



*Leaving Certificate Examination, 2017*

# *Technology*

## *Ordinary Level*

*Friday, 23 June*  
*Morning, 9:30 - 11:30*

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	

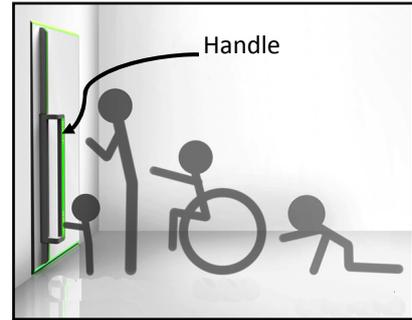
**Examination Number:**

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

- 1.** The graphic shows the design of a handle for an emergency exit door.

Give **one** advantage of using this door handle design.

Advantage: \_\_\_\_\_  
 \_\_\_\_\_



State **one material property** which should be considered when selecting a material for the manufacture of the door handle.

Property: \_\_\_\_\_

- 2.** The graphic shows *climote*, a device which allows a home heating system to be controlled remotely.

- (i) Give **two** benefits of using this smart technology.

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



- (ii) A householder purchases 1000 litres of kerosene for home heating at 60 cent/litre. If this fuel lasts for six months, calculate the average cost of this energy per month.

**Cost of energy/month:** \_\_\_\_\_  
 \_\_\_\_\_

- 3.** The *Drumi* from *Yirego*, is a portable washing machine that does not require electricity. The device is mechanically powered using a foot pedal.

Give **two** advantages of using such a device.

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



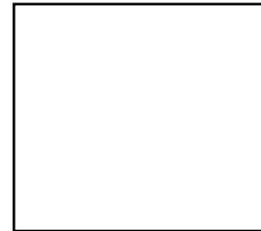
Suggest a suitable material which could be used to manufacture part **A**.

Material: \_\_\_\_\_

4. The graphic shows a light dependent resistor (LDR) which is commonly used in electronics.



- (i) Using the *Formulae and Tables* booklet or otherwise, draw the symbol for this component in the box provided.



LDR

- (ii) Outline a specific use for this component in a circuit manufactured by a student.

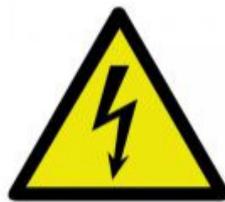
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5. The graphics show three safety signs found in the workplace.

- (i) State the meaning of **each** safety sign.



A: \_\_\_\_\_

B: \_\_\_\_\_

C: \_\_\_\_\_

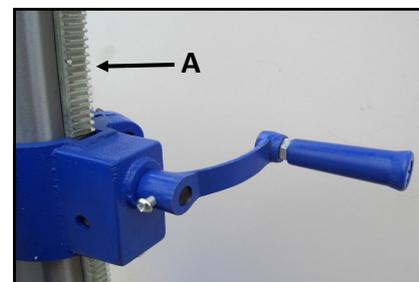
- (ii) What colour is usually associated with an emergency exit sign?

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6. The graphic shows the mechanism which allows the table in a pillar drill to be raised and lowered.

- (i) Name the component **A** shown.

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- (ii) Lubricants are used to protect mechanisms from wear and to prolong the life of machines.

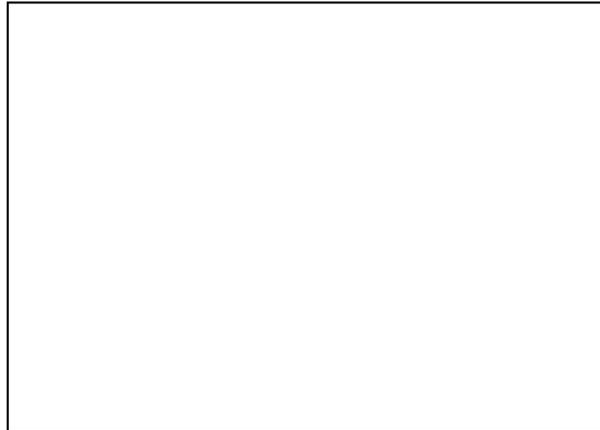
Suggest a suitable lubricant that could be used to protect machines while in use.

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7. In the box provided, make a well proportioned **2D** sketch of the *Dyson Air Blade* hand dryer shown when viewed in the direction of the arrow **A**.



8. A *Work Breakdown Structure* (WBS) is a project management tool used by students and professionals.

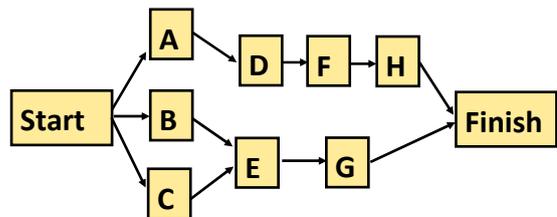
- (i) Outline **one** advantage of using a WBS.

Advantage: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



- (ii) In the WBS shown, name the predecessor(s) of the tasks **D** and **E**.

Task **D**: \_\_\_\_\_

Task **E**: \_\_\_\_\_

9. *Liquid Solvent Cements* are used to permanently join plastics together.

- (i) Describe a suitable method of applying solvent cement safely.

\_\_\_\_\_

\_\_\_\_\_

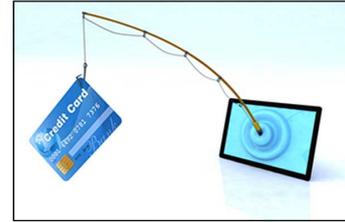
- (ii) Suggest **one** semi-permanent method of joining plastics.

\_\_\_\_\_

\_\_\_\_\_



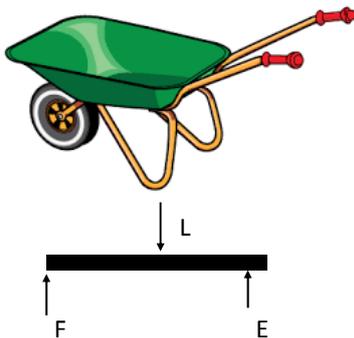
**10.** *Phishing* is an attempt to acquire private information such as usernames, passwords and credit card details by pretending to be a trustworthy source.



Outline **two** ways of minimising your risk of becoming a victim of phishing.

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

**11.** The graphic shows a wheelbarrow. Also shown is a diagram of the forces acting on it. A wheelbarrow will always give a mechanical advantage to the user.



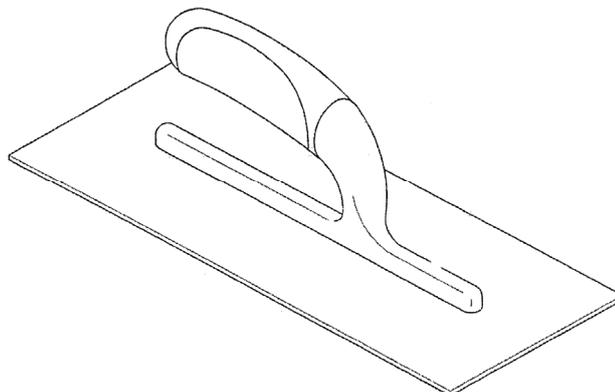
(i) What *class* of lever is a wheelbarrow?

\_\_\_\_\_

(ii) Describe what is meant by a *mechanical advantage*, with reference to a wheelbarrow.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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



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