



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

DESIGN AND TECHNOLOGY

0445/01

Paper 1 Design

May/June 2007

1 hour 15 minutes

Candidates answer on the pre-printed A3 Answer Sheets.

Additional Materials: Standard drawing equipment
A3 pre-printed Answer Sheets (2)

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



* 2 0 1 3 6 4 0 5 9 9 *

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

- 1 It is difficult trying to eat in bed when you are unable to get out and sit at a table.

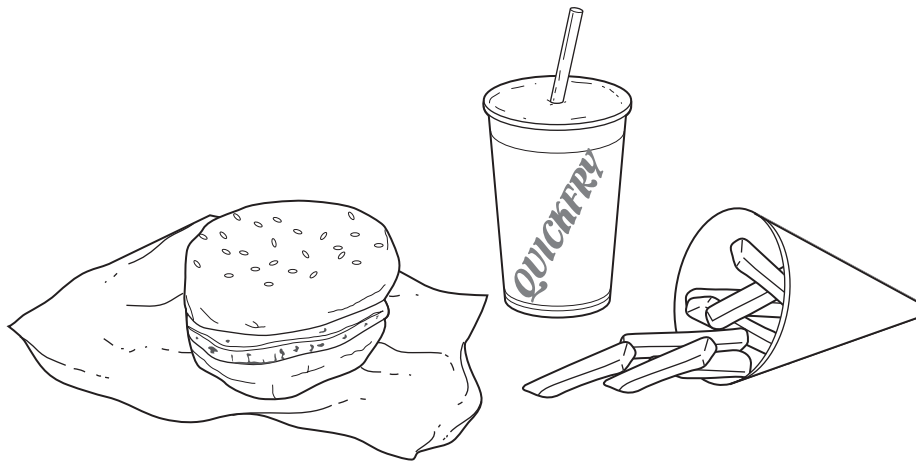


An eating surface that could be positioned over or on the bed, when eating, would be very useful.

- (a) List **four** points about the function of such an eating surface that you consider to be important. [4]
- (b) Draw **two** different methods that can be used to join materials when making lightweight constructions. [4]
- (c) Develop and sketch ideas for the eating surface. [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 your 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]

3

- 2 Take-away foods often get spilt or squashed when carrying them away from fast food restaurants.

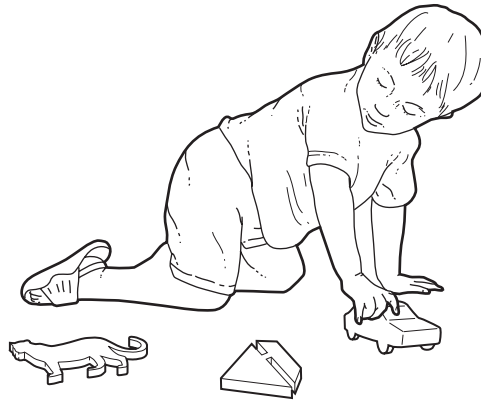


A flat-pack carrier for the items shown above would be helpful.

- (a) List **four** points about the function of such a carrier that you consider to be important. [4]
- (b) Draw **two** types of handle that could be used on a carrier of this type. [4]
- (c) Develop and sketch ideas for the carrier. [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 your problem. Include construction details and major dimensions. [12]
- (f) Suggest suitable materials for your solution and give reasons for your choice. [4]
- (g) Design a logo for the carrier that represents take-away food. State the method used to put the logo on the carrier. [6]

4

3 Children enjoy playing with toys that have moving parts or make noises.



Design a toy that has a part that moves or makes a noise only when pulled along by the child.

- (a) List **four** points about the function of such a toy that you consider to be important. [4]
- (b) State **four** possible ways of providing movement or noise in a toy. [4]
- (c) Develop and sketch ideas for the toy. [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 your 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]