FORM TP 2026–095

TEST CODE 01230020

MAY–JUNE 2026

CARIBBEAN EXAMINATIONS COUNCIL

CARIBBEAN SECONDARY EDUCATION CERTIFICATE® EXAMINATION

INTEGRATED SCIENCE

Paper 02 – General Proficiency

2 hours 30 minutes

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READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

1. This paper consists of SIX questions. Answer ALL questions.
2. Do NOT write in the margins.
3. You may use a silent, non-programmable calculator to answer questions.
4. If you need to rewrite any answer and there is not enough space to do so on the original page, you must use the extra lined page(s) provided at the back of this booklet. **Remember to draw a line through your original answer.**
5. **If you use the extra page(s), you MUST write the question number clearly in the box provided at the top of the extra page(s) and, where relevant, include the question part beside the answer.**

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DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

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1. (a) (i) State the type of cell division which occurs during asexual reproduction in plants.

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(1 mark)

(ii) Describe TWO artificial methods of **asexual** reproduction.

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(4 marks)

(b) Table 1 shows the percentage yield, over a six-year period, for crops that were planted asexually.

TABLE 1: PERCENTAGE YIELD OVER SIX-YEAR PERIOD

Year	Percentage Yield
2019	100
2020	100
2021	80
2022	70
2023	60
2024	60

(i) On the grid provided **on page 5**, plot a line graph of year against percentage yield to represent the data in Table 1. You MUST connect ALL plotted points and label EACH axis. **(10 marks)**

(ii) State ONE suitable conclusion which can be made from the data shown in Table 1.

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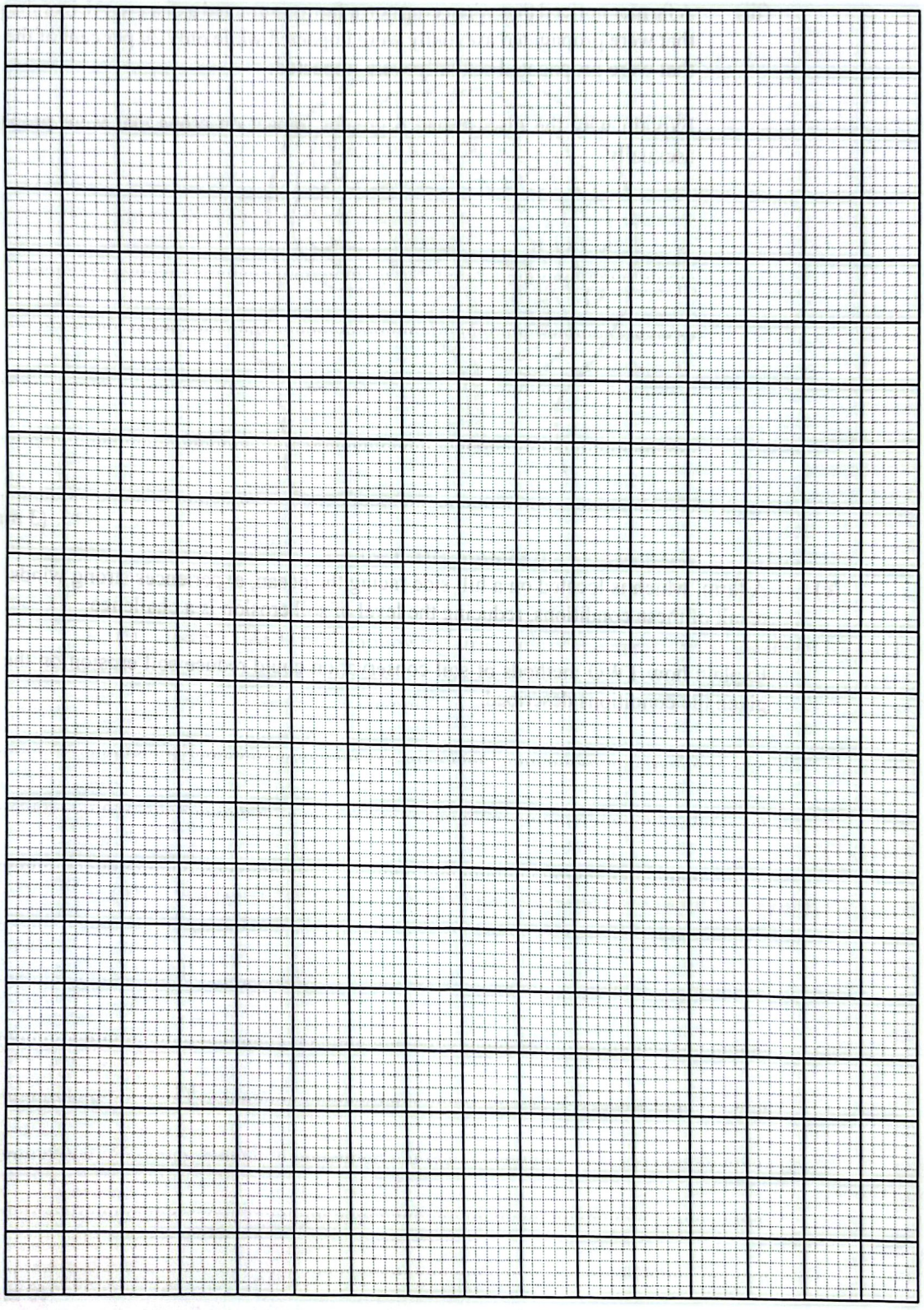
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(1 mark)

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(iii) A farmer noticed that when crops on a farm contracted a disease, ALL of the plants that were propagated asexually were impacted while only 20 per cent of the crops that were propagated sexually were impacted.

Explain why the disease had a greater impact on crops that were propagated asexually.

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(3 marks)

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(c) A farm, which is located on a hill side facing the ocean, experiences strong winds. As a result of these conditions, reducing the level of soil erosion is a challenge.

Explain how TWO methods of soil conservation could reduce soil erosion on the farm given the conditions described.

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(6 marks)

Total 25 marks

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2. (a) Figure 1 shows the structures of the human brain.

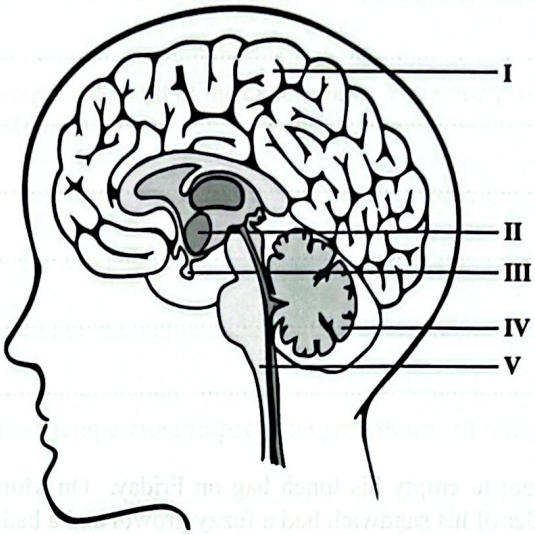


Figure 1. Diagram of the human brain

(i) Name EACH of the following structures of the human brain shown in Figure 1.

I .....

III .....

V .....

(3 marks)

(ii) State ONE function of EACH of the following parts of the human brain shown in Figure 1.

II .....

.....

IV .....

.....

(2 marks)

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(iii) Explain why a person with a spinal cord injury will not be able to experience a knee-jerk reaction.

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(3 marks)

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(b) Kai forgot to empty his lunch bag on Friday. On Monday morning he found that the remainder of his sandwich had a fuzzy growth and a bad smell.

(i) Define the term 'pathogens'.

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(1 mark)

(ii) Suggest ONE type of pathogen that may be responsible for EACH of the following observations.

The fuzzy growth .....

The bad smell .....

(2 marks)

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(c) Olive carried out an experiment to determine the impact of moisture on the rate of growth of pathogens. She placed one dry slice of bread in a bag and one moistened slice of bread in another bag.

(i) State the expected result of the experiment. You must give ONE reason to support your prediction.

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(2 marks)

(ii) Outline how temperature impacts the growth rate of microorganisms.

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(2 marks)

Total 15 marks

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3. (a) Food is the energy source for the human body. However, it has to go through the digestion process before it is useful.

(i) Define the term 'energy'.

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.....

(1 mark)

(ii) Define the term 'digestion'.

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(1 mark)

(iii) Name the TWO types of digestion which occur in the human digestive system.

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(2 marks)

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(b) A student conducted an experiment to identify the types of nutrients present in four samples of food (Samples I–IV). Table 2 shows the results of the experiment.

TABLE 2: RESULTS OF FOOD TEST

Sample	Iodine Test	Benedict's Test	Biuret's Test	Emulsion Lipid Test
I	Orange-brown	Blue	Purple	Milky white
II	Orange-brown	Blue	Blue	Milky white
III	Blue-black	Blue	Blue	Colourless
IV	Blue-black	Orange	Blue	Milky white

(i) Identify which of the food samples is MOST likely chicken. You MUST give a reason to support your answer.

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(2 marks)

(ii) Identify the food sample which a doctor would MOST likely advise a patient with diabetes to avoid.

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(1 mark)

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(c) The teeth play an important part in the digestion process. Figure 2 shows a diagram of the external structure of a tooth.

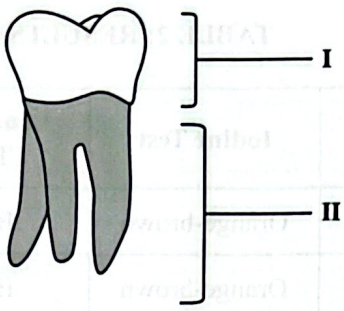


Figure 2. Diagram showing the external structure of a tooth

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(i) Name EACH of the parts of the tooth labelled I and II in Figure 2.

I .....

II .....

(2 marks)

(ii) State ONE function of EACH of the parts of the tooth labelled I and II in Figure 2.

I .....

.....

II .....

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(2 marks)

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(iii) Dana has a diet which is high in meat such as pork and chicken. At her recent dentist visit she was told that she has to extract two of her canines and two of her molars as the teeth are severely damaged.

Outline the likely impact of the removal of EACH type of teeth on the digestion on meat.

Canines

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Molars

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(4 marks)

Total 15 marks

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4. (a) Michael has many electrical gadgets which are constantly plugged in. One day he was using a phone charger with a broken cord and exposed wires, and a fire started.

(i) State TWO of the elements that are required for a fire to take place.

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(2 marks)

(ii) Outline ONE reason why water is NOT suitable for extinguishing an electrical fire.

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(2 marks)

(iii) State the type of extinguisher which can be used to put out electrical fires.

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(1 mark)

(b) Figure 3 shows a circuit set-up that was used to check the conductivity of various materials.

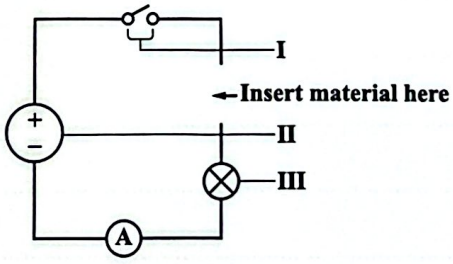


Figure 3. Diagram of a circuit

(i) Name the parts of the circuit labelled I–III in Figure 3.

I .....

II .....

III .....

(3 marks)

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(ii) Table 3 shows the ammeter readings for three samples of materials (Samples I–III) that were tested in the circuit.

TABLE 3: AMMETER READING FOR THREE MATERIALS

Material	Ammeter Reading
Sample I	2
Sample II	0
Sample III	15

Explain why Sample II is MOST likely plastic.

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(3 marks)

(iii) Calculate the voltage for Sample III if the resistance is 10 ohms. You MUST use the formula $V = IR$, to calculate your answer. You MUST show your working.

(2 marks)

(iv) Calculate the wattage for Sample I if the voltage is 10 volts. You MUST use the formula $P = IV$, to calculate your answer. You MUST show your working.

(2 marks)

Total 15 marks

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5. (a) Figure 4 shows a diagram of the solar system.

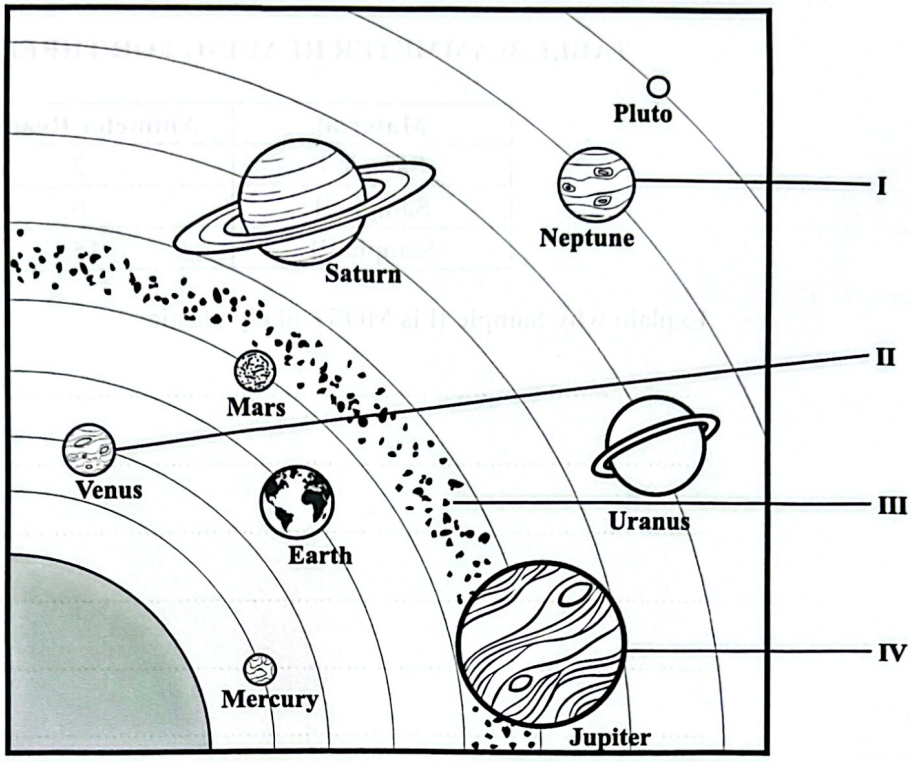


Figure 4. Diagram of the solar system

(i) Name the area of the solar system labelled III in Figure 4.

.....

(1 mark)

(ii) Based on Figure 4, complete the table below by identifying the number of moons that exist on EACH of the following planets.

Planet	Number of Moons
I	.....
II	.....
IV	.....

(3 marks)

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(iii) State the name of the galaxy in which the solar system shown in Figure 4 is found.

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(1 mark)

(iv) State TWO reasons why scientists on earth are trying to explore other planets in the universe.

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(2 marks)

(b) In space, combustion in the engine of a spacecraft results in the gas expanding and rushing out the nozzle where it is expelled.

(i) State Newton's third law of motion.

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(1 mark)

(ii) Explain how combustion in the engine and the characteristics of space will work to move the spacecraft, given Newton's third law of motion.

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(3 marks)

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(c) Figure 5 shows a man pushing a car of mass 1450 kg.

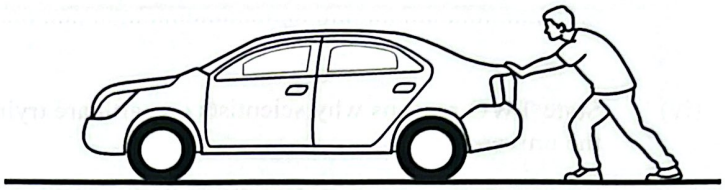


Figure 5. Diagram of a man pushing a car

(i) Using the formula $F = m \times a$, calculate the force acting on the car if the car accelerates at a speed of 5 m/s². You MUST show your working.

(2 marks)

(ii) Calculate the force acting on the car if the car did not move when it was pushed. You MUST show your working.

(2 marks)

Total 15 marks

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6. (a) (i) Describe how neap tides are formed.

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(2 marks)

(ii) Name TWO types of tides, other than neap tides.

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(2 marks)

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(b) Figure 6 shows a diagram of an apparatus which was used to determine whether a sample of water is sea water or pure water.

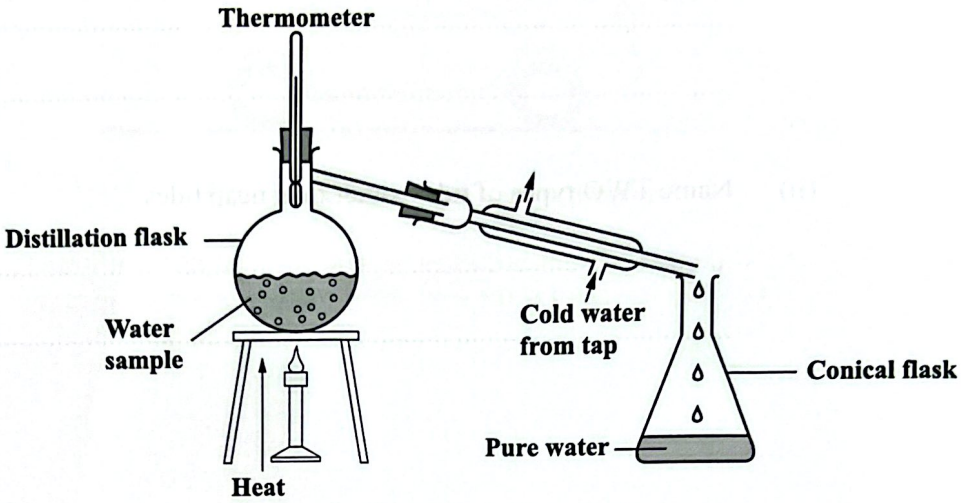


Figure 6. Diagram of apparatus set-up

(i) State the expected observation in the distillation flask and the conical flask if the sample of water is sea water and if the sample of water is pure water.

Sea water

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Pure water

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(4 marks)

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(ii) The densities of two other samples of water are measured. The density of Sample A is 997kg/m³ and the density of Sample B is 1030kg/m³.

Explain which of the samples, A or B, is MORE likely to be sea water based on the stated densities.

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(3 marks)

(iii) List FOUR physical properties of water, other than its density.

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(4 marks)

Total 15 marks

END OF TEST

IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS TEST.

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