SECONDARY SCHOOLS ANNUAL EXAMINATIONS 2000

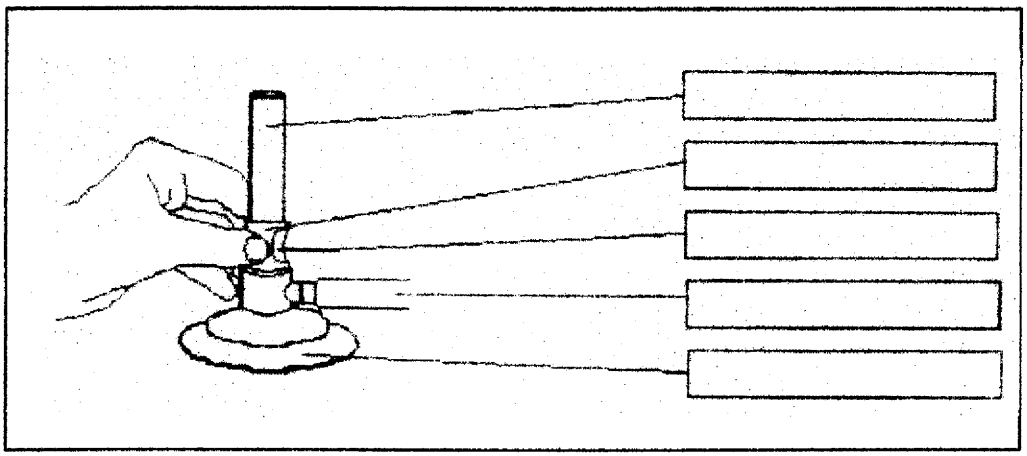
Educational Assessment Unit – Education Division

FORM 1 **INTEGRATED SCIENCE** **Time 1 hr 30 min**

Name ..... **Class** .....

1 (a) **Label** the Bunsen burner using the words below:

collar, air-hole, base, rubber tubing, barrel.



(5)

(b) The Bunsen Burner has 2 flames.

(i) Which flame would you use to heat a beaker of water? _____ (1)

(ii) Give two reasons for your answer _____ (2)

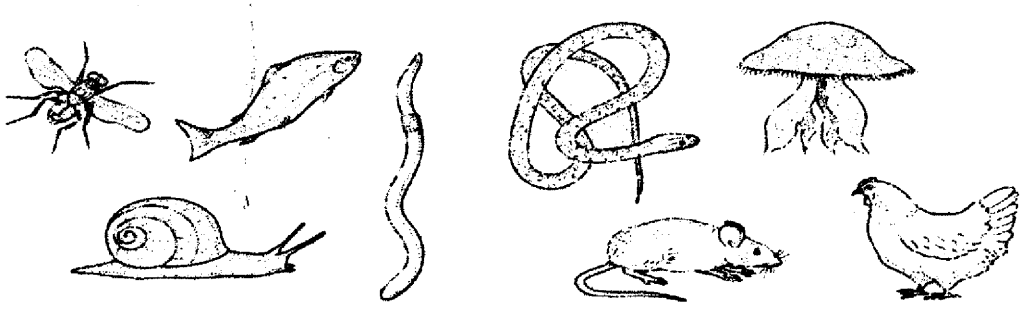
_____

(iii) Write down two safety rules you should follow when you are in the laboratory.

_____

_____ (4)

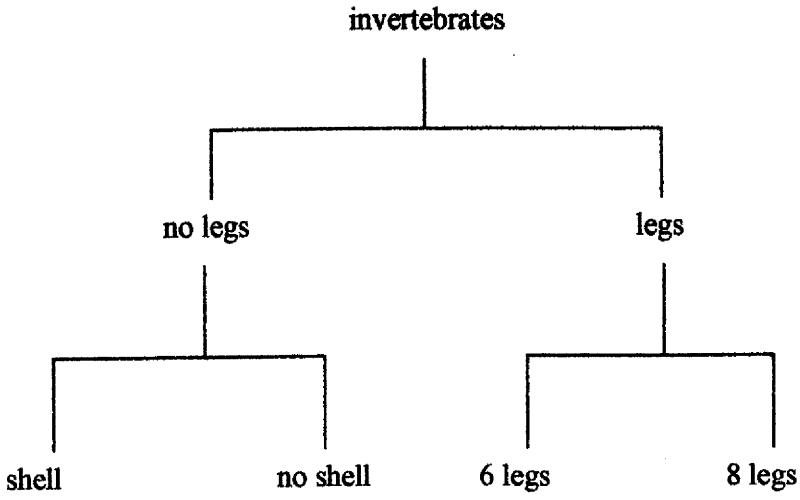
2 (a) Draw circles round the **animals with a backbone**:



(4)

(b) The picture shows four invertebrates found in a wood. Use the following **key** to identify them.

(i)



	Animals
	beetle
	earthworm
	snail
	spider

A _____ B_____ C _____ D _____

(4)

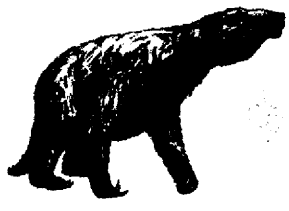
(ii) The two main groups of animals are the _____(animals with backbones)

and the _____ (animals without backbones). (2)

3 (a) Megatherium was a large **mammal**. It is now extinct.

The drawing shows what scientists think megatherium looked like.

(i) How can you tell from the drawing that megatherium was a **mammal**?



_____

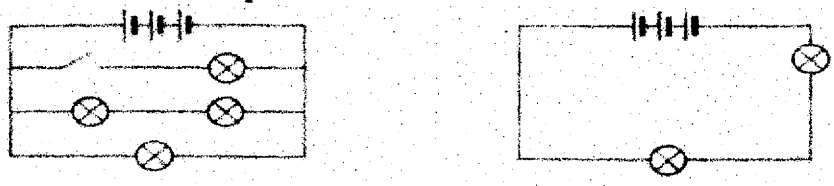
(1)

(ii) Give one other way that **mammals** are different from other vertebrate animals

_____

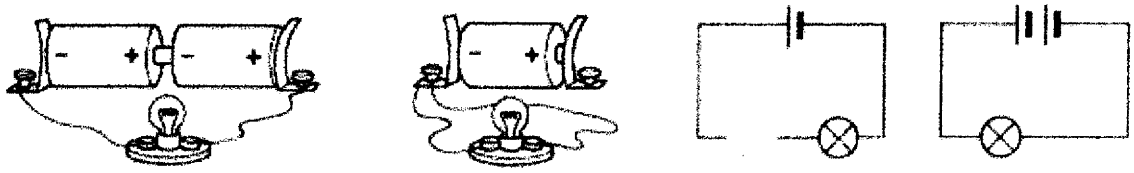
(2)

(b) Label each circuit as **parallel** or **series**.



(i) _____ (ii) _____ (2)

(c) Draw a circle round the circuits where the bulb would light..



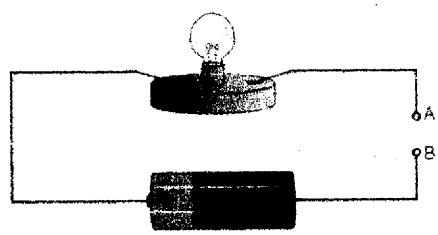
(4)

(d) Name the **symbols**:

(i) _____ (ii) _____ (iii) _____ (iv) _____ (4)

9 John connected a battery and a bulb as shown in the diagram.

He put different objects between A and B.



(a) Which objects make the bulb light?

Put a tick in the right box for each object.

Object	Bulb lights up	Bulb does not light up
A match stick		
An iron nail		
Aluminium foil		
A plastic spoon		
A one cent coin		
A piece of cardboard		

(6)

(b) (i) A substance that makes the bulb light up is called _____.

(ii) A substance that does not make the bulb light up is called _____.

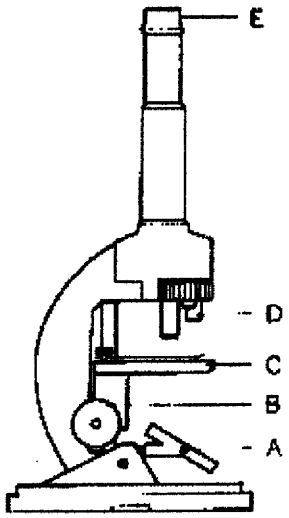
(2)

(c) Draw a circle round the set of batteries that will work if used in an electrical circuit.

(a) (b) (c)

(1)

10. (a) This is the drawing of a **microscope**.



Answer the following questions:

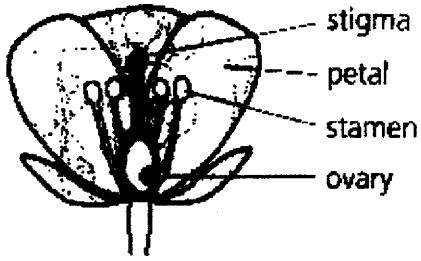
(i) Which letter points to the eye-piece lens? _____

(ii) Where would you put the microscope slide? _____

(iii) What is part A called? _____

(3)

(b) Write the name of the correct plant part next to its job.



Job	Plant part
Makes and stores pollen	
Gives a sticky surface for pollen to land on	
Attracts insects	
Makes the seeds	

(4)

(b) Below is a list of **vertebrates**:

Decide which group each belongs to and complete the table:

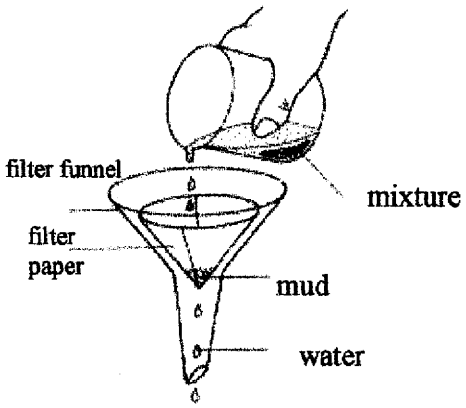
sparrow, newt, herring, toad, monkey, snake, robin, cod.

Mammal	Reptile	Bird	fish	amphibian

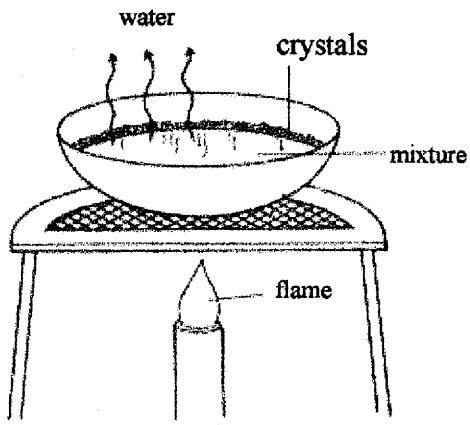
(8)

4 (a) Give the name of the method of separation choosing from the words below.

Filtering, distilling, evaporating, chromatography.



(i)



(ii)

(2)

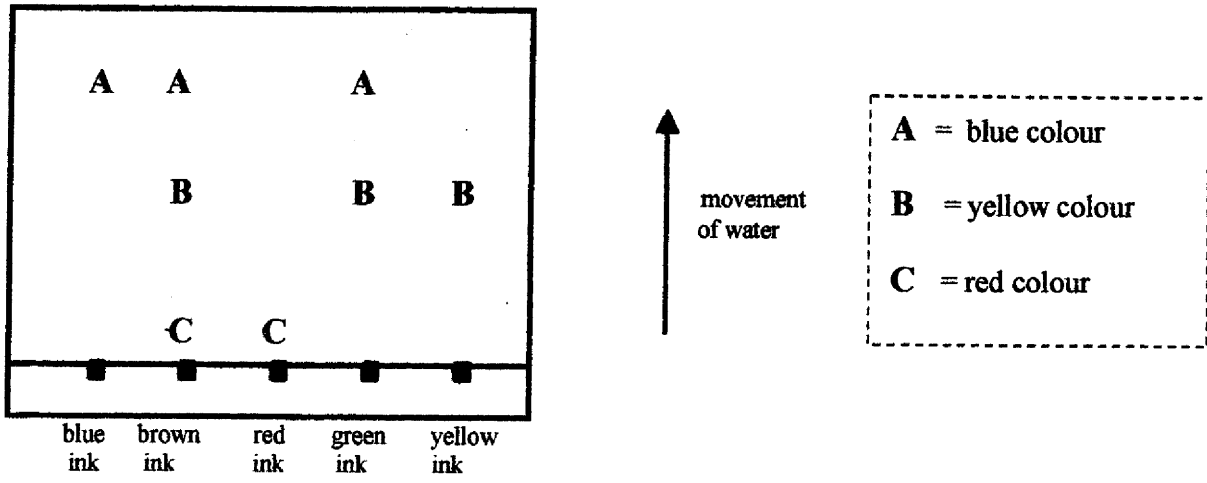
(b) From the above write down which method you would use to separate the following

(i) Sand and water _____

(ii) Salt and water _____

(4)

(c) A pupil used **chromatography** to show which dyes are present in different coloured inks. The diagram shows some of her results.



(i) Which ink is a pure colour? _____. (1)

(ii) Which ink is made from three different colours?_____.

(1)

(iii) If Jane uses a **permanent marker** what happens? Underline the correct answer.

many colours come out,

the colour does not spread out,

three different colours come out.

(2)

5 Complete these sentences using the words below:

boil, condenses, evaporate, melt, flammable

(a) (i) When a liquid dries up it is said to _____.

(ii) When ice turns to water it is said to _____.

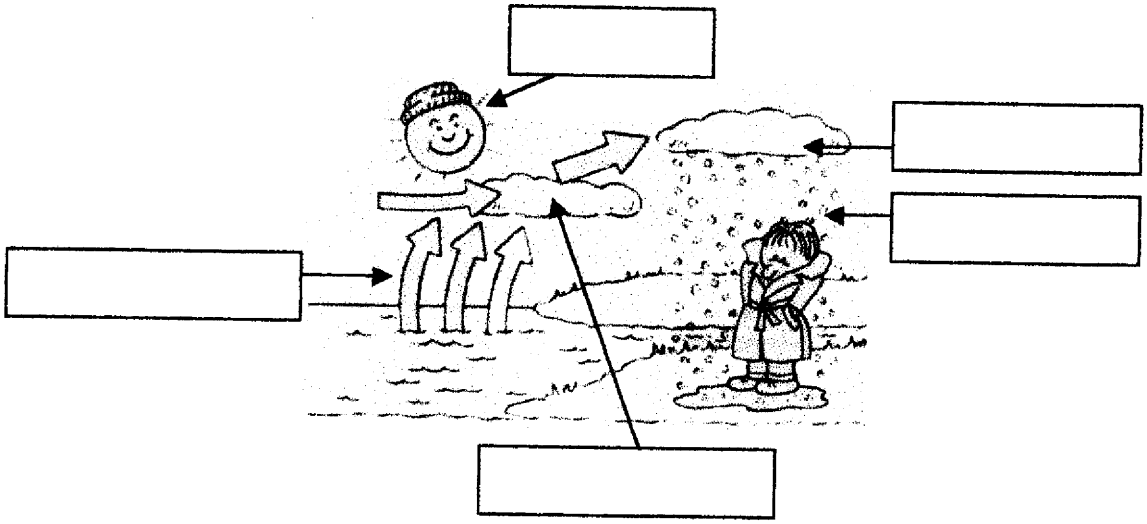
(iii) When steam hits a cold mirror it _____.

(iv) When water is heated to 100^0 C it will _____.

(v) Something that is easily set on fire is said to be _____. (5)

(b) Add these words to label the **Water Cycle:**

evaporation, condensation, sun, rain, clouds.



(5)

6 Complete the table to show the **energy transfers** involved using the following words:
You may use the same word more than once.

Movement energy, sound energy, electrical energy, stored energy.

(i) Clockwork toy	stored energy to _____
(ii) Ringing a door bell	_____ to _____
(iii) Steam engine	heat energy to _____
(iv) Electric motor	_____ to _____
(v) Pedalling a bike	_____ to _____

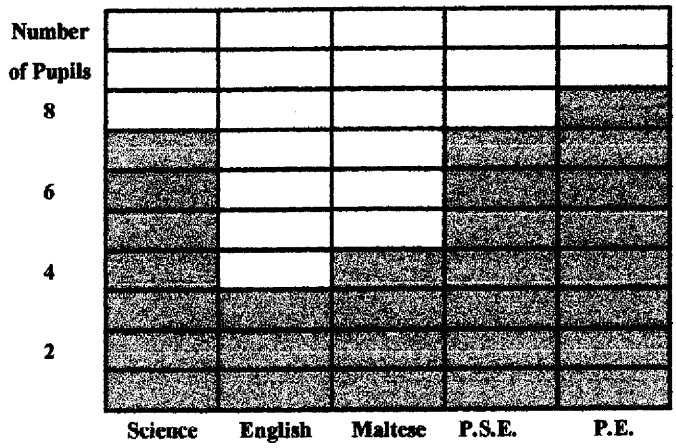
(8)

7 Two pupils were measuring the **mass** of some objects.

(a) Which **instrument** did they use? _____ (1)

(b) Name the **unit** which is used to measure mass. _____ (1)

(c) This bar graph shows the favourite subjects of a class of pupils:



(i) How many pupils prefer P.E.? _____

(ii) Which subject is the least favourite? _____

(iii) How many pupils prefer languages ? _____

(iv) How many pupils are there in the class? _____

(4)

(d) Write **true** or **false**:

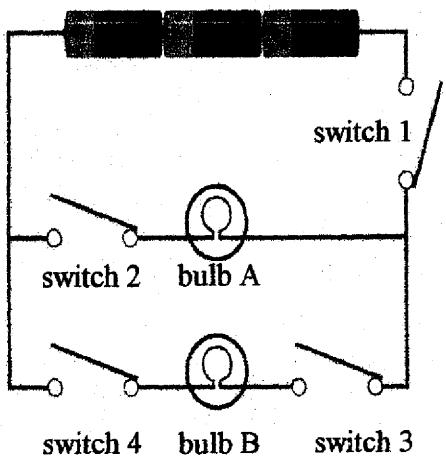
(i) The measuring cylinder is used to measure volume. _____ (1)

(ii) The normal body temperature is 50^0C. _____ (1)

(iii) The pulse rate means how fast you can run. _____ (1)

(iv) Ice melts at 0^0 C. _____ (1)

8 Mary has made a circuit with two bulbs, three batteries and four switches.



(a) What will happen if Mary:

(i) Closes switches 1 and 2?

_____

(ii) Closes switches 3 and 4?

_____

(iii)Which switches have to be closed for both bulbs to light?

_____

(3)