



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

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**DESIGN AND TECHNOLOGY**

0445/11

Paper 1 Design

October/November 2011

1 hour 15 minutes

Candidates answer on the pre-printed A3 Answer Sheets.

Additional Materials: Standard drawing equipment

**To be taken together with the optional paper for which you have been entered in one session of 2 hours and 15 minutes**

**READ THESE INSTRUCTIONS FIRST**

Write your Centre number, candidate number and name in the spaces on **both** printed Answer Sheets.

Write in dark blue or black pen.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **one** question.

Write/draw your answers in the spaces provided on the Answer Sheets.

You may use a calculator.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [ ] at the end of each question or part question.



This document consists of 4 printed A4 pages and an Insert.



Answer **one** question only on the A3 pre-printed answer sheets provided.

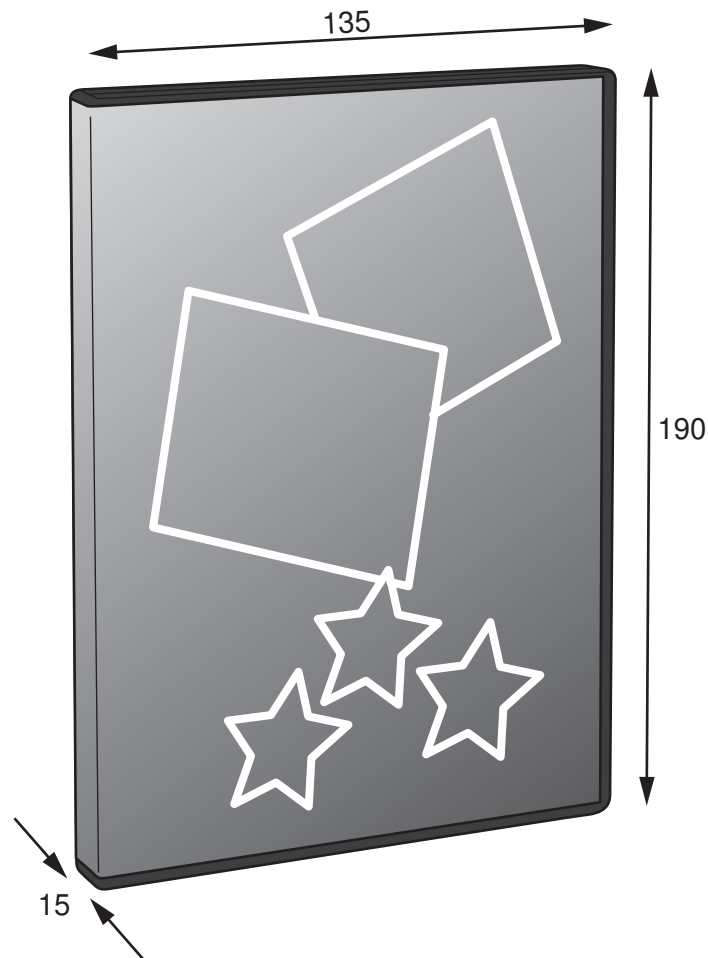
- 1 Many people like to keep their car clean but have nowhere to store the equipment used.



Design a portable storage device that would hold the items shown.

- (a) List **four** additional points about the function of such a device that you consider to be important. [4]
- (b) Use sketches and notes to show **two** ways by which carrying handles can be made using either wood, metal or plastic. [4]
- (c) Develop and sketch **three** ideas for the device. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and major dimensions. [12]
- (f) Suggest suitable specific materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture **one** part of your solution in the school workshop. [6]

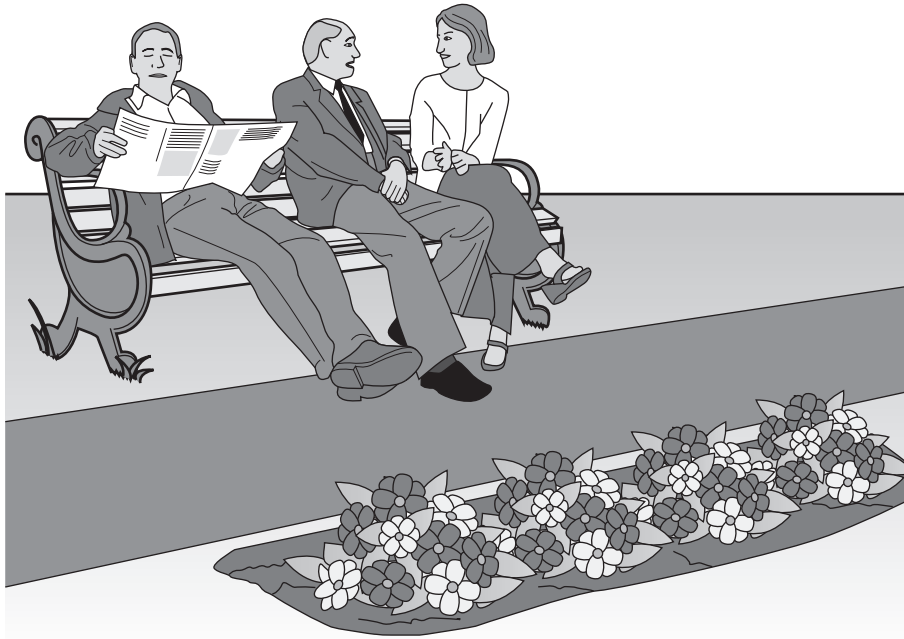
- 2 A local shop intends to promote a DVD as 'DVD of the week' in an attempt to increase sales.



Design a freestanding promotional display that could be placed at the entrance to the shop for this purpose. The manufacturer of the display will send it to shops by standard post.

- (a) List **four** additional points about the function of such a display that you consider to be important. [4]
- (b) Use sketches and notes to show **two** methods by which card or other lightweight materials can be made to fold easily. [4]
- (c) Develop and sketch **three** ideas for the display. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and major dimensions. [12]
- (f) Suggest suitable specific materials for your solution and give reasons for your choice. [4]
- (g) Outline a method of producing a prototype of the display in the school graphics studio. [6]

- 3 Many parks and gardens have a focal point to attract attention.



Design a focal point that would use the wind to generate movement and add interest to such a place.

- (a) List **four** additional points about the function of such a focal point that you consider to be important. [4]
- (b) Use sketches and notes to show **two** ways of creating movement from the wind. [4]
- (c) Develop and sketch **three** ideas for the focal point. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and major dimensions. [12]
- (f) Suggest suitable materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture **one** part of your solution in the school workshop. [6]