Junior Certificate Examination, 2008

TECHNOLOGY – DESIGN TASKS

HIGHER LEVEL - 200 marks

and

ORDINARY LEVEL - 240 marks

The design briefs for the 2008 Certificate Examinations are given overleaf

THE TASK MUST BE COMPLETED BY MAY 2th 2008
CANDIDATE INSTRUCTIONS

- Design and make any one of the design tasks listed opposite.

- The completed task must be accompanied by a Design Folder and presented for assessment clearly identified with your examination number. Shading and colour should be used where appropriate in your design folder.

- Presentation and finished appearance of both folder and product are important.

- The design task must be executed in the school under the direction of the teacher. If any aspect of the task is completed at home it must be with the knowledge and permission of the teacher.

- Tasks submitted for assessment must be the candidates' own work. Where a task includes a specialised process not performed by the candidate but necessary for the completion of the task, reference must be made to such work in the Design Folder.

- All important operating features must be clearly visible without dismantling.

- The Design Task must be completed by 2nd May, 2008.

STORAGE OF TASKS

When the design task has been completed, school authorities should ensure that the finished product and folder are kept in a safe place under lock and key until examining commences.

ALLOCATION OF MARKS

Design Tasks

200 marks are allocated for Design Tasks at Higher Level and 240 marks are allocated for Design Tasks at Ordinary Level.

The Design Folder

Forty per cent (40%) of the marks are allocated for the design folder.

The Product

Sixty per cent (60%) of the marks are allocated for the product.
TECHNOLOGY DESIGN TASKS

Select any one of the following.

(a) Design and make a water-traversing vehicle which will automatically propel itself when it is placed in water.

(b) Design and make a working model of a car trailer and a system which could be used to tip the trailer without removing it from the car. Safety should be an important part of the design.

(c) Design and make a working model of a solar-powered road vehicle. The vehicle must also be capable of being powered separately using a battery.

(d) Design and make a game which has an integrated electronic feature.

(e) Design and make a lightweight bridge structure which spans a distance of 400mm. The bridge must automatically illuminate when it gets dark.

(f) Design and make a computer-controlled device which will automatically pierce a hole in a piece of card when it is inserted into a slot. The device must pierce the card only once each time the card is inserted.

NOTE:

- Power sources, where used, must not exceed 12V DC.
- Where appropriate, all switches should be clearly labelled and the voltage at which the task operates should be clearly indicated.
A simple model of the design process is shown below. It is recommended that you follow the logical sequence of this design process and that evidence of these stages is reflected in your design folder. Shading and colour (pencils etc.) should be used where appropriate in your design folder.