UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

DESIGN AND TECHNOLOGY **0445/12**

Paper 1 Design **May/June 2010**

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.

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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.

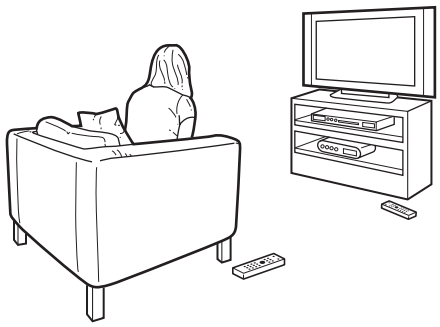
At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

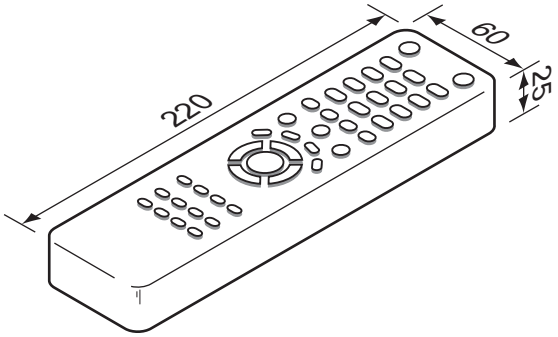
This document consists of **4** printed A4 pages and an Insert.

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

1 Television and DVD player remote controllers are often misplaced and not at hand when required for use.





Design a device that would store two remote controllers and enable easy access to the user.

(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** methods by which items such as remote controllers could be protected from damage when being stored. [4]

(c) Develop and sketch ideas for the storage device. [12]

(d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]

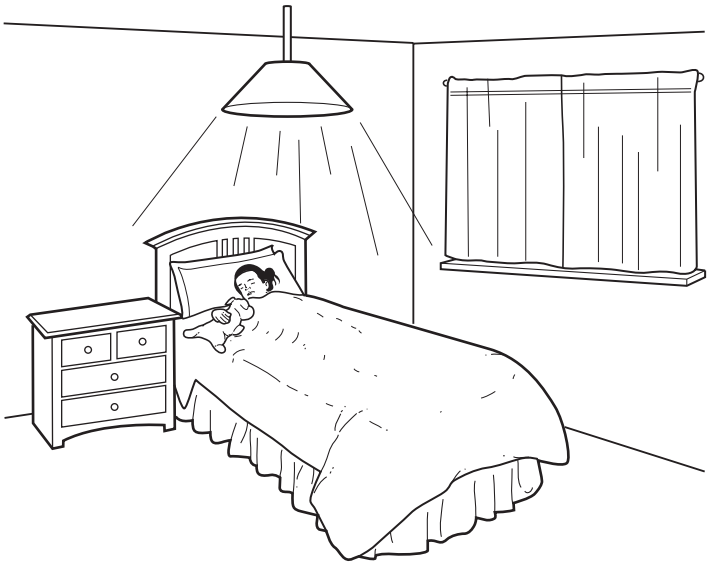
(e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and major dimensions. [12]

(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]

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3 Some young children are afraid of the dark and will go to bed only if a light is left on.



Design a battery powered light that would fit into the bedroom environment of a small child and turn off automatically after a preset time.

(a) List **four** additional points about the function of such a light that you consider to be important. [4]

(b) Draw any **two** types of battery that could be used to power such a light. [4]

(c) Develop and sketch ideas for the light. [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]

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