

SECONDARY SCHOOLS ANNUAL EXAMINATIONS 2001

Educational Assessment Unit – Education Division

FORM 2

INTEGRATED SCIENCE

Time 1hr 30 min

Name _____

Class _____

ANSWER ALL QUESTIONS

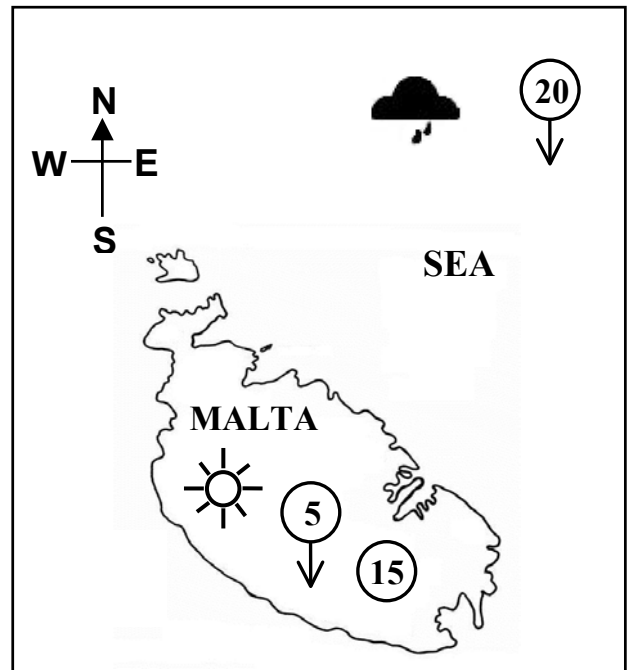
1. Look at the weather map of Malta, then answer the questions that follow:

a. Explain **in words** what the **weather** is like **over Malta**.

3 marks

b. Explain **in words** what the **weather** is like **over the sea** near Malta.

2 marks



c. What **instrument** would you use to measure the **temperature**?

1 mark

d. What **season** of the year is it likely to be?

1 mark

e. Give **one** reason for your answer?

2 marks

2. Here are 4 living things.

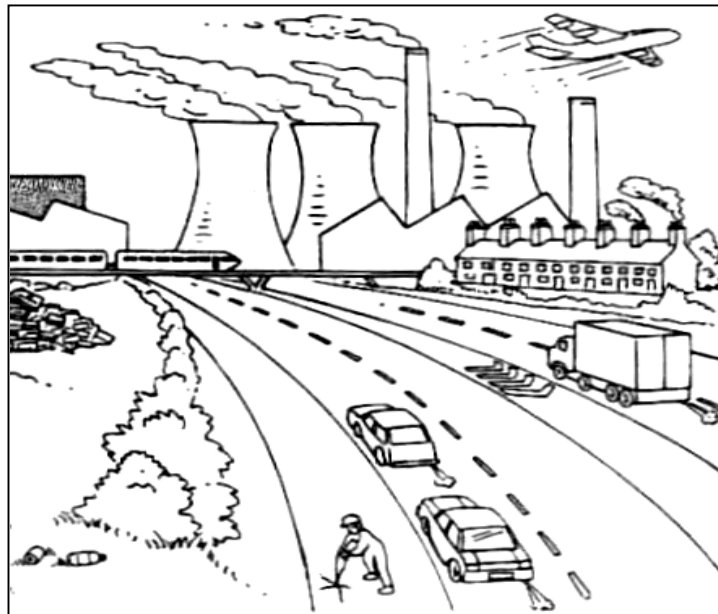
human lion dolphin cactus plant

a. Write down the **living thing**, which does each of the following:

- i. Lives in water _____
- ii. Lives in the jungle _____
- iii. Grows in the desert _____
- iv. Causes pollution _____

4 marks

b. This picture below shows a place where there is a lot of **pollution**.



List **3 things** that are causing **Air pollution** and **3 things** that are causing **Noise pollution**.

Things causing Air pollution	Things causing Noise pollution

6 marks

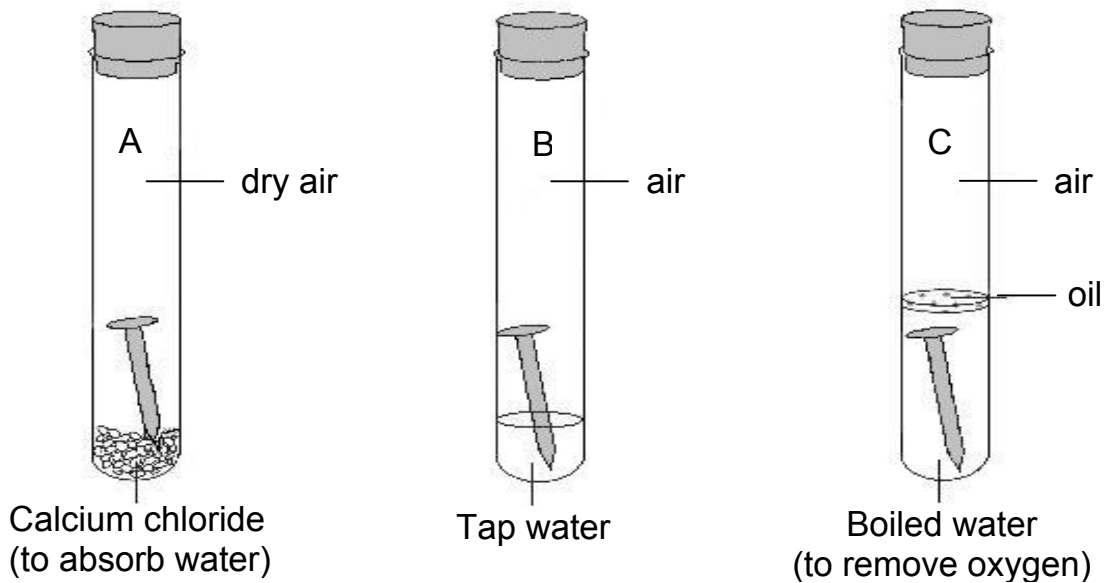
c. Name one **type of pollution** that you see on your journey to school each day and say what is **causing** it.

Type of pollution: _____

Cause of pollution: _____

2 marks

3. Gianni carried out an experiment on **rusting**.
He placed 3 shiny iron nails **A, B, C** in sealed test tubes as shown in the diagram.



- a. Which nail will rust?

1 mark

- b. Tick **one** correct answer.

Iron rusts when there is only oxygen.

Iron rusts when there is oxygen and water.

2 marks

- c. Which is the best way **to prevent** the following objects from **rusting**?

i. A bicycle chain _____

ii. Car body _____

iii. Paper clip _____

3marks

- d. Water pipes were once made of iron.

Why are new houses having plastic water pipes?

2 marks

- e. **Rust** is made from **iron and oxygen** joined together. Is rust an **element**?

1 mark

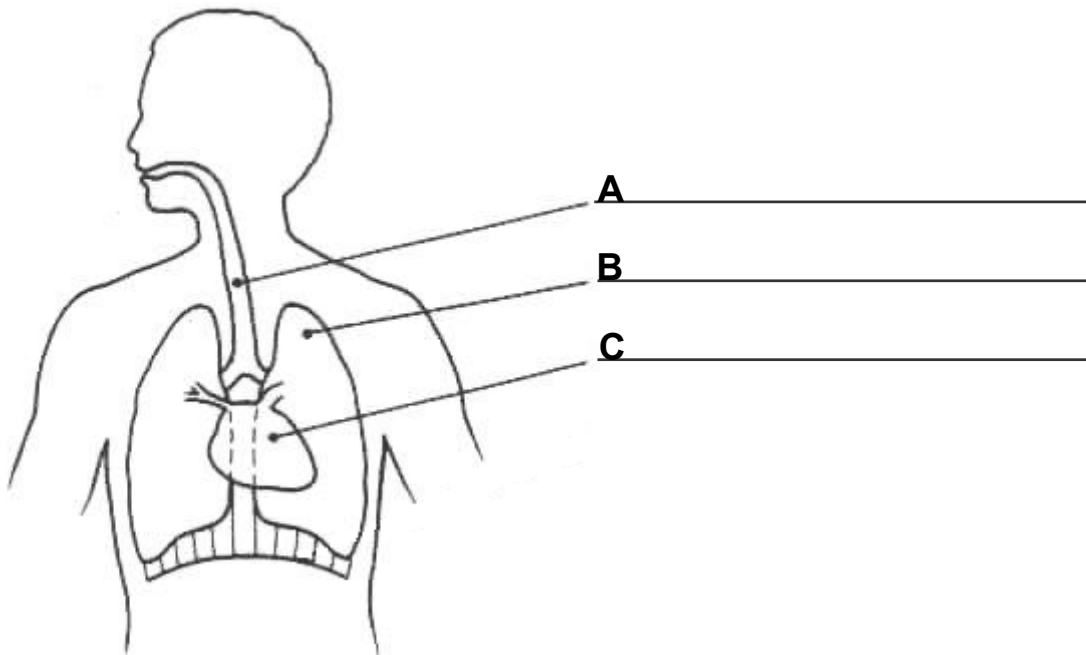
- f. Name **2 elements** and write their **symbol**.

element	symbol

4 marks

- 4 The diagram shows the **organs** we have in our **chest**.
 a. Label the diagram using the following words.

Lung heart windpipe



3 marks

- b. What **job** does **C** do in your body?

_____ 1 mark

- c. What is the name of the **body system** which has **B** as the main organ?

_____ 1 mark

5. Here is a list of **body organs** that can be affected by **disease** or **health hazards**.

liver bones heart lungs brain

Choose from the list above the **organ** that is affected by each of the following statements.

- Chemicals in smoke makes you cough more. _____
- Too much fatty food can cause high blood pressure. _____
- Drinking alcohol. _____
- Meningitis affects the nervous system. _____
- Arthritis causes stiff joints. _____

5 marks

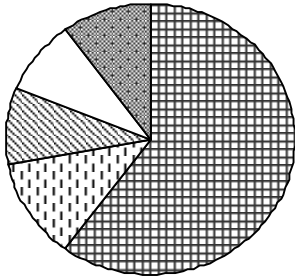
6a. Give **3** reasons **why** we eat food.

3marks

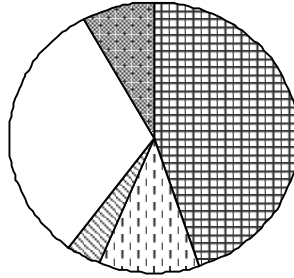
b. Food is made up of the **basic food substances**.

Look at the 3 pie charts showing the **basic food group** in 3 **different** cereals.

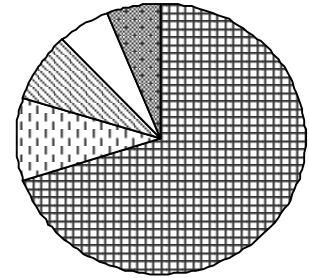
Muesli



Fibran flakes



Sunflakes



Key



carbohydrates



proteins



fat



fibre



others

i. Which **basic food group** is the largest in **all 3** cereals?

1 mark

ii. Which **cereal** contains **most fibre**?

1 mark

iii. Why do we need **fibre** in our **daily diet**?

2 marks

iv. We need a **balanced diet**.

Which of the following 2 pictures show a **better balanced diet**?

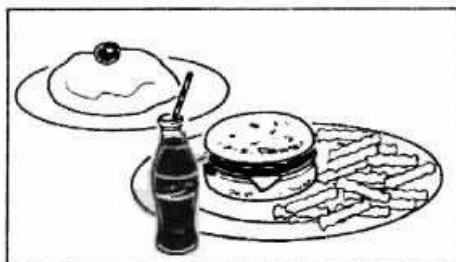


Diagram A

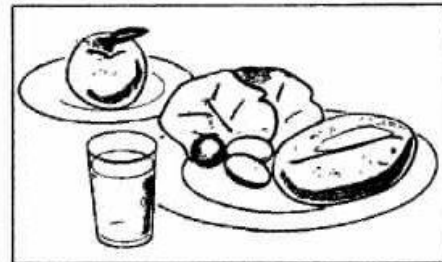


Diagram B

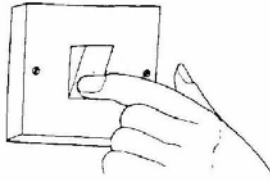
1 mark

7. The following pictures show some **everyday forces**. The forces used are:

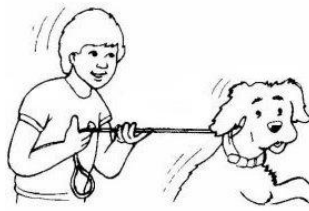
gravity

pushing

pulling



i.



ii.



iii.

a. Name the **forces** used in:

Picture i. _____

Picture ii. _____

Picture iii. _____

3 marks

b. Which **one** of the above pictures shows a **non-contact force**?

2 marks

c. Fill in using the following words:

speed direction shape

Forces can change the size or _____ of an object. They can change the

_____ of a moving object, or change the _____ of a moving object.

3 marks

d. **Friction** is a **force**, which tries to **stop** objects moving.

Write down **where** friction takes place in the following activities. Use the following words.

air ice whiteboard parachute skates marker

One example has been done for you.

When a car is stopping friction takes place between the **tyres** and the **road**.

i. When a parachute is floating down friction takes place between the _____ and the _____.

ii. When writing on a whiteboard friction takes place between the _____ and the _____.

iii. When an ice skater is skating friction takes place between the _____ and the _____.

6 marks

8. Substances are made up of **particles**.

a. Tick the **correct** statements about particles.

- i. Particles in a gas are not moving.
- ii. Particles are tiny.
- iii. Particles are closer together in a solid than in a liquid.
- iv. Particles in a solid move as fast as in a gas.
- v. Particles are spaced out in a gas.
- vi. Particles move more when heated.

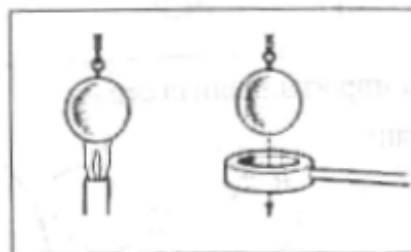
6 marks

b. Theresa wanted to find out what happens when **solids** are **heated**.

She did the following experiment.

She heated the metal ball.

Then she tried to pass it through the ring.



i. Does the ball pass through the ring?

_____ 1 mark

ii. What has happened to the **size** of the ball?

_____ 1 mark

iii. When the ball is heated the **spacing between the particles** becomes **bigger**.

Draw diagrams to show the **spacing** of the **particles** of the metal ball:

a. before heating.



b. after heating



4 marks

9. Here is a list of some **materials** used in building a house.

brick

sand

plastic

cement

wood

copper

glass

stone

a. Fill in the table using the above building material

Natural material	Man made material

8 marks

b. Choose a **material** from above which is used to make

- i. doors _____ 1 mark
- ii. pipes _____ 1 mark

c. Tick **one** box which shows why these materials are used for their jobs.

- i. Electric wiring is made from **copper** because copper
- is shiny.
 - is a conductor of electricity.
 - is not attracted to a magnet.

3 mark

- ii. Window panes are made of **glass** because glass
- is see-through.
 - is a conductor of electricity.
 - is a conductor of heat

3mark

10. A **fuel** is a substance which is **burned** to give off **energy**.

a. Name a **fuel** which can be used in cars.

1 mark

b. What **fuel** does your **body** use?

1 mark

c. Underline **2** fuels which may **run out** in the next few hundred years.

coal

wind

food

oil

4 marks