

Candidate forename						Candidate surname					
Centre number						Candidate number					

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GCSE

A534/01

DESIGN AND TECHNOLOGY

Graphics

Technical Aspects of Designing and Making

TUESDAY 29 MAY 2012: Afternoon

**DURATION: 1 hour 15 minutes
plus your additional time allowance**

MODIFIED ENLARGED

Candidates answer on the Question Paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

None

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

- **Write your name, centre number and candidate number in the boxes on the first page. 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.**

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 (*).**

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SECTION A

Answer ALL questions.

1 Fig. 1 shows a fruit tray (opposite).

(a) Complete the sketch (see A3 insert) 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]**

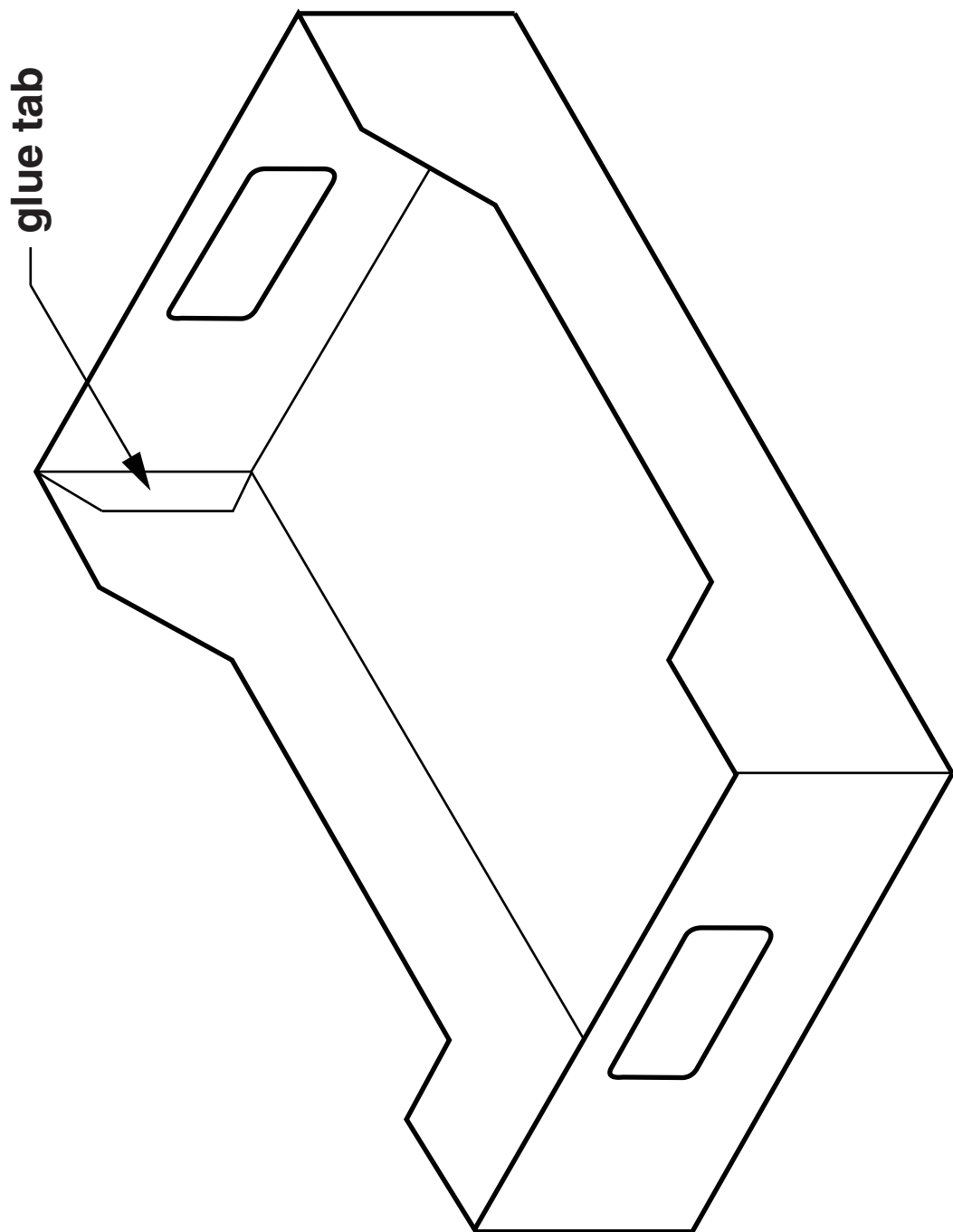
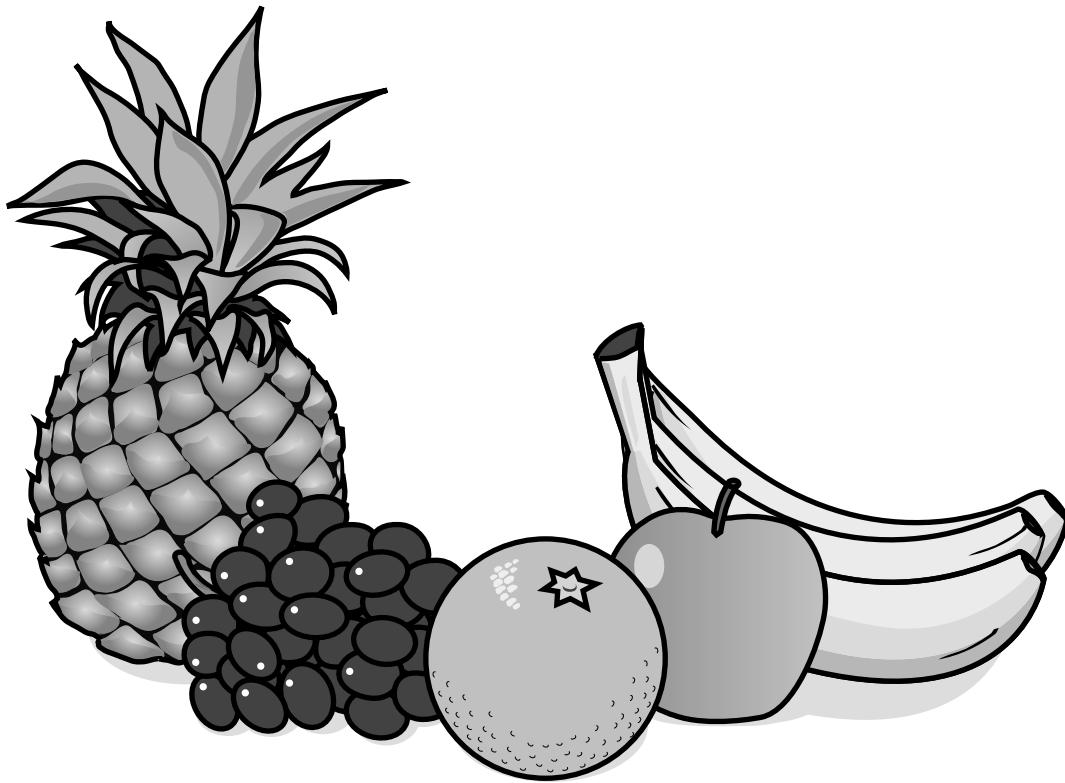


Fig. 1

- (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 (see A3 insert).

(a) Complete the isometric sketch (see A3 insert) of the point of sale display on the grid on the A3 insert. [4]

(b) The point of sale display is made from 1 mm thick thermoplastic sheet.

(i) Name a suitable thermoplastic sheet for the point of sale display.

_____ [1]

(ii) Name the item of equipment that would be used to heat the plastic sheet so that it can be folded.

_____ [1]

[illegible]

[6]

[Total: 12]

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

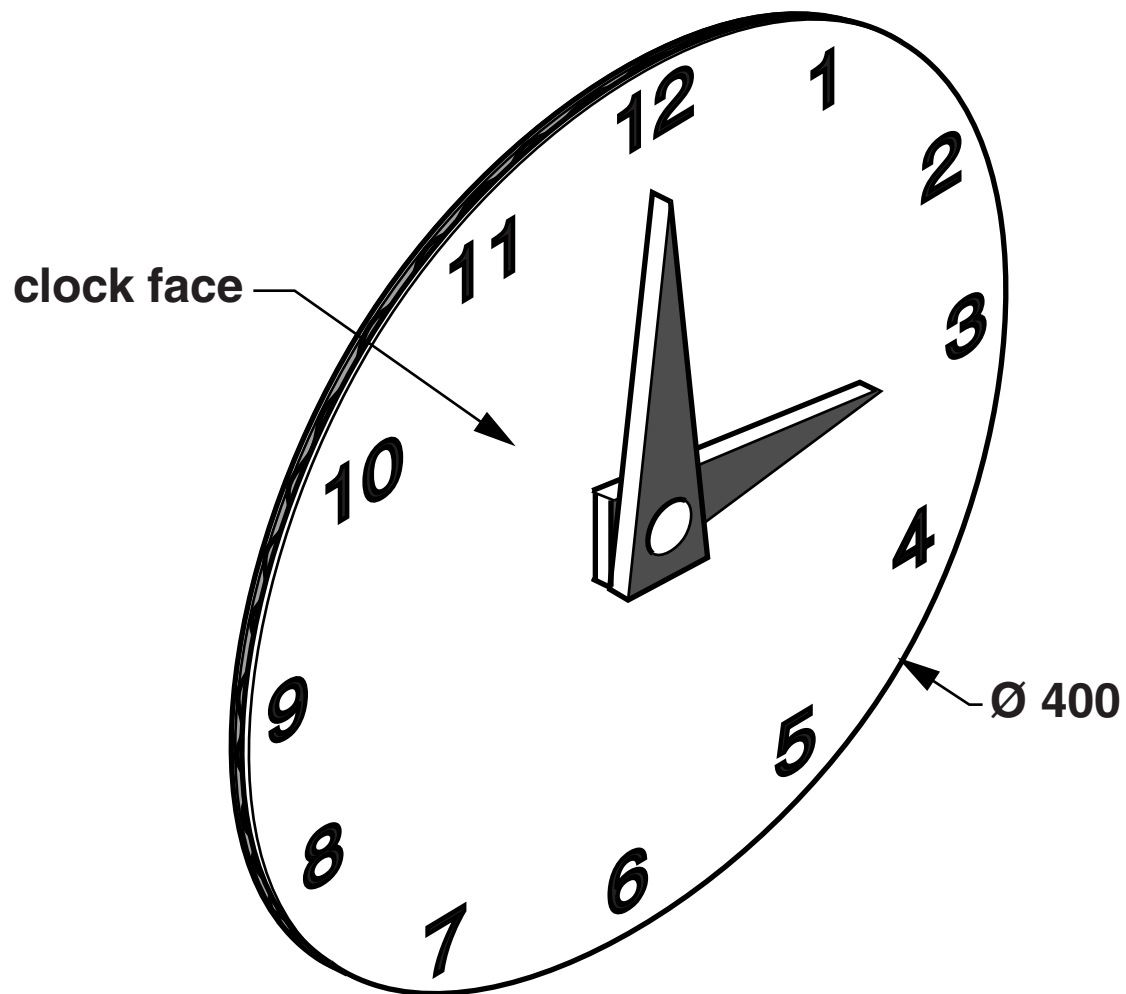


Fig. 4

- (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.**

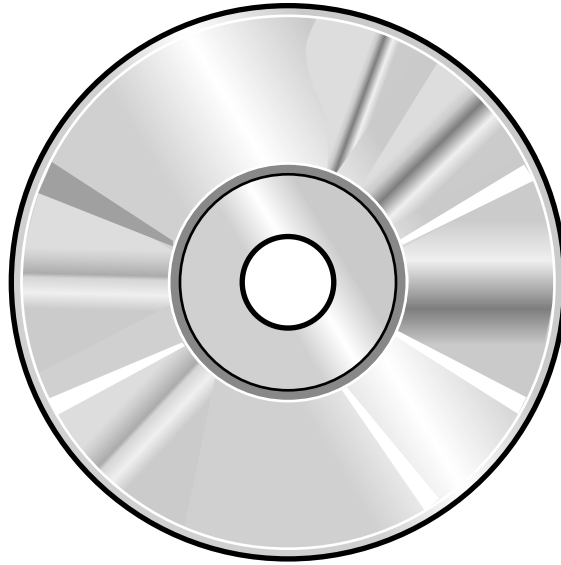


Fig. 5

- (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.**

[6]

- (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.

SPACE	SPACE	SPACE
-------	-------	-------

[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.

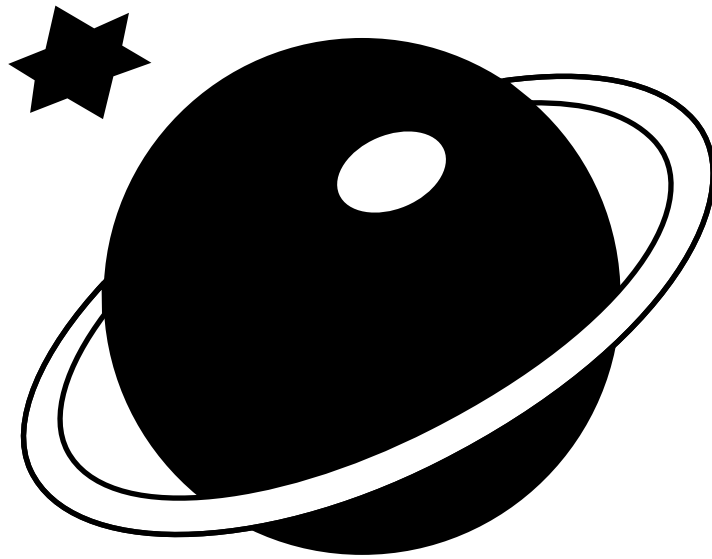


Fig. 6

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.

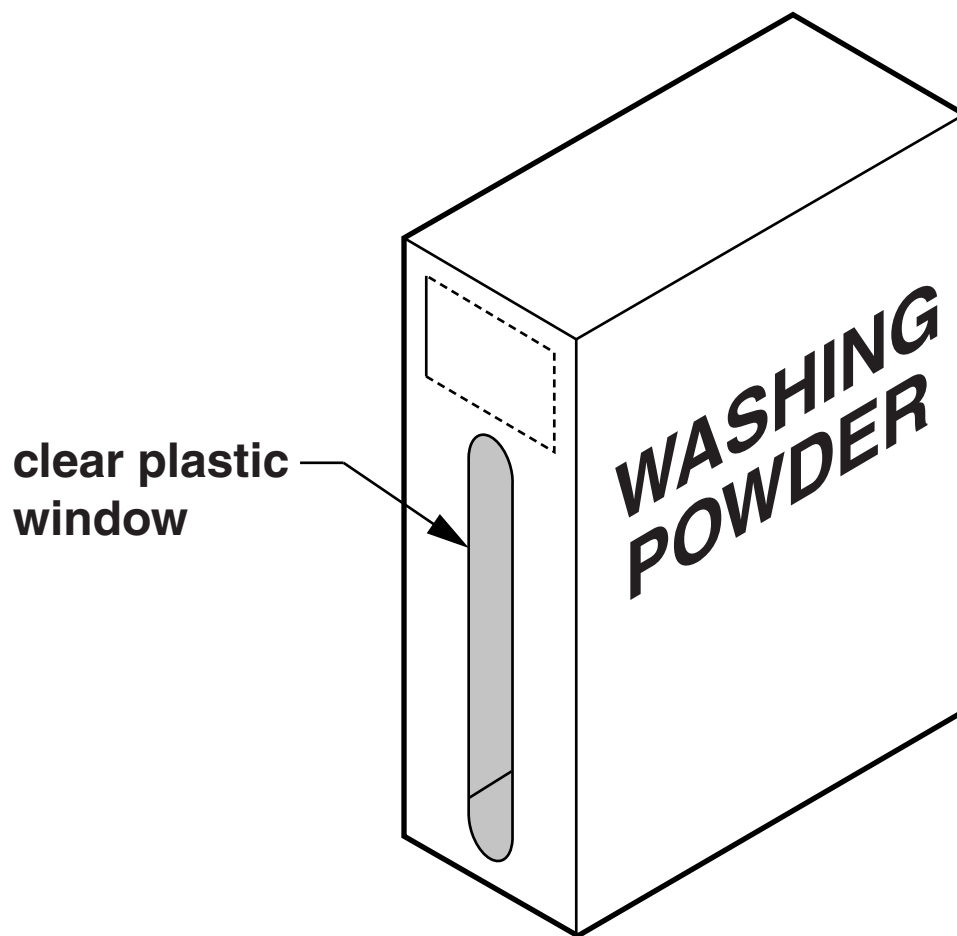


Fig. 7

- (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]

[illegible]

[6]

[Total: 12]

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