JUNIOR LYCEUM ANNUAL EXAMINATIONS 2009

Directorate for Quality and Standards in Education
Educational Assessment Unit

FORM 1 **INTEGRATED SCIENCE** **TIME: 1 hr 30 min**

Name: _____ **Class: _____**

Answer all the following questions

1. Safety in the laboratory is very important.
   Write down TWO safety rules you have to follow when doing experiments.

   _____

   _____

   (2 marks)

2. Class 1.03 are investigating eye colour. Lisa and Jane record the eye colour of everyone in the class.
   Here are their results.

Eye colour	brown	blue	grey	Green
Number of pupils	8	10	0	4

   a. Draw a bar chart to show the different eye colours in class 1.03.

   (5 marks)

   b. What is the most common eye colour? _____

   c. What is the least common eye colour? _____

   d. What is the total number of pupils in class? _____

   (3 marks)

3. Daniel heats 50cm^3 of water until the water starts to boil. He me… temperature of the boiling water.

   i. What TWO <u>measuring instruments</u> are needed?

   _____ _____ (2 marks)

   ii. Name TWO other apparatus Daniel would need for this experiment?

   _____ _____ (2 marks)

   iii. Daniel measured the temperature of boiling water.

   At what temperature does water boil? _____ (2 marks)

   iv. Draw the apparatus that Daniel **set up** to do this experiment.
   You have **to show and label** FIVE apparatus.

(5 marks)

4. Living things do what non-living things cannot do on their own.

   a. Underline FOUR living things.

   starfish sun water soil grass cheese cow tree rocks sea

(4 marks)

   b. Give THREE differences between living and non-living things.

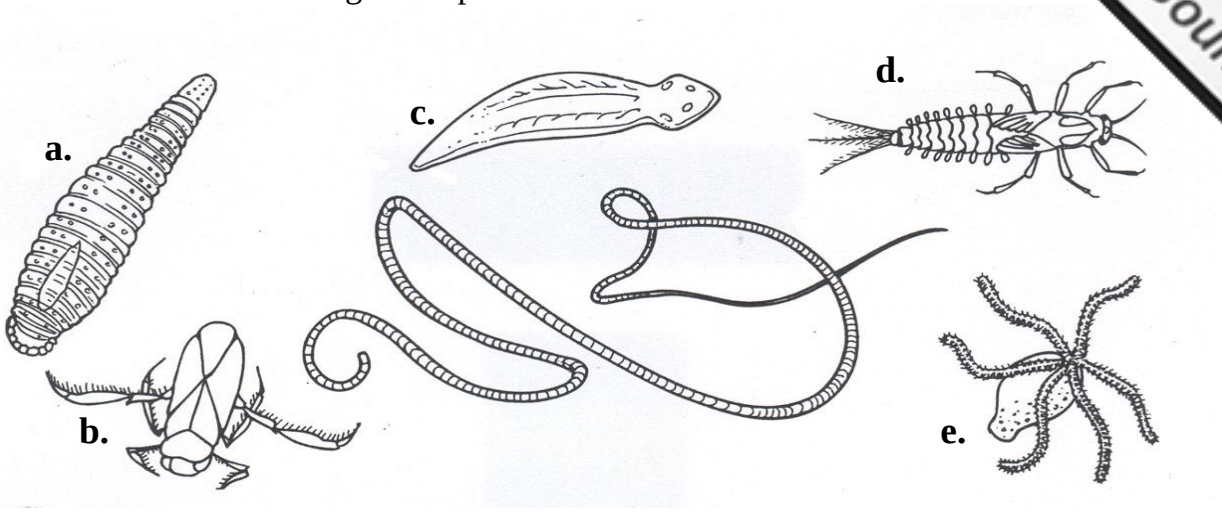
_____

_____

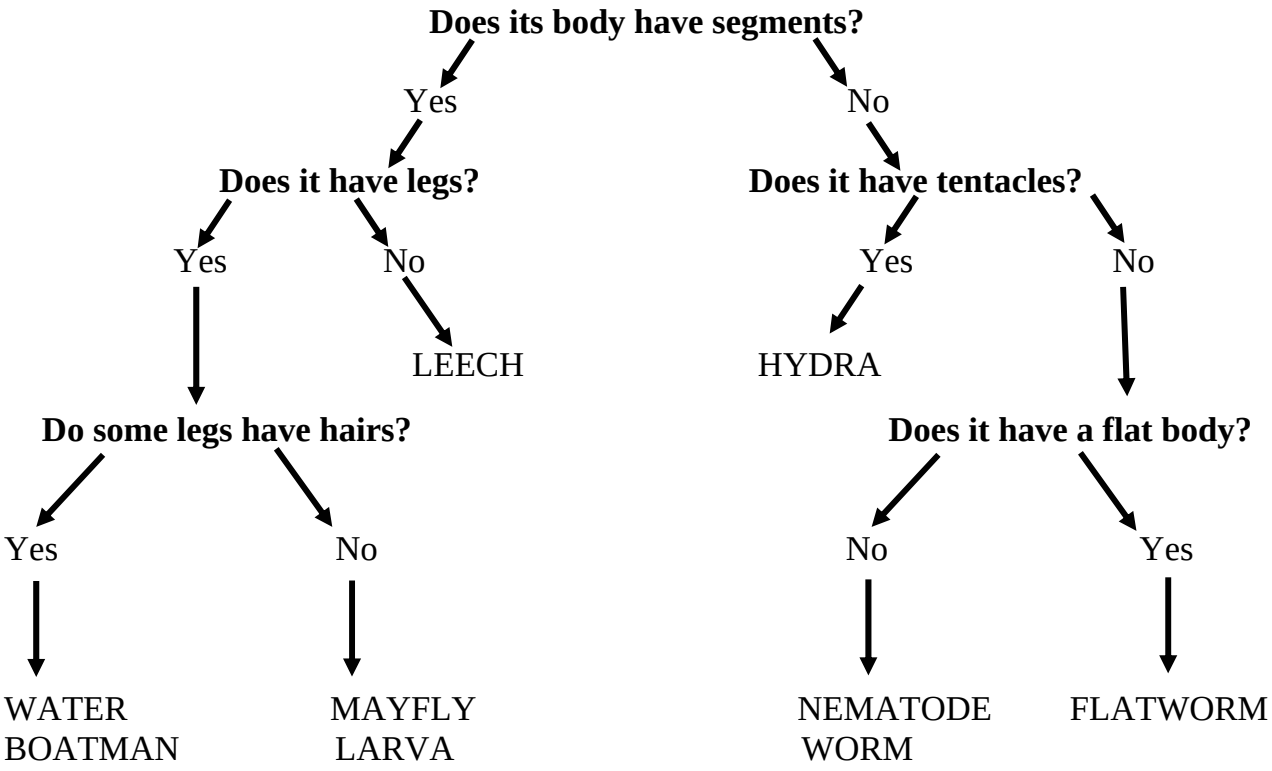
_____

(3 marks)

5. These animals were caught in a pond.



a. Use this key to work out what the animals are.



Find the names of the following animals:

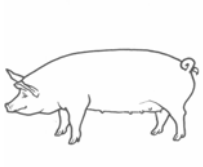
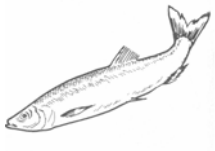
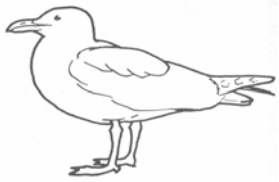
a is a _____ d is a _____

b is a _____ e is a _____

c is a _____ (5 marks)

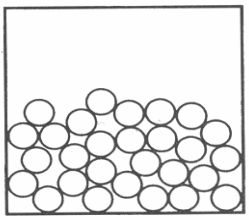
b. These animals do not have a backbone or other bones in their body. Therefore they are all called _____. (1 mark)

6. The following table is about vertebrate groups. Fill in the missing information. The first one has been done for you as an example.

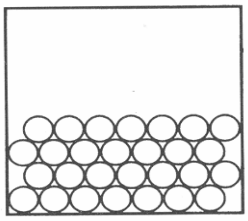
Animal	Vertebrate group	One detail belonging to this vertebrate group	Another example from this vertebrate group
	mammal	live birth	human being
			
			

(6 marks)

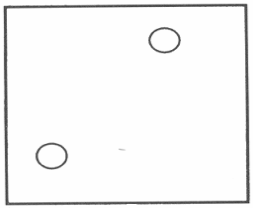
7. The diagram below shows particles in a solid, a liquid and a gas.



Box A



Box B



Box C

i. Which box shows the particles in:

a solid? _____ a liquid? _____ a gas? _____

(3 marks)

ii. Choose words from the following list to complete the sentences below.

boiling **condensing** **distilling** **evaporating**

filtering **freezing** **melting**

The change from water to steam is called _____

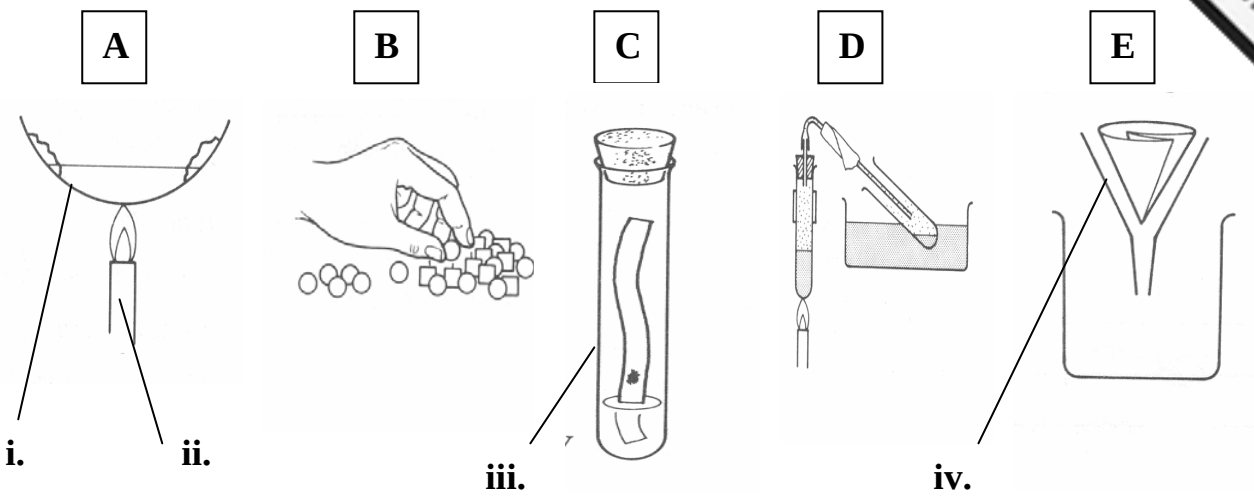
The change from ice to water is called _____

The change from liquid to solid is called _____

The change from steam to liquid is called _____

(4 marks)

8. Nicole draws five sketches of methods of separating mixtures.



a. Four pieces of apparatus, i, ii, iii and iv, are labelled on the diagrams.
Write down their names.

i. _____ **ii**. _____

iii. _____ **iv**. _____

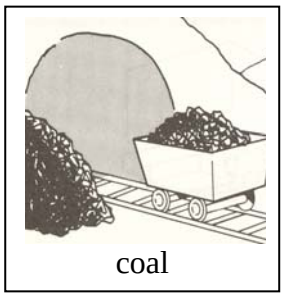
(4marks)

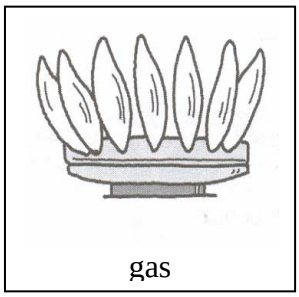
b. Which method could be used for each of the following separations?
Give a reason for your answer. Fill in the table to answer this question.
The first one has been done for you as an example:

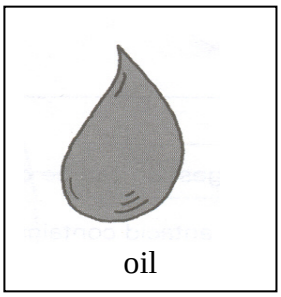
Separating…	**Diagram**	**Name of Method**	**Reason for using this method**
i. **Separating peas and beans**	B	By hand	They are solids which do not mix and cannot be separated by other methods
ii. Separating sand and salt solution to get the SAND			
iii.**Getting WATER from a salt solution:**			
iv. **Getting SALT from a salt solution**			

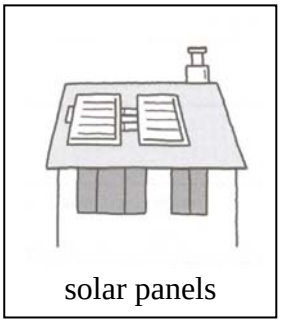
(9 marks)

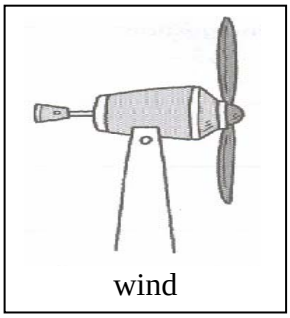
9. Look at the following six different energy sources.

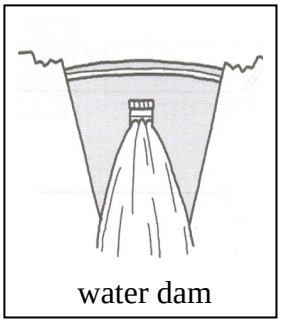

coal


gas


oil


solar panels


wind


water dam

a. Which three of these energy sources are fossil fuels?

_____ _____ _____

(3 marks)

b. The other three energy sources are different. Why are they different?

_____

(2 marks)

c. Complete these sentences describing the energy transfer:

i. The wind turbine transfers _____energy from the wind to _____energy.

ii. The solar panels transfer _____ energy from the sun to energy as _____.

(4 marks)

d. Do you think that the Governments should encourage
(i) more burning of fossil fuels, OR (ii) more use of renewable energy sour

Write a letter to your member of Parliament saying what you think the Governme should do.

Dear…
I think we should use more _____

to generate electricity because _____

_____

_____

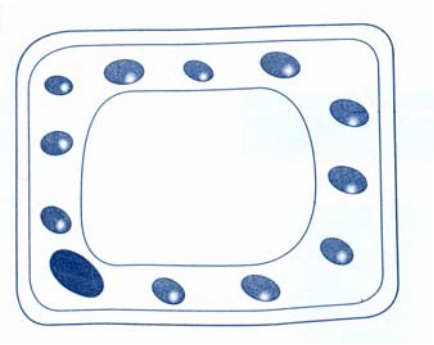
_____

_____

_____

(4 marks)

10. The diagram shows a plant cell.



a. Label the diagram. (6 marks)

b. What parts of a cell are found in both animal and plant cells? Tick THREE correct boxes?

cell membrane	cell wall	Chloroplast	cytoplasm	nucleus	Vacuole

(3 marks)

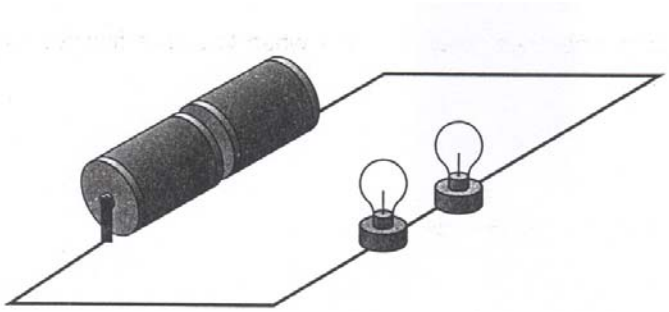
11. Emily is setting up an electrical circuit. She has wires, switches, bulbs and c
(batteries). She does not use them all.

a. Draw the symbols of the following:

Components	**Symbols**
bulb	
cell (battery)	
open switch	

(3 marks)

b. Look at the picture of Emily's circuit.



Use the symbols to draw a diagram of Emily's circuit.

(3 marks)

c. The bulbs in Emily's circuit are very bright. Emily removes one cell (battery) from the circuit. Complete the sentence below to describe the effect on the bulbs of removing a cell.

The bulbs will be _____

(1 mark)

d. Complete this sentence:
The circuit above has the bulbs connected in _____.

(1 mark)

e. What happens to the other bulb if one bulb is removed?

_____

(1 mark)

f. Look again at Emily's circuit. In what other way could the bulbs be connected? Draw this circuit.

(3 marks)

The bulbs in this circuit are connected in _____.

(1 mark)

g. Emily adds some different materials to her circuit. When some materials are placed in the circuit, the bulbs light up. Some materials do not allow the bulbs to light up. Finish the table by ticking (✓) the results of her experiment.

Material	**Bulbs light up**	**Bulbs do not light up**
Plastic		
Copper		
Rubber		

(3 marks)

h. Fill in the blanks:

Materials which allow electricity to flow through the circuit are called _____. Materials which do not allow electricity to flow through the circuit are called _____.

(2 marks)

- END OF PAPER. PLEASE CHECK YOUR WORK AGAIN -