



Leaving Certificate Examination, 2013

Technology

Ordinary Level

Friday, 21 June
Afternoon, 2:00 - 4:00

There are **three** Sections in this paper. Attempt **all three** Sections.

Section A: Core - Short-answer questions.

Section B: Core - Long-answer questions.

Section C: Options - Long-answer questions.

Section A - Core (72 marks)

Instructions:

- (a) Answer **any nine** questions in the spaces provided.
All questions in Section A carry 8 marks.
- (b) Draw all sketches in pencil.
- (c) Hand up this booklet at the end of the examination.
- (d) Write your examination number in the box provided
and on all other pages used.

| |
|----------------------|
| Centre Number |
| |

| Section | Mark |
|----------------|-------------|
| Section A | |
| Section B | |
| Section C | |
| Total | |
| Grade | |

Examination Number:

Section A. Answer **any nine** questions. All questions carry 8 marks.

1. The graphics show the National Library logo as used in 1982 and in 2009.


Discuss how the change in logo reflects the evolution in the storage and accessing of information in libraries over the last 30 years.



1982



2009

2.  (i) The Volvo ocean race visited Galway in 2012. The image shows one of the yachts.

Suggest a suitable material for the **hull** and for the **sail** of the yacht.

Hull: _____

Sail: _____

(ii) Give **one** property of **each** chosen material that makes it suitable for its purpose.

1. _____

2. _____

3. The use of nuclear-thermal rockets is being considered for the propulsion of spacecraft.

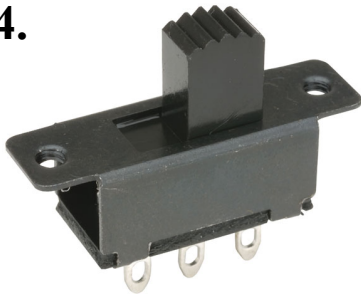
Outline **one** advantage and **one** disadvantage of using nuclear power in this situation.



Advantage: _____

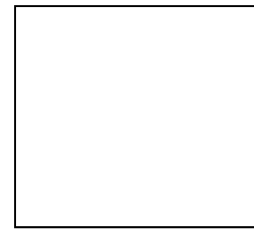
Disadvantage: _____

4.



The graphic shows a DPDT slide switch used in electronics.

(i) Using the formulae and tables booklet or otherwise, draw the symbol for this switch in the box provided.



DPDT switch

(ii) Outline a specific use for this switch in circuits manufactured by students.

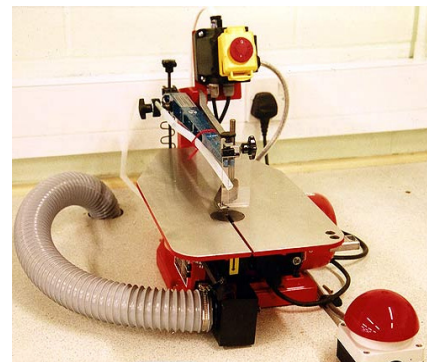
5.

The image shows a scroll saw suitable for use by students in the Technology room. The saw has a number safety features.

Give **two** safety features of this scroll saw.

- 1. _____
- 2. _____

Outline **one** safety precaution that a student should observe when using a scroll saw.



6.

On October 24th 2012, Saorview, Ireland's free digital television service was launched.

Give **two** advantages of digital television.

- 1. _____

- 2. _____



7. In the box provided, make a well proportioned 2D sketch of the footstool shown when viewed in the direction of the arrow A.



8. The solar powered LED keyring torch shown has been designed with sustainability in mind.
Outline **two** advantages of such a design.

1. _____

2. _____



9. The gearing system shown allows an input and an output shaft to rotate at 90° to each other.

- (i) Name this gearing system.

- (ii) Give **one** example of where this gearing system would be used.



10. The iPhone holder shown is to be manufactured from a **single** piece of acrylic.

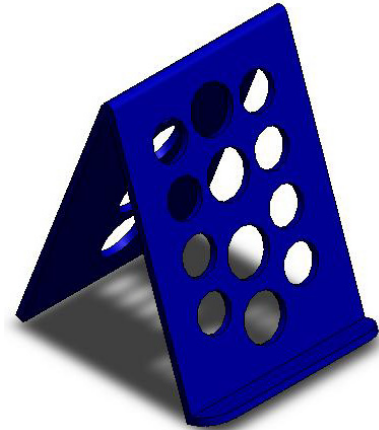
List **four** main steps required to manufacture this item.

1. _____

2. _____

3. _____

4. _____



11. The image shows a QR Code.

(i) Name **one** electronic device that uses QR codes.

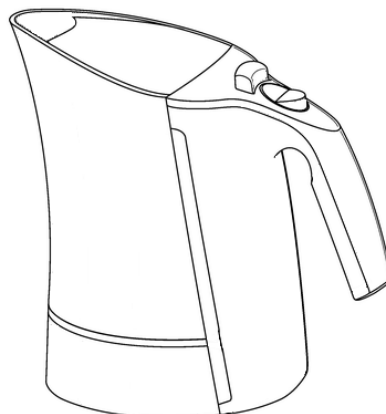
(ii) Give **two** advantages of using QR Codes.

1. _____

2. _____



12. Use **two** graphic techniques to enhance the graphic representation of the electric kettle shown.



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