Coimisiún na Scrúduithe Stáit
State Examinations Commission

2011. S.67

Junior Certificate Examination 2011

Technology

Design Tasks

Ordinary Level - 240 marks

Higher Level - 200 marks

The design briefs for the Junior Certificate Examination 2011 are given overleaf.

The Design Task must be available for assessment by Tuesday 3rd May 2011.

Instructions to candidates:

- Design and make any **one** of the design tasks listed opposite.
- The design task submitted for assessment must consist of two components:
  - a design folder *and*
  - an artefact
- All work submitted for assessment must be clearly identified with your examination number.
- Tasks submitted for assessment must be the candidates **own individual work**.
- The design task must be completed in school under the supervision of the class teacher.
- When using research sources, including the Internet, the sources must be acknowledged. Research material copied directly from the Internet or from other sources and presented as your own work will not receive any marks.
- Shading and colour should be used where appropriate in your design folder.
- Presentation and finished appearance of both folder and product are important.
- All important operating features must be clearly visible without dismantling.

The Design Task must be available for assessment by Tuesday 3rd May 2011.

Storage of design tasks:

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

Allocation of marks:

Design Tasks

240 marks are allocated for design tasks at Ordinary Level.
200 marks are allocated for design tasks at Higher Level.

The Design Folder

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

The Artefact

Sixty percent (60%) of the marks are allocated for the artefact.

Technology Design Tasks 2011

Select any **one** of the following:

(a) Safety at night is of the utmost importance for road users.
Design and make an electronic high-visibility unit which can be attached to a bicycle and will make the bicycle safer for use at night.

(b) Design and make a novelty water fountain for a playschool.
The pump should only activate when the water level in the reservoir is sufficiently high and should switch off if the water drops to a low level.

(c) Design and make a working model of a swing bridge to allow boats to travel up and down a river.
The bridge should stop automatically when it reaches its open and its closed limits.

(d) Design and make a motorised toy vehicle capable of travelling over rough terrain.
The operator must have electro-mechanical directional control of the vehicle.

(e) Design and make a motorised mobile suitable for a child's playroom which incorporates **either**:

- a light that switches on automatically at night

Or

- a timer circuit to control the period for which the motor operates.

(f) Design and make a hand-held game to amuse children and/or adults on long journeys.

NOTE:

- Power sources, where used, must not exceed 12V DC.
- Where appropriate, all switches should be clearly labelled and the voltage at which the artefact operates should be clearly indicated.

OVER →

Technology - Design Tasks

Information for examination candidates:

A simple model of a design process is shown below. It is recommended that you follow the logical sequence of this design process and that evidence of each stage is reflected in your design folder. Shading and colour (pencils etc.) should be used where appropriate in your design folder.