



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Leaving Certificate Examination 2024 Technology

Section A and Answerbook

Ordinary Level

Monday 24 June Afternoon 2:00 - 4:00

160 marks

Examination Number

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Date of Birth

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For example, 3rd February
2005 is entered as 03 02 05

Centre Stamp

Instructions

Write your Examination Number and your Date of Birth in the boxes on the front cover.

Write your answers to all parts of the examination into this answerbook. This answerbook will be scanned and your work will be presented to an examiner on screen. Anything that you write outside of the answer areas may not be seen by the examiner.

Write your answers in blue or black pen. You may use pencil for sketches, graphs and diagrams only.

There are three sections in this examination. Attempt **all three** Sections.

Questions for Sections B and C are supplied separately but your answers must be written in this answerbook.

Section A 72 marks
Core – Short-answer questions.
Answer **any nine** questions in this section.
Each question carries 8 marks.

Section B 48 marks
Core – Long-answer questions.
Answer the **two** core questions presented.
Each question in Section B carries 24 marks.

Section C 40 marks
Options – Long-answer questions.
Answer **one** of the five optional questions presented.
Each question in Section C carries 40 marks.

Section A.

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

Write your answers in the spaces provided.

1. The Health and Safety Authority (HSA) provide a range of different colour-coded safety signs.

- (i) State the meaning of the safety sign shown.



- (ii) Explain what is meant by a safety sign that is **blue** in colour.

2. The image shows a wallet which has Radio Frequency Identification (RFID) protection built in to protect it from *skimming*.

- (i) Explain what is meant by the term *skimming*.



- (ii) Outline **one** benefit of using this type of wallet compared to a traditional wallet.

3. The *SolarEV City Concept* combines solar panels on rooftops with electric vehicles on the streets. Using this, and other concepts, the city of Paris aims to eliminate local CO₂ (carbon dioxide) emissions by the year 2050.

Describe **two** other ways urban areas can reduce carbon emissions.

1.
2.



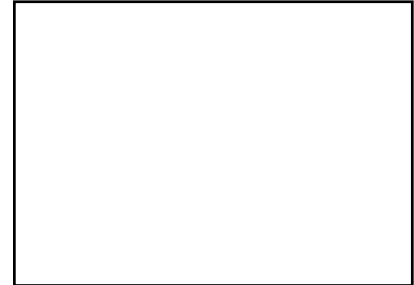
4. The image shows a DC buzzer used in electronics.

(i) Explain what is meant by the term DC.



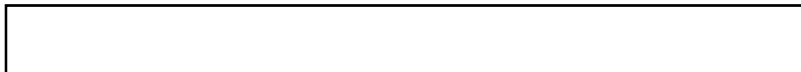
DC:

(ii) Using the *Formulae and Tables* booklet, or otherwise, draw the symbol for a buzzer in the box provided.



5. The image shows a *graphic view* used to represent a camera.

(i) Name the graphic view used.



(ii) State **two** advantages of using this type of representation.

1.

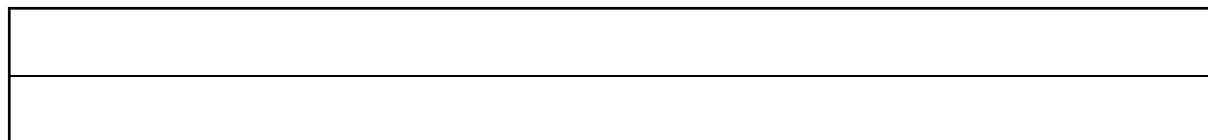
2.

6. The tool shown is commonly used in the Technology room.

(i) Name the tool.

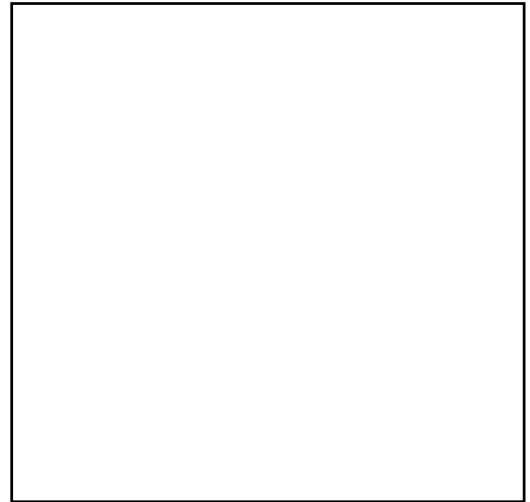


(ii) Describe a situation where this tool might be used.



7. The image shows a *machine tool stand*.

In the box provided, make a well-proportioned 2D sketch of the stand when viewed in the direction of arrow **A**.



8. The image shows a mechanism that allows the driver and driven wheels to rotate in the same direction.

(i) Name the mechanism shown.

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(ii) Outline **two** advantages of using this mechanism.

1.
2.

9. The image shows an innovative hairdryer that has been *ergonomically* designed.

(i) Give **one** example of how this hairdryer is ergonomically designed.



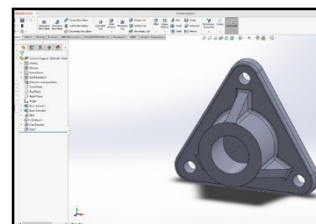
(ii) The hairdryer has a power rating of 2 kW.

Calculate how much it will cost to run the hairdryer for 15 minutes, if the cost per unit of electricity is €1 per kWh.

Calculation:

10. The image shows a screenshot from a Computer Aided Design (CAD) *software* package.

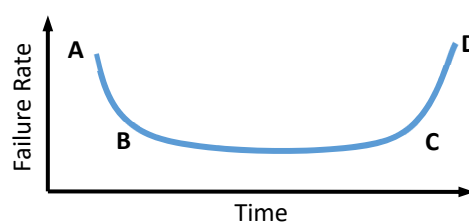
(i) Explain what is meant by the term *software*.



(ii) State **two** reasons why a student would use CAD in Technology.

1.
2.

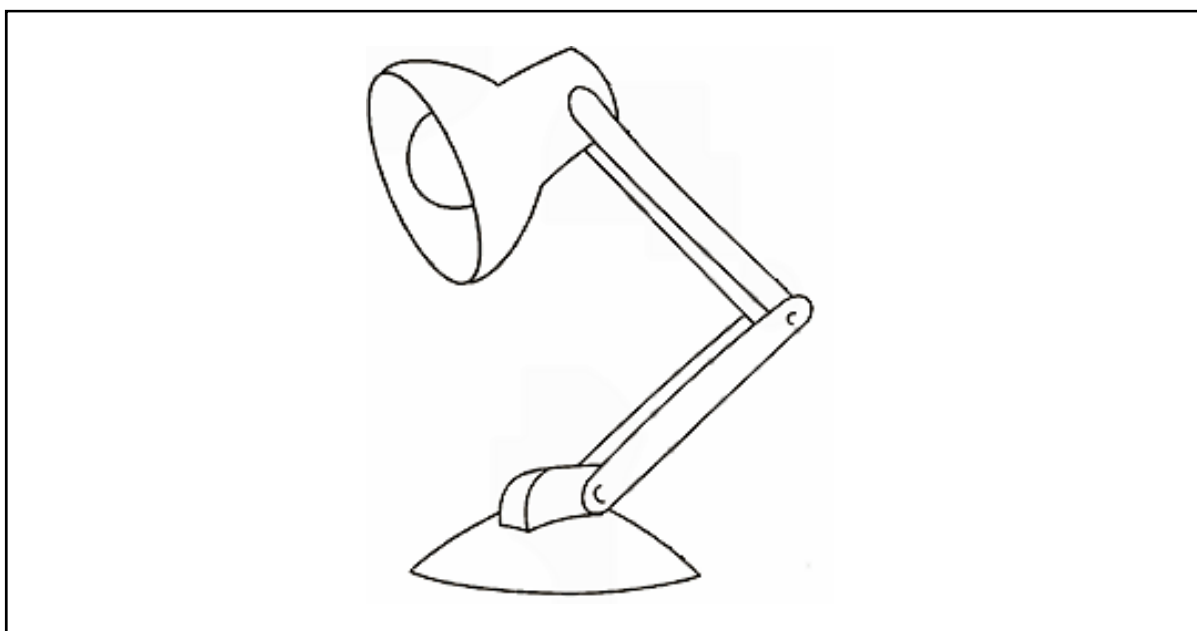
11. The graphic shows the bathtub curve which is used to represent the failure rate of a product over a period of time.



Suggest a reason for the high failure rate at **A-B**, and at **C-D**.

High failure rate at A-B:
High failure rate at C-D:

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



Answerbook for Sections B and C

Instructions

Questions for **Sections B** and **C** are supplied separately.

Start each question on a new page. Write the question number in the box at the top of each page.

Use the left-hand column to label each part, as shown below.

Question	0 4	Start each question on a new page
Part		
(a)		
(b)(i)		
(b)(ii)		

You do not need to use all of the pages in this answerbook. If you run out of space in this answerbook, you may ask the superintendent for more paper.

Write your answers in blue or black pen. You may use pencil for sketches, graphs and diagrams only.

Part

[illegible]

Part

[illegible]

Part

[illegible]

Part

[illegible]

Part

[illegible]

Part

[illegible]

Part

[illegible]

Part

[illegible]

Part

[illegible]

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Part

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Part

[illegible]

Part

[illegible]

Part

[illegible]

Part

[illegible]

Acknowledgements

Images

Image 1 page 3: <https://cdn.huntoffice.ie/images/P.cache.large/safety-sign.jpg>

Image 2 page 3: <https://pularys.com/en/pularys/product/173713101/>

Image 3 page 3: <https://media.istockphoto.com/photos/shanghai-urban-landscape-landmarks-and-solar-panels-picture-id946740894?k=6&m=946740894&s=170667a&w=0&h=cs9fDvI-ELU3rZQDpMXgT-d0T4tSLYVEJ4cn2TP4QfY=>

Image 1 page 4: <https://centraltechsupplies.ie/wp-content/uploads/2023/05/ECM310BUZ-1.jpg>

Image 2 page 4: <https://images.squarespace-cdn.com/content/v1/58702ee844024315d26e2e1e/1534879555982-SWPNGNGH1N7G53WHNFDM/Camera.jpg?format=2500w>

Image 3 page 4: [https://s3-eu-west-](https://s3-eu-west-1.amazonaws.com/webshop/data/thumbs/db/db40a8f559cef3f9d86792203a153e548dbb2dfc.jpg)

[1.amazonaws.com/webshop/data/thumbs/db/db40a8f559cef3f9d86792203a153e548dbb2dfc.jpg](https://s3-eu-west-1.amazonaws.com/webshop/data/thumbs/db/db40a8f559cef3f9d86792203a153e548dbb2dfc.jpg)

Image 1 page 5: https://m.media-amazon.com/images/I/61s9EAQyojL._AC_SX679_.jpg

Image 2 page 5: <https://www.linearmotiontips.com/wp-content/uploads/2017/10/Belt-and-Pulleys.jpg>

Image 3 page 5:

https://fashionista.com/.image/c_limit%2Ccs_srgb%2Cq_auto:good%2Cw_760/MTUwNDQ2OTQ0MDIyNTA1MTMx/aria-unicorn_mini-blowdryer.webp

Image 1 page 6: https://www.fiverr.com/zaj_22/do-anything-ranging-from-a-simple-part-in-solidworks-to-a-medium-assembly

Image 2 page 6: <https://pngtree.com/so/flexible-desk-lamp>

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Leaving Certificate – Ordinary Level

Technology Section A and Answerbook

Monday 24 June

Afternoon 2:00 - 4:00