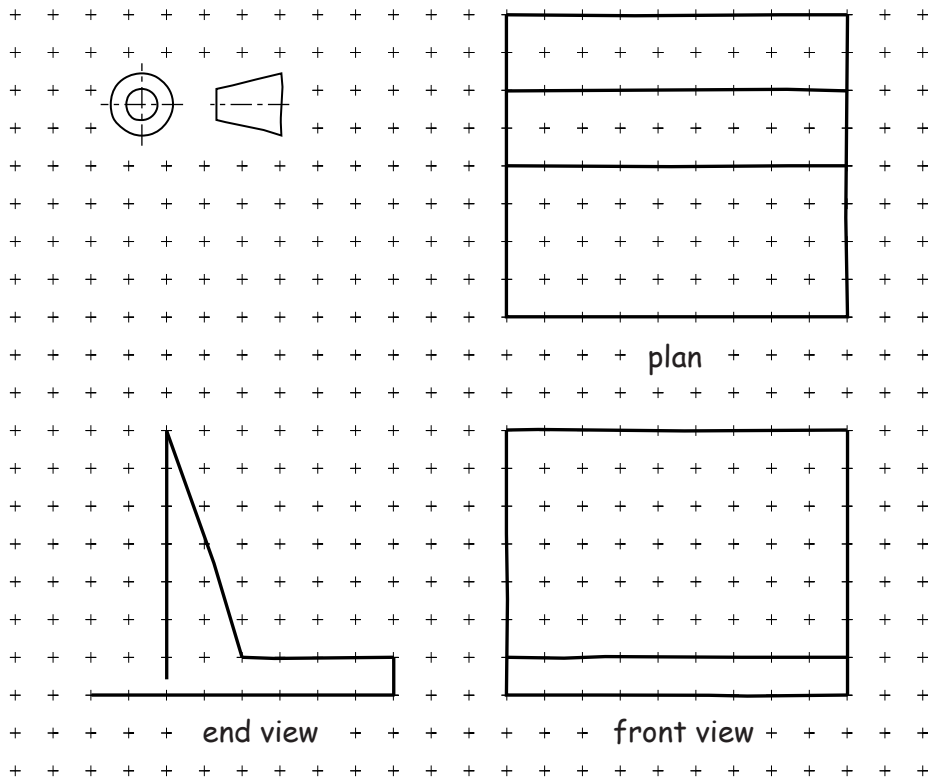


Fig. 2

(a) Complete the isometric sketch of the point of sale display on the grid below.

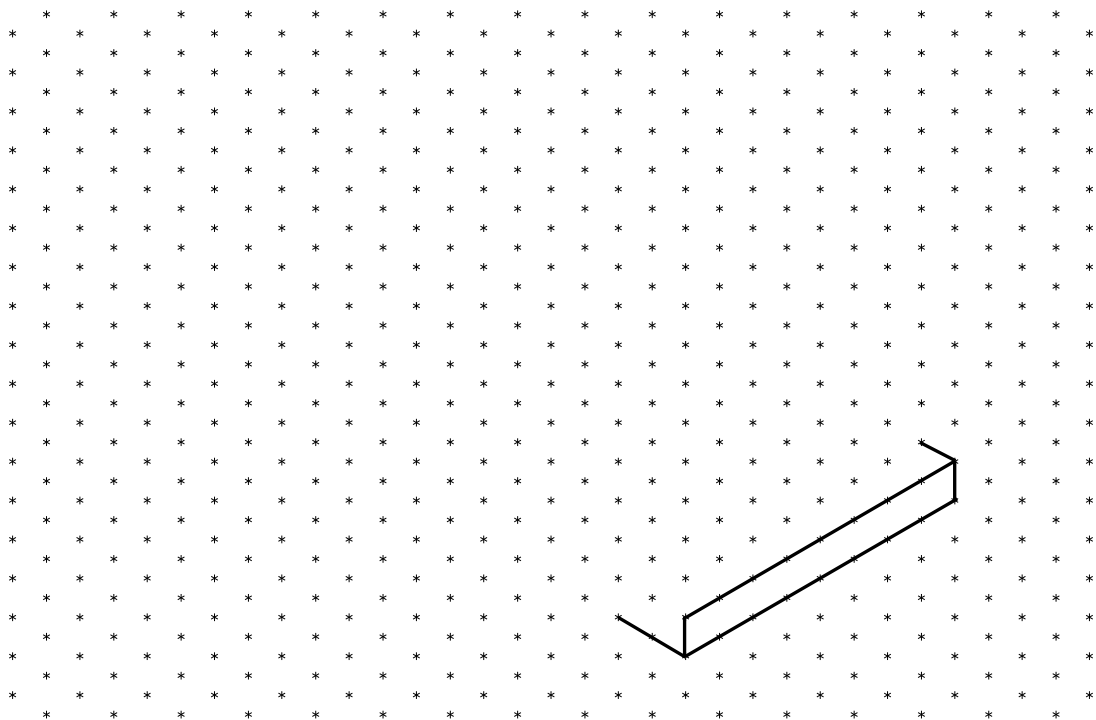


Fig. 3

[4]

- 3 Fig. 4 shows a teaching aid to help children tell the time. The teaching aid is made from 4 mm thick Corriflute.

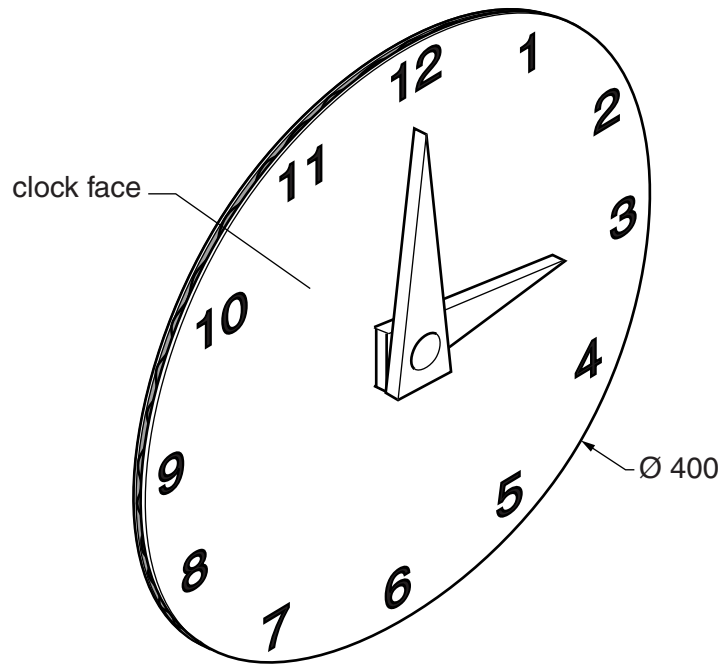


Fig. 4

- (a) State a suitable length for the hour and minute hands on the clock.

Minute hand Hour hand [2]

- (b) Sketch a method of attaching the clock hands to the clock face that will allow them to rotate.

[2]

(c) The numbers on the clock face are made from self adhesive vinyl. Explain how CAD/CAM could be used to produce the numbers.

.....
.....
.....
.....
.....
.....
.....
..... [4]

(d) State **one** advantage and **one** disadvantage of using Corriflute for the teaching aid.

Advantage.....
.....
Disadvantage.....
..... [2]

(e) A further teaching aid is required to explain nanotechnology.

(i) Tick (✓) the most appropriate 'key word' that describes nanotechnology.

smaller	bigger	heavier
---------	--------	---------

[1]

(ii) State **one** application of nanotechnology.

.....
..... [1]

[Total: 12]

Section B

Answer **all** questions.

- 4 Fig. 5 shows a DVD. The DVD is an educational film about outer space aimed at young children.

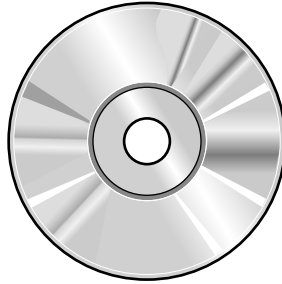


Fig. 5

- (a) Use sketches and notes to show how the DVD could be packaged. Specification points for the package are that it must:
- be made from card
 - form a star shape when opened
 - close securely
 - clearly show the word '*SPACE*' on it.

(b) The DVD package is to be produced in black card with silver lettering. State an appropriate printing process to print the letters in silver.

..... [1]

(c) State **one** other finishing process that could be used to make the lettering on the package stand out.

..... [1]

(d) Three font styles for the word 'SPACE' are shown below.

(i) Tick the font style most suitable for the DVD lettering.



[1]

(ii) Give **one** reason for your choice of font style.

.....
..... [1]

(e) Fig. 6 shows the logo to be applied to the DVD package.

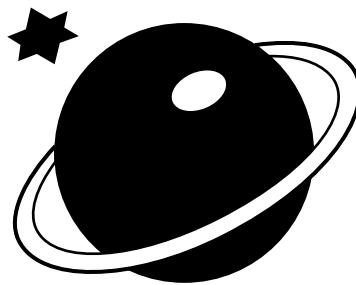


Fig. 6

Explain how the manufacturer of the DVD can protect the logo from being used or reproduced by other companies.

.....
.....
.....
..... [2]

[Total: 12]

5 Fig. 7 shows a washing powder box made from cardboard.

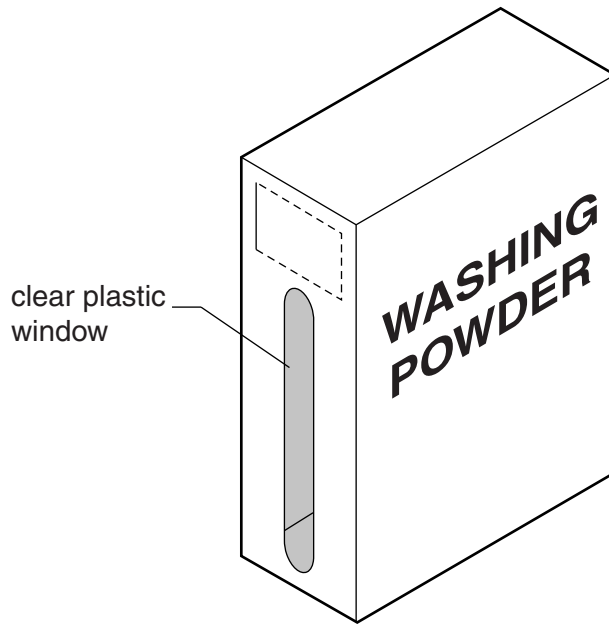


Fig. 7

(a) State **two** pieces of information that should be on the box.

- 1
- 2..... [2]

(b) State the purpose of the clear plastic window on the side of the box.

-
- [1]

(c) State a suitable adhesive for fixing the clear plastic window to the box.

- [1]

(d) Explain how the use of two materials for the box will affect the recycling process.

-
-
- [2]

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