DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Department for Curriculum Management and eLearning
Educational Assessment Unit
Annual Examinations for Secondary Schools 2010

FORM 1 **INTEGRATED SCIENCE** **TIME: 1h 30m**

Name: _____ **Class:** _____

ANSWER ALL QUESTIONS

1. The following is a list of laboratory apparatus. Choose any THREE. In the space provided draw this apparatus and write its name.

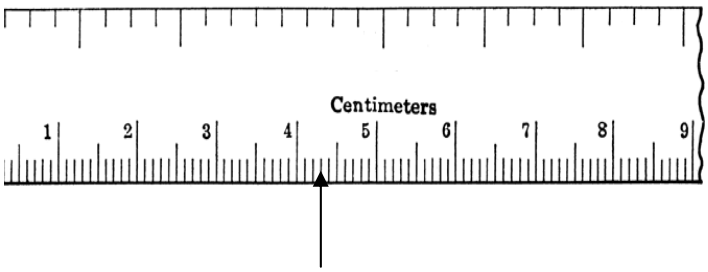
chemical bottle, pipette, test-tube, measuring cylinder, tripod, thermometer

Drawing:	**Drawing:**	**Drawing:**
Name of apparatus: _____	**Name of apparatus:** _____	**Name of apparatus:** _____

(6)

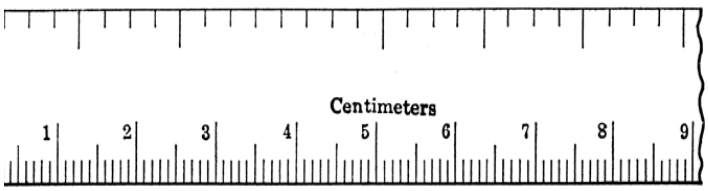
2. This question is about measuring instruments.

a) What is the measurement shown by the arrow on the ruler? Your answer should include the correct unit.



_____ (1)

b) Using an arrow, mark on the ruler a measurement of **6.7cm.**



(1)

c) Which instrument is used to measure:

volume of a liquid : _____

temperature: _____

time: _____ (3)

d) Every measurement has its own unit. Match these measurements to their units.

MEASUREMENT	UNIT
volume	s
time	g
length	ml
mass	cm

(4)

3. The diagram shows a sperm cell.

a) Add these labels from the box to the diagram.

Nucleus	Cytoplasm	cell membrane

(3)

b) Which part of this cell is not usually found in animal cells?

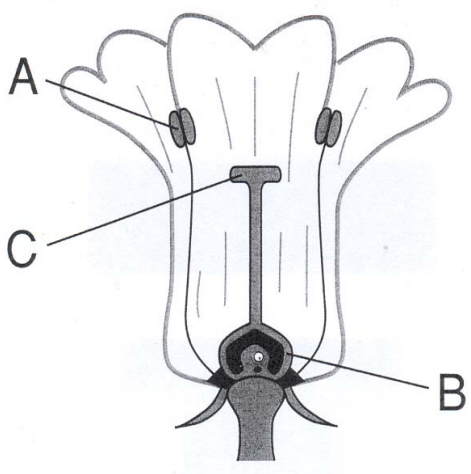
_____ (1)

c) Underline the correct word from each bracket.

When an egg cell joins with a sperm cell (**filtration / fertilisation**) takes place. The (**nucleus / cell membrane**) of each cell join together to form a new cell. This is the beginning of a new (**animal / plant**).

(3)

4. The diagram below shows three parts of a flower. These are the ANTHER, th[illegible] and the STIGMA.



a) **Write the correct letter in the following sentences:**

i) Part _____ is the **ovary**.

ii) Part _____ is the **anther.**

iii) Part _____ is the **stigma**. (3)

b) Answer **TRUE** or **FALSE**.

i. Pollen is made in the anther. _____

ii. The pollen contains the female sex cell of the flower. _____

iii. Wind and animals spread this pollen to other flowers. _____

iv. The ovary makes the male sex cells. _____

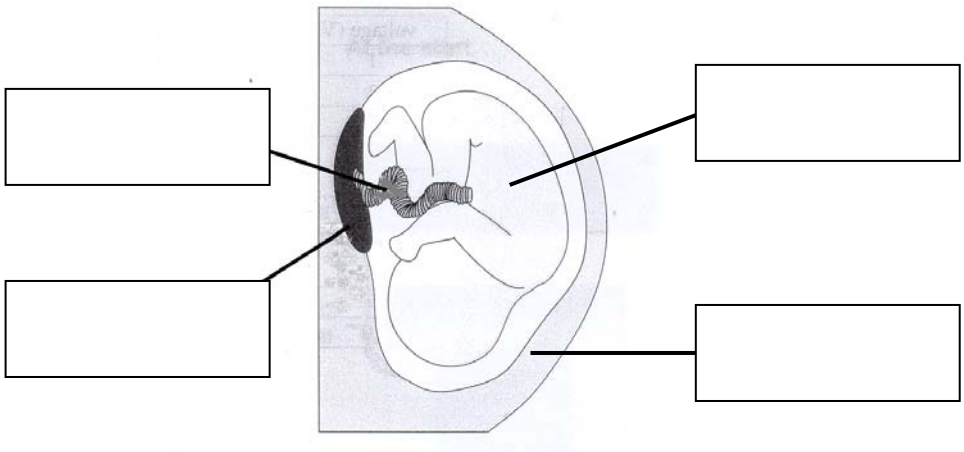
v. In the stigma the male and female sex cells join together. _____

(5)

5. The diagram shows a baby before birth.

Use these words to label the diagram.

uterus, umbilical cord, foetus, placenta



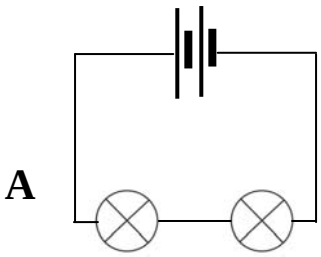
(4)

6. Symbols are used when drawing circuit diagrams.

a. What do these symbols stand for?

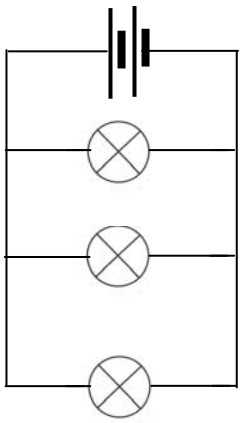
_____ _____ _____ (3)

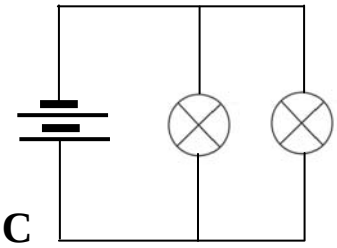
b. Look at these circuits and then answer the following questions.



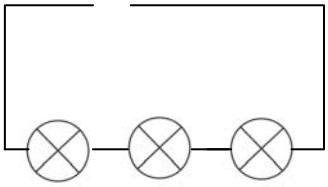
A

B





C



D

(i) Which circuits will make the bulbs light? _____ (3)

(ii) Which circuit is incomplete? _____

What is missing in this circuit? _____

On the diagram of this circuit, use the correct symbol to fill in the missing part. (3)

c. i). In which circuits are the bulbs connected in series? _____

ii) In which circuits are the bulbs connected in parallel? _____

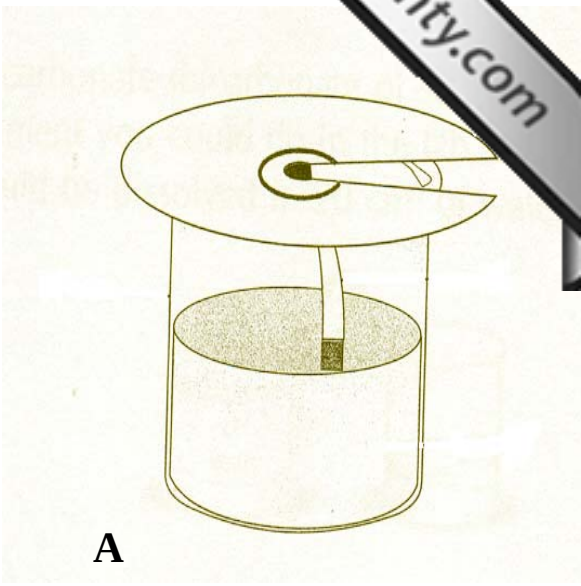
(4)

d. A set of Christmas lights did not light up. This was because one of the bulbs was broken. Were these bulbs connected in series or in parallel?

_____ (1)

7. The following question is about two different methods of separation.

a. Diagram A shows chromatography.



A

i) Name THREE things you see in the diagram.

_____

_____

_____ (3)

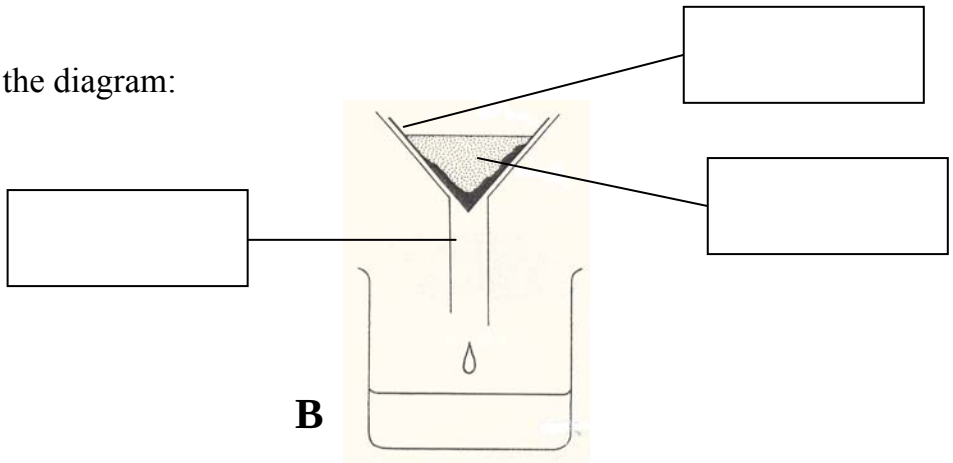
ii) **Underline the correct answer**:

This experiment is used to …

- filter water
- separate colours
- evaporate water (1)

b. Diagram B shows another method of separation.

i) Label the diagram:



B

(3)

ii) What is the name of this method of separation?

_____ (1)

iii) **Underline the correct answer**:

This method can be used to separate:

- sand and water
- salt and water
- soil and salt
- soil and sand (1)

8. Helen is doing an experiment. She puts some ice cubes in a pan and heats them. A time later she notices drops of water on a window.

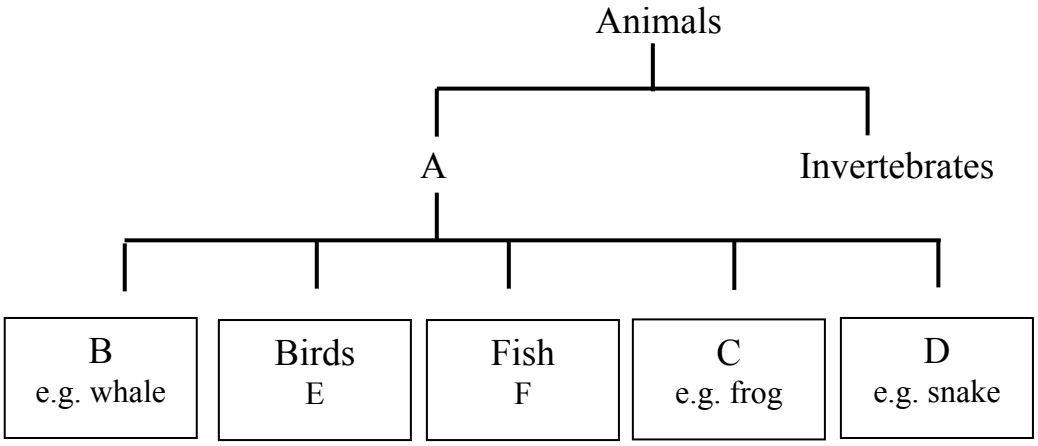
Fill in the blanks to explain what is happening.
The following words might help you. Each word can be used once, more than once or not at all.

liquid	**freezing**	**solid**	**condensation**	**evaporation**
100		**0**	**boiling**	**gas**

Before she starts to heat the ice cubes up, the ice is a _____. After the ice has been heated, it turns to water which is a _____. On further heating, Helen notices bubbles of _____ rising within the water. Water is now _____ and its temperature is _____ degrees Celsius (^{0}C). _____ of water from the saucepan produces water vapour which then cools on the window. This cooling of water vapour is called _____. This produces small water drops which are seen on the window. (7)

9. The diagram below shows how animals are divided.

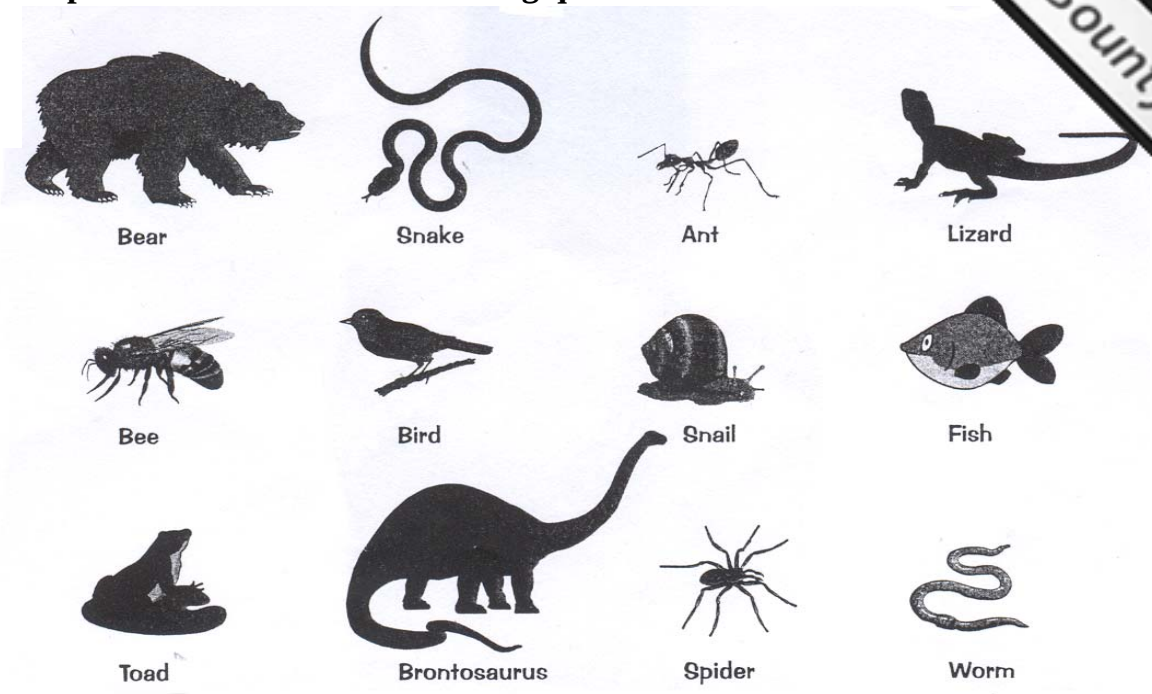
Find out what each letter can stand for and write them in the table provided.



Letter	What it can stand for
A	
B	
C	
D	
E	
F	

(6)

10. Use the pictures to answer the following questions:



a) List 2 vertebrates. _____ _____ (2)

b) List 2 invertebrates. _____ _____ (2)

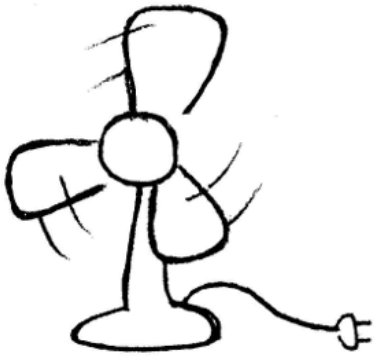
c) Name a mammal. Write ONE feature which makes it a mammal.

_____ (2)

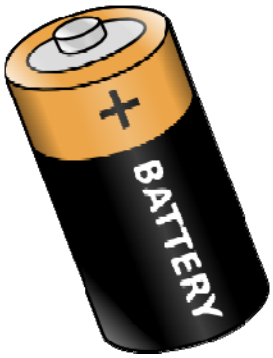
d) Name an amphibian. Write ONE feature which makes it an amphibian.

_____ (2)

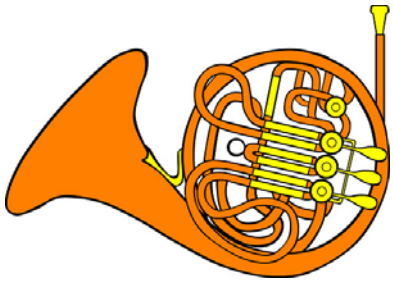
11. What is the MAIN form of ENERGY found in each of these pictures?



a. _____ **b.** _____



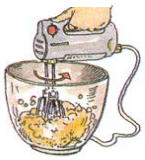
c. _____ **d.** _____



e._____ (5)

12. In most kitchens there are lots of devices that are designed to transfer electrical energy into at least one type of energy.

Complete the following, showing only the **MAIN** energy transfer:

a.	electric kettle		Electricity → _____
b.	food processor		Electricity → _____
c.	radio		Electricity → _____

(3)

13. This question is about some elements and compounds.

a. Symbols can be used to show elements. Give the symbol of the following eleme

Carbon _____ Copper _____ Hydrogen _____ (

b. Compounds are chemicals made up of a number of elements joined together. For example, water is made up of hydrogen and oxygen.

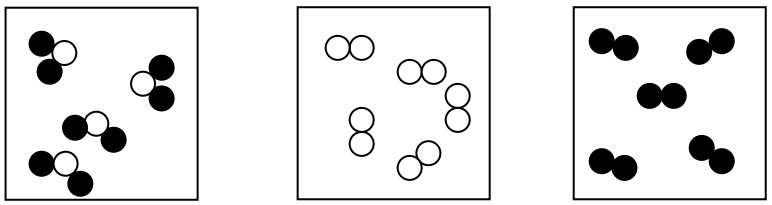
Which TWO elements make up:

i) Carbon dioxide? _____ and _____ (2)

ii) Salt? _____ and _____ (2)

14. In the diagrams below :

● stands for a Hydrogen particle ○ stands for an Oxygen particle



A B C

i) Which diagram shows pure hydrogen? _____ (1)

ii) Which diagram shows a compound of hydrogen and oxygen? _____ (1)

iii) Which diagram represents pure oxygen ? _____ (1)

15. Elements can be divided into metals and non-metals.

a) i. Name one metal used in the lab. _____

ii. Name one non-metal. _____ (2)

b) i. Name one metal used to make jewellery._____ (1)

ii. Give one property of this metal that makes it suitable for jewellery.

_____ (1)

- END OF PAPER. PLEASE CHECK YOUR WORK AGAIN -