



*Leaving Certificate Examination, 2015*

# *Technology*

## *Ordinary Level*

*Friday, 19 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.

<b>Centre Number</b>

<b>Section</b>	<b>Mark</b>
Section A	
Section B	
Section C	
Total	
Grade	

**Examination Number:**

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

1. The image shows a *multi-tool* marketed by survival specialist Bear Grylls.

(i) Name **two** tools contained in the multi-tool shown.

1. \_\_\_\_\_

2. \_\_\_\_\_

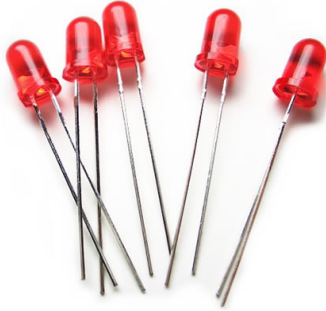
(ii) Describe **one** situation where a multi-tool would meet the requirements of an individual.

\_\_\_\_\_

\_\_\_\_\_



2.



(i) The image shows red *LEDs*.

Explain what is meant by the abbreviation LED.

**LED:** \_\_\_\_\_

\_\_\_\_\_

(ii) Outline **two** methods of determining the *cathode* of an LED.

1. \_\_\_\_\_

2. \_\_\_\_\_

3.

Wind turbines are used as a means of producing energy. They can be situated on land or at sea.

(i) List **two** advantages of using wind turbines.

1. \_\_\_\_\_

2. \_\_\_\_\_



(ii) Name **one** energy conversion that takes place when wind turbines are generating electricity.

\_\_\_\_\_

\_\_\_\_\_

4. Wireless printers have become very popular at home and at work.

(i) Name **two** devices that can print directly to a wireless printer.

1. \_\_\_\_\_

2. \_\_\_\_\_



(ii) Give **two** benefits of using a *laser* printer instead of an *inkjet* printer.

1. \_\_\_\_\_

2. \_\_\_\_\_

5. The image shows a *band saw* suitable for use in a Technology room.



(i) Give **two** safety precautions that should be observed when using a band saw.

1. \_\_\_\_\_

2. \_\_\_\_\_

(ii) Explain the purpose of the *tension adjuster* on the band saw as indicated by the arrow **A**.

\_\_\_\_\_

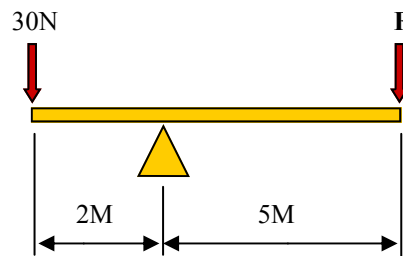
\_\_\_\_\_

6. A diagram of a lever is shown opposite.

(i) Name the *class* of lever shown.

\_\_\_\_\_

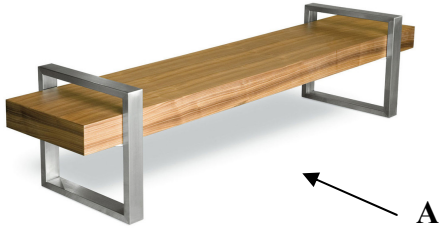
(ii) If a force of 30N is applied as shown in the diagram, calculate the force **F** required to balance the lever.



Force (**F**): \_\_\_\_\_

\_\_\_\_\_

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



8. The ESB launched 'The Great Electric Drive' to promote greater use of electric cars in Ireland.



- (i) Give **two** advantages of using electrically powered cars instead of using petrol powered cars.
1. \_\_\_\_\_
  2. \_\_\_\_\_
- (ii) Explain what is meant by a *hybrid* car.

\_\_\_\_\_

\_\_\_\_\_

9. The mechanism shown allows mechanical power and torque to be transmitted.

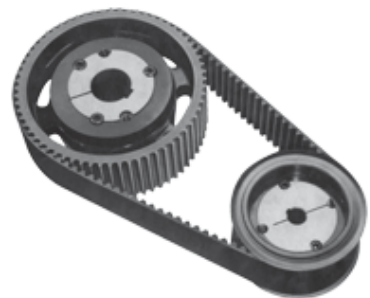
- (i) Name the mechanism shown.

\_\_\_\_\_

- (ii) Give **one** advantage of using this mechanism in a product.

\_\_\_\_\_

\_\_\_\_\_



**10.** The paper towel holder shown is manufactured from a *softwood* and a *metal*.

- (i) Name a suitable *softwood* and a suitable *metal* which could be used to make the paper towel holder.

**Softwood:** \_\_\_\_\_

**Metal:** \_\_\_\_\_

- (ii) Give **two** reasons for selecting your chosen metal.

1. \_\_\_\_\_

2. \_\_\_\_\_



**11.** The image shows a laptop transformer that converts *AC* to *DC*.

- (i) Explain what is meant by the terms *AC* and *DC*.

**AC:** \_\_\_\_\_

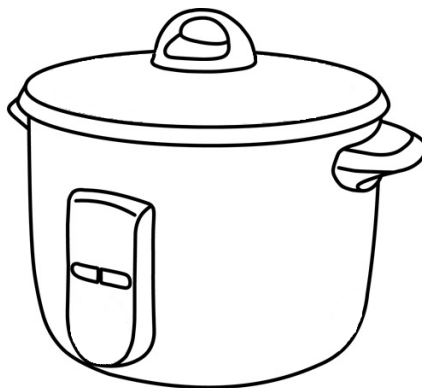
**DC:** \_\_\_\_\_

- (ii) Current is measured in amps (A).  
Give the unit of measurement of *Resistance*.

Unit of Resistance: \_\_\_\_\_



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



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