

JUNIOR LYCEUMS ANNUAL EXAMINATIONS 2001
Educational Assessment Unit – Education Division



FORM 1

INTEGRATED SCIENCE

Time 1 hr 30 min

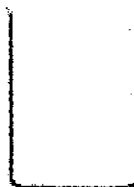
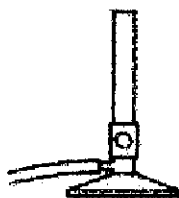
Name **Class**

1. (a) Christine sees the following **signs** on two chemical bottles. What do these signs tell her about the chemicals.

Sign	Meaning of sign
	
	

(2)

- (b) Write the names of the following **apparatus**:



(i) _____ (ii) _____ (iii) _____ (iv) _____

(4)

- (c) (i) What name would you give to this **experiment**?

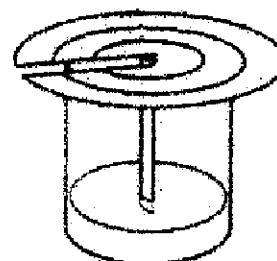
- (ii) Name **3 apparatus** you would use for this experiment.

- (iii) What would be the **result** of this experiment?

(1)

(3)

(2)



2. Look at these lists of living things.

Each list has one living thing that is the 'odd one out'.

This living thing lives in a different type of place to the others.

Underline the 'odd one out'.

Write a reason why you chose this one.

(a) **sheep** **cow** **octopus** **horse** **hen**

Reason: _____ (2)

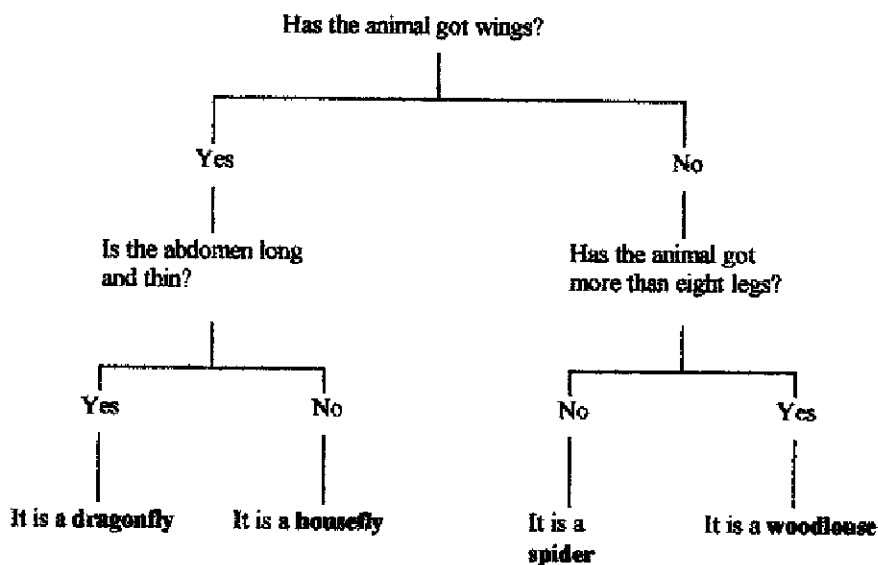
(b) **kangaroo** **koala bear** **mouse** **penguin** **rabbit**

Reason: _____ (2)

(c) **crab** **earthworm** **ant** **woodlouse** **snail**

Reason: _____ (2)

3. Here is a key. It can be used to identify four small animals.



(a) Write down two things you could use to identify a dragonfly.

(i) _____ (ii) _____ (2)

(b) Write down two things you could use to identify a woodlouse.

(i) _____ (ii) _____ (2)

(c) Martha finds an animal with eight legs and no wings. What in the key is it?

_____ (1)

- (d) Martha reads that woodlice prefer to live in dark places rather than light places. What could she do to find out whether this is true. (Write only two sentences).

(4)

- (e) She goes out and finds woodlice underneath a stone near a pond or in a piece of rotting wood. What else do woodlice like as well as darkness?

(1)

4. Lee has a mixture of salt and sulphur. He wants to separate them. He knows that salt dissolves in water but sulphur does not.

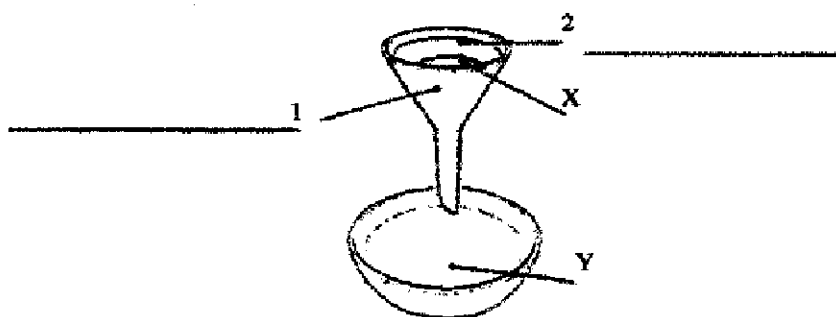
- (a) Lee decides to add water to the mixture, then he stirs it. Explain why he does this.

(2)

- (b) He then filters the mixture using this apparatus.

Label parts 1 and 2 on the diagram.

(2)



- (c) What substance is left at X? _____

(1)

- (d) What substance is collected at Y? _____

(1)

- 5 (a) The table shows the five stages in the water cycle. Finish the table by writing in numbers to show the correct order. Number 1 has been done for you.

Water condenses to form clouds	
Water runs into the sea	
Water falls as rain	
Water evaporates from the sea	1
Water vapour rises in the air	

- (b) (i) Some ice cubes are placed in a glass of water.
What happens to the temperature of the water after the ice cubes are placed in the glass?

_____ (1)

- (ii) Explain why the outside of the glass becomes misty?

_____ (2)

- (c) Ann wants to dissolve some sugar cubes in water as quickly as possible. Suggest three things she should do.

- (i) _____
(ii) _____
(iii) _____



(3)

6. The following question is about energy changes.

- (a) I get my energy from _____. When I paddle a bicycle, my _____ energy is transferred to _____ energy and energy to _____ up my body.



(4)

- (b) In a typical week you might eat 10 kg of food.
Explain why you are not 10 kg heavier at the end of the week.

(2)

(c) Write the **starting energy** and the **finishing energy** of the following:

	starting energy	finishing energy
a paper pellet is fired from a catapult		
a yoyo is moving up and down		
playing an electric guitar		

(6)

7 (a) Write down what each of these **instruments** is used to measure:

(i) a ruler is used to measure _____

(ii) a thermometer is used to measure _____

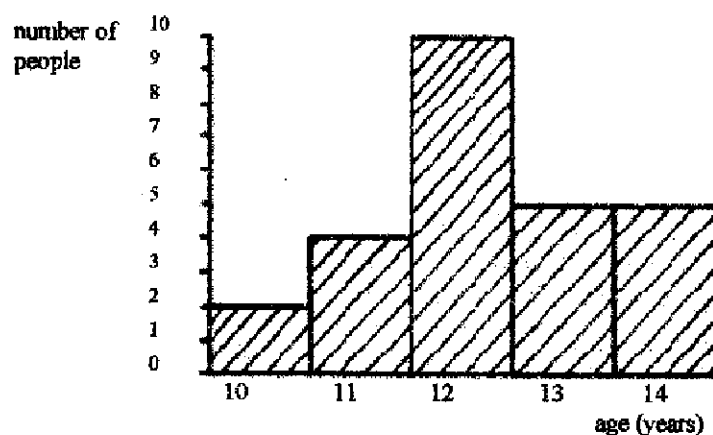
(iii) a measuring cylinder is used to measure _____

(iv) a balance is used to measure _____

(4)

(b) Sue and Maria did a survey in their youth club.

This bar-chart shows the ages of the people in their club:



(a) How many people are aged 12? _____

(1)

(ii) How old is the youngest person? _____

(1)

(iii) How many people are in the youth club? _____

(2)

(iv) Which is the most common age group? _____

(1)

8 (a) Sara made this circuit to test which things conduct electricity.

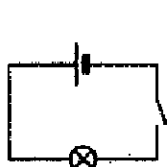


Choose the 4 things from this box that would complete Sara's circuit. Place a circle round your answer(s)

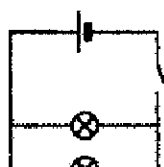
glass copper rubber iron wood aluminium steel plastic

(8)

(b) Look at each of the circuits shown in the diagrams. Then answer the questions below.



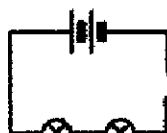
(i)



(ii)



(iii)



(iv)



(v)

(i) In which circuits are the lamps in series? _____

(2)

(ii) In which circuit are the lamps in parallel? _____

(1)

(iii) In which circuit will the lamps be brightest? _____

(2)

(iv) In which circuit will the lamps be dimmest? _____

(2)

(c) (i) Peter is searching out of the shower to switch on the light with an ordinary switch. Write a sentence to explain why this is dangerous.



(1)

(ii) Sam is filling the kettle at the tap. What has she forgotten to do?



(1)

Why is it dangerous?

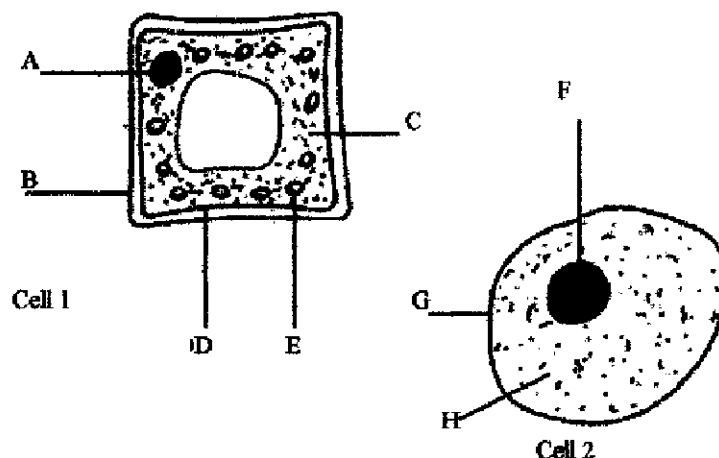
(1)

(iii) Anita is plugging the toaster to the same socket as the washing machine and the kettle. Why is this dangerous?



(2)

9. Look at these pictures of cells.



(a) (i) Which line is pointing to a cell wall? _____

(1)

(ii) Which line is pointing to a chloroplast? _____

(1)

(iii) Which two lines are pointing to a nucleus?

_____ and _____

(2)

(iv) Which is a plant cell? _____

(2)

(b) Read these sentences. Each one is about a **part of a cell**. Write its name.

(i) I control what is going on inside the cell. _____ (1)

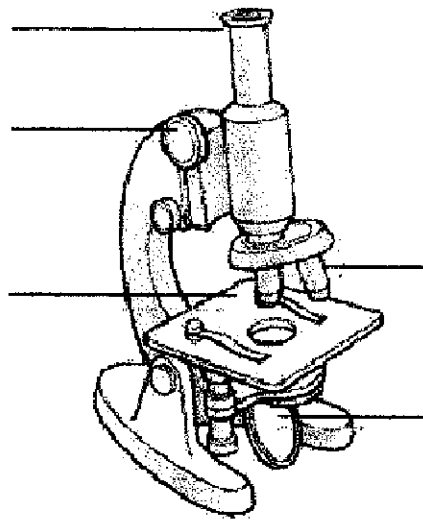
(ii) I surround plant and animal cells. _____ (1)

(iii) I am strong and support plant cells. _____ (1)

(iv) I am the stuff that cells are full of. _____ (1)

(c) Look at this picture of a **microscope**.

Label the parts using the words in the box.



eyepiece, objective lens, stage, focusing knob, mirror

(5)