



**DAY WATERMAN
COLLEGE**

ENTRANCE EXAMINATION INTO YEAR 7

SAMPLE SCIENCE PAPER

TIME ALLOWED: 45MINUTES

NAME: _____

SCHOOL: _____

DATE OF BIRTH: _____

CENTRE: _____

DATE OF EXAMINATION: _____

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

Candidates are to answer on the Question Paper.

No additional Materials are required.

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1. Write your name on all the work you hand in.
 2. Write in dark blue or black pen.
 3. You may use a pencil for any diagrams or graphs.
 4. Answer all questions.
 5. The number of marks is given in brackets [] at the end of each question or part.
 6. Calculators are NOT allowed.
 7. You may lose marks if you do not show your working of if you do not use appropriate units.

DO NOT START UNTIL YOU ARE TOLD TO DO SO. GOODLUCK!

SECTION A

1. Which of these is an irreversible change?
 - a. Candle wax melting
 - b. Candle wax burning
 - c. Ice cream melting
 - d. Water boiling

2. What new materials are formed when a candle burns?
 - a. Melted wax
 - b. Water and carbon dioxide and soot
 - a. No new materials are formed
 - b. Forms sand

3. How could you change burnt paper back into its original form?
 - a. Cool it
 - b. Scrape off the soot
 - c. You can't
 - d. Soak it in oil

4. Which of these statements is FALSE?
 - a. Freezing is not a reversible change
 - b. Heating a substance can cause both reversible and irreversible changes
 - c. Dissolving is a reversible change
 - d. Burning of sugar is not reversible

5. Material A is stretchy but not absorbent. Material B is very absorbent but does not stretch. Which makes the best swimwear?
 - a. Material A
 - b. Material B
 - c. Both Material A and Material B make good swimwear
 - d. None of the two

6. Which spoon is it safer to stir very hot soup with?
 - a. A metal spoon
 - b. A wooden spoon
 - c. A paper spoon
 - d. None of the above

7. What is the area where a polar bear lives called?

- A. the igloo
- B. the desert environment
- C. the Arctic habitat
- D. the winter habitat

8. What does the word 'adapted' mean?

- A. A living thing is well suited to where it lives.
- B. A living thing is not suited to where it lives.
- C. A living thing cannot survive on its own.
- D. A plant that can live on the top of a mountain.

9. What does the word 'distribution' mean?

- A. Where organisms are found in a habitat.
- B. The total number of organisms living in a habitat.
- C. The different species that live in a habitat.
- D. The different tribes that live in a habitat.

10. The drawing shows a lion common to many predators but *not* to many prey?

QUESTION



- A. It has legs.
- B. It has forward facing eyes.
- C. The colour of its hair camouflages it.
- D. It has good eyesight.

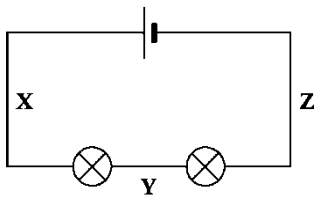
11. The loss of blood and the uterus lining in the menstrual cycle is called-----

- A. menstruation.
- B. ovulation.
- C. fertilisation.
- D. urination.

12. Which of these food chains is the correct way to show grass being eaten by rabbits, and rabbits being eaten by foxes?

- A grass \leftrightarrow rabbit \leftrightarrow fox
- B fox \rightarrow rabbit \rightarrow grass
- C grass \leftarrow rabbit \leftarrow fox
- D grass \rightarrow rabbit \rightarrow fox

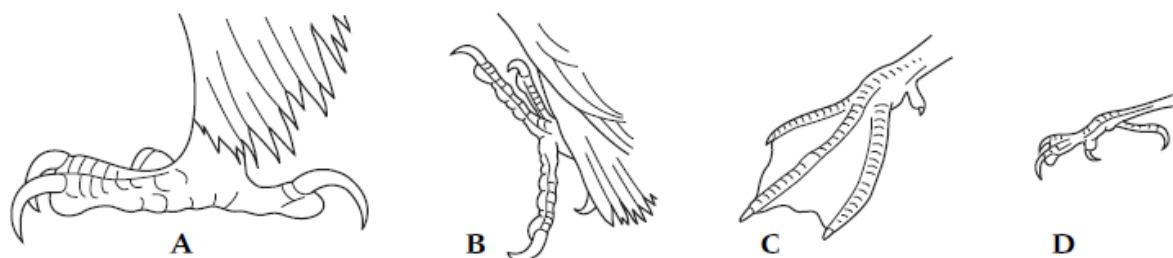
13. How big would the current be at X, Y and Z?



- A It would be biggest at X and smallest at Z.
 - B It would be biggest at Z and smallest at X.
 - C There would be no current at Y.
 - D It would be the same at all three places.
14. You can make the current in a circuit smaller by:
- A putting a switch in the circuit.
 - B putting more bulbs in the circuit.
 - C taking some bulbs out of the circuit.
 - D putting more cells in the circuit.
15. When electricity flows through wires:
- A they melt.
 - B they get cold.
 - C they get hot.
 - D nothing changes

SECTION B

1. Look at these diagrams of birds' feet.



a Which one is adapted for swimming on water? [1 mark]

b Which one is adapted for catching other birds? [1mark]

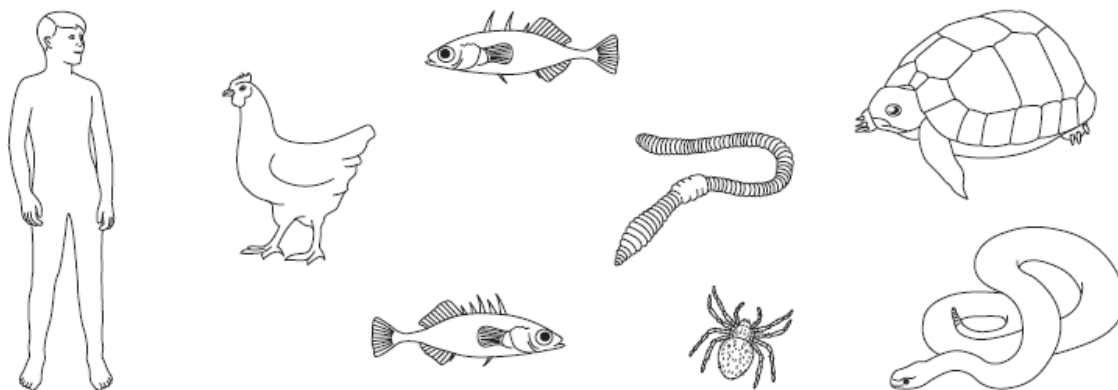
Look at the picture of the seal.



c How is it adapted to living in the sea?

 [1 mark]

a Circle the drawings of invertebrates.



[2 mark]

b Complete the sentences to give two differences between a chicken and a fish.

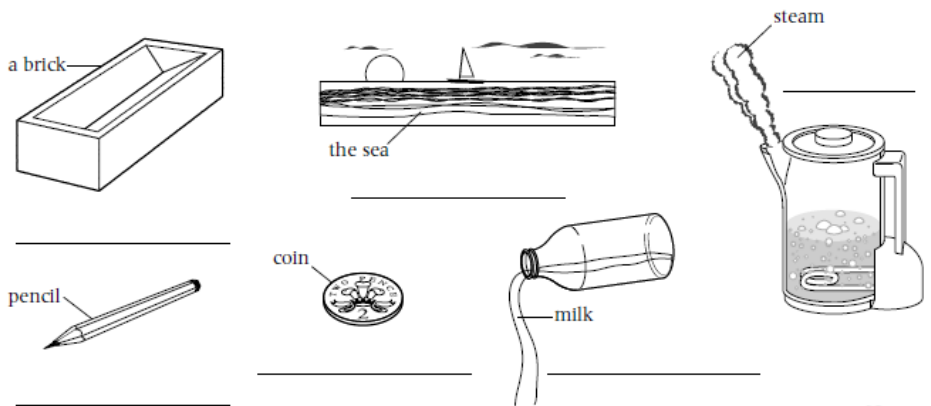
i Chickens have wings, fish have..... [1 mark]

ii Chickens have feathers, fish have..... [1 mark]

c Describe one difference between the two fish shown in the drawings.

..... [1 mark]

2. Are these things solids, liquids or gases? Write the correct word for each one.



[2 mark]

3. You can smell dinner cooking while you are watching TV. The smell has spread by diffusion.

a Why does diffusion happen?..... [1 mark]

b Why doesn't diffusion happen in solids?..... [1 mark]

c Does diffusion happen faster in a liquid or a gas?..... [1 mark]

Explain your answer.[2 marks]

4. Which sentence describes what a mixture is? Tick the best answer.

- A. Lots of things jumbled together which cannot be separated.
- B. Just one thing by itself.
- C. Lots of things jumbled together which can be separated.
- D. One thing which can be split up into smaller bits.

[1 mark]

5. Katie has a cold. Her dad makes her a hot lemon drink using some yellow powder. He mixes the powder with some hot water. The powder dissolves in the hot water.

a. Put a ring round the word that best describes the water.

Solute **solvent** **soluble** **solitude** [1 mark]

b. Put a ring round the word which best describes the powder.

Solute **solvent** **solution** **insoluble** [1 mark]

6. Fill in the gaps. Choose words from the box.

colour direction flavour pull push shape speed

You will not need to use all the words.

a A force can be aor

b Forces can change theor of things. [5 marks]

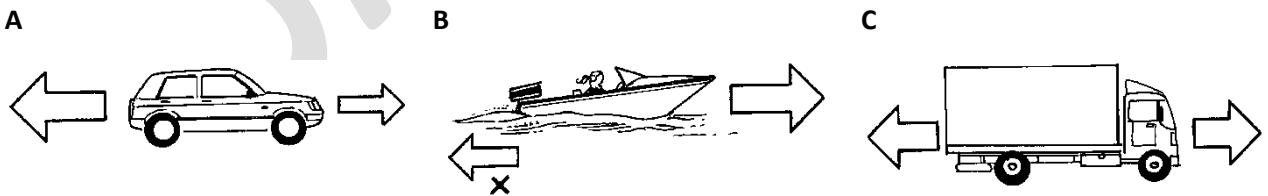
7. a Write down one example of useful friction. [1 mark]

b Write down one example of when friction is not useful. [1 mark]

8. a How can you increase the friction between two surfaces? [1mark]

b Write down two ways that you can reduce the friction between two surfaces. [3 marks]

9.



a Which picture shows balanced forces? [1mark]

b What will happen to the speed of the car? [1mark]

c What will happen to the speed of the boat? [1mark]

d What is causing force X? [1mark]

e. Why doesn't a rocket in space need to use its engine to keep moving?
.....
..... [2mark]

TOTAL: 50 MARKS

SAMPLE