

Annual Examinations for Secondary Schools 2022

YEAR 9	SCIENCE AND TECHNOLOGY	TIME: 1 hour
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Name: _____

Class: _____

1. **Figure 1** shows organisms from different classes of vertebrates.



A



B



C

Figure 1

- a. What is a vertebrate?

_____ (1)

- b. Write the letter of the organism that is an amphibian. _____ (1)

- c. From photograph 'B', identify **one** characteristic feature of this group of vertebrates.

(1)

Total 3 marks

2. Figure 2 shows the life cycle of a tomato plant.

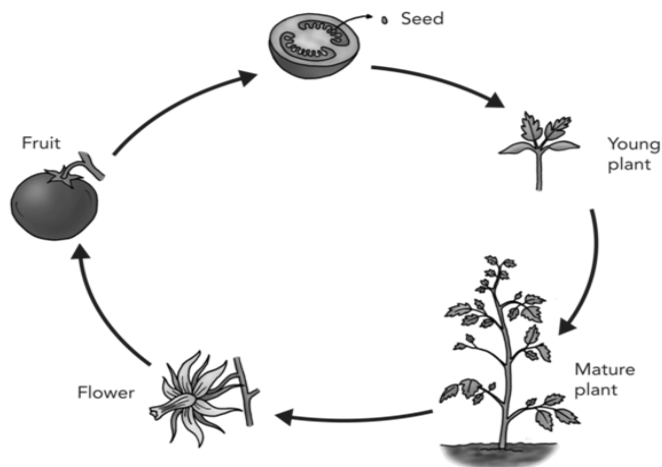


Figure 2

- a. From the words below, underline the one that describes the process of a 'seed' becoming a 'young plant'.

photosynthesis

reproduction

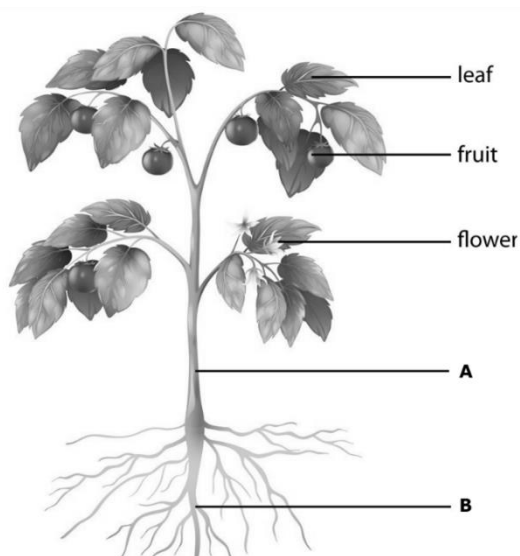
germination

(1)

- b. Write **one** factor needed for plant growth.

(1)

- c. Figure 3 shows a mature tomato plant. On the diagram, label parts 'A' and 'B'.



A: _____

B: _____

(2)

<https://adflipped.weebly.com/parts-of-a-plant.html>

Figure 3

Total 4 marks

3. a. **Figure 4** shows a typical Maltese Garigue habitat.



<https://gozocominoferry.com/2018/12/27/habitat-garigue-and-cliff-side/>

Figure 4

From the list of sentences below, underline the **two** that are correct about the garigue habitat.

- This habitat has large bushes and small trees.
- This habitat has small pockets of soil and is mainly rock.
- This habitat has large trees like Oak (Balluta) and Pine (Żnuber) trees.
- This habitat is mainly sand dunes, with plants living in salty conditions.
- This habitat has low growing plants such as Thyme (Sagħtar). (2)

- b. **Figure 5** shows a photograph of a beach taken after a storm. The beach is full of plastic litter.



<https://timesofmalta.com/articles/view/malta-one-of-europes-worst-offenders-for-plastic-waste.713197>

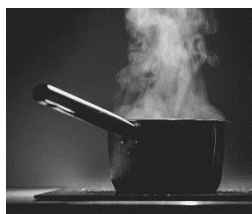
Figure 5

Give **one** reason why plastic is harmful to the environment.

(1)

Total 3 marks

4. The following pictures and their descriptions show different materials.
In the spaces provided, write the state of matter for each material.



A glass bottle

Steam
from a boiling
saucepan

Sea water

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(3)

Total 3 marks

5. Below is a list of materials, of which some are soluble in water while other materials are insoluble in water.

chalk	sugar	copper sulfate	plastic
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From this list of materials, choose **one** material that is:

- a. soluble in water: _____ (1)
- b. insoluble in water: _____ (1)

Total 2 marks

6. Two students find a mixture of two metals, iron and copper. Iron is in the form of a powder while copper is in the form of filings.

a. State which metal has the largest particles.

_____ (1)

b. State the method which should be used to separate these metals from each other. Note that both metals must be obtained after they are separated.

_____ (1)

c. Iron tends to rust if it is left untreated. State what makes iron rust.

_____ (2)

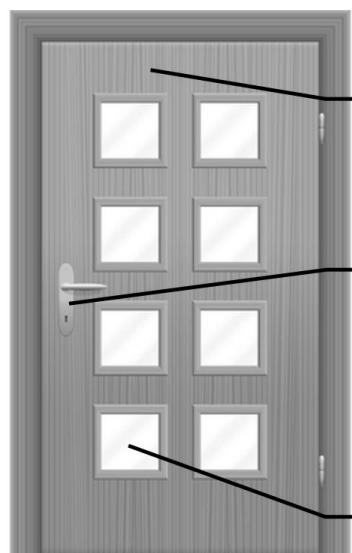
d. Why is it important to prevent iron from rusting?

_____ (1)

Total 5 marks

7. Look carefully at the picture of a product, below:
- a. Fill in the blanks with the type of material used in this product, using the following word bank:

aluminium metal	thermoset-plastic
manufactured-wooden-board	textile



(1)

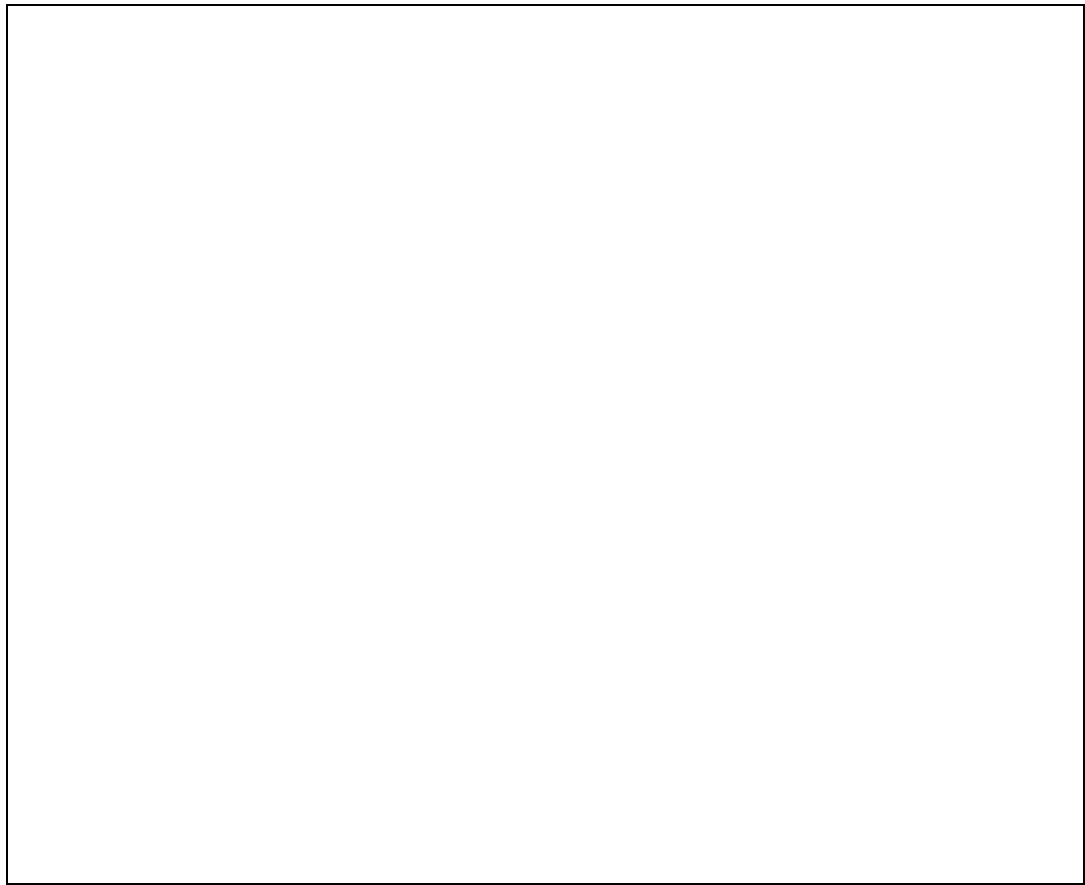
(1)

- b. The windows in this product need to be made from a **see-through** material. Circle the material that has such properties.

Translucent Plastic	Solid wood	Ferrous metal
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(1)

- c. The product is a common door. In the space provided below, draw **two** simple sketches (2D or 3D) of this door showing how this looks when it is open and when it is closed.



(2)

- d. Add annotations to your sketch including the following keywords:

door open

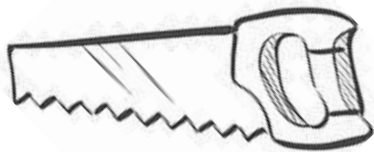
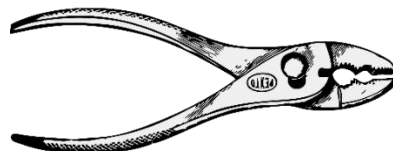
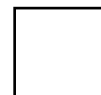
door closed

handle

(2)

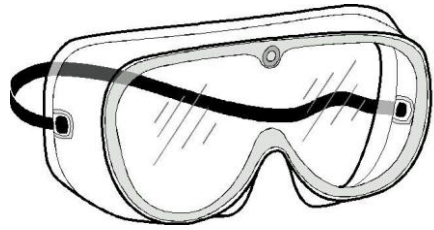
Total 7 marks

8. a. Tick (✓) the tool which is used to cut wooden material.



(1)

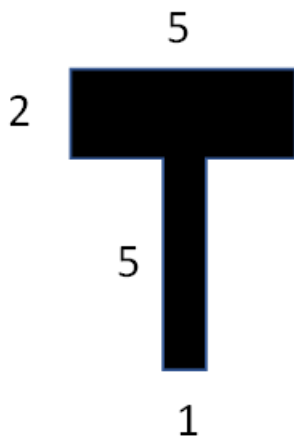
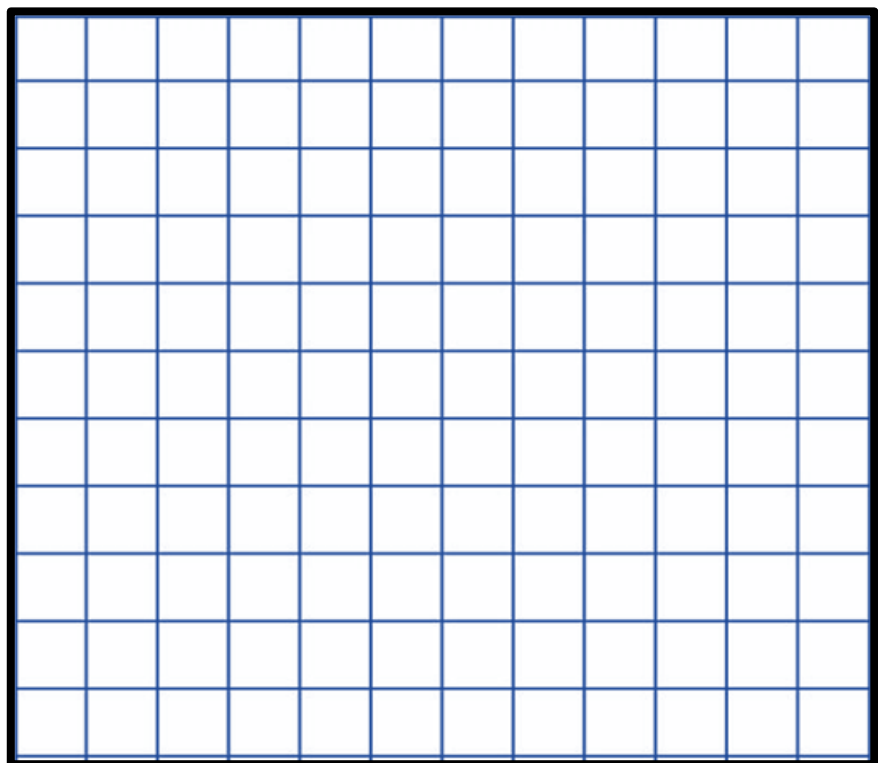
- b. Tick (✓) the personal protective equipment that is used to protect our eyes in the workshop.

☐☐

(1)

Total 2 marks

9. The diagram below shows a hammer. Follow the dimensions given to draw the shape of a hammer in the grid provided. Each grid box represents 1 unit. (1)



Total 1 mark

End of paper. Check your work again.