

JUNIOR LYCEUMS ANNUAL EXAMINATIONS 2000

Educational Assessment Unit – Education Division

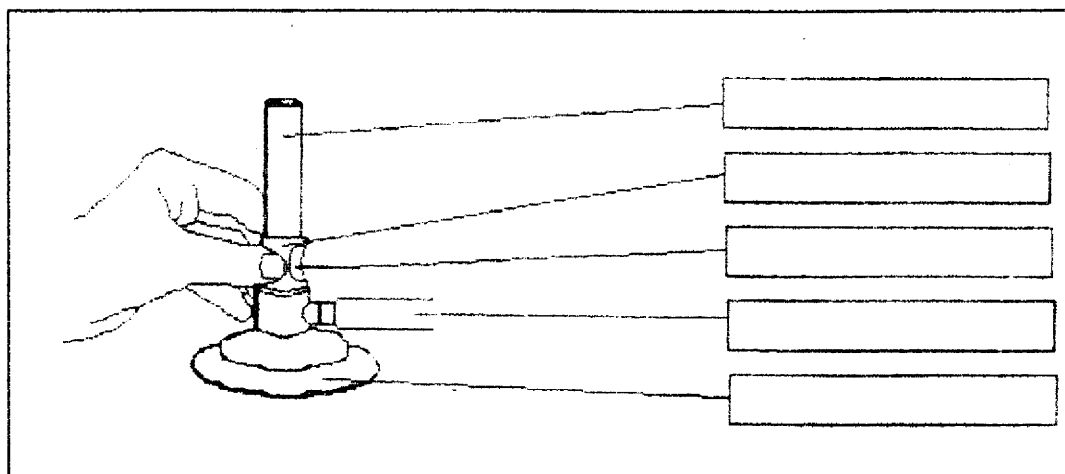
FORM 1

INTEGRATED SCIENCE

Time 1 hr 30 min

Name Class

1 (a) Label the Bunsen burner.



(5)

(b) The Bunsen Burner has 2 flames.

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

(1)

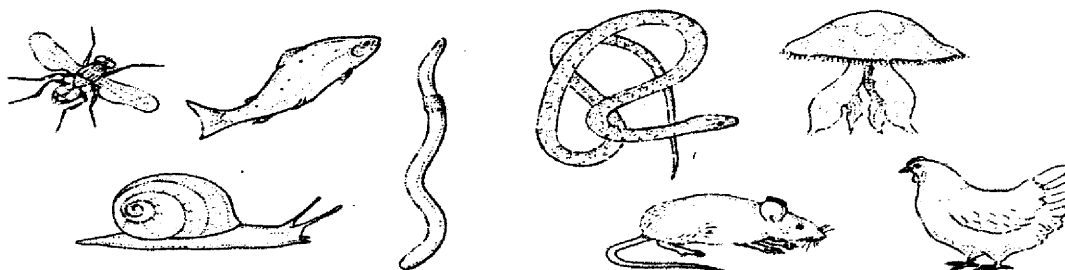
(ii) Give two reasons for your answer _____

(2)

(iii) Write down two safety rules you should follow when using the Bunsen burner.

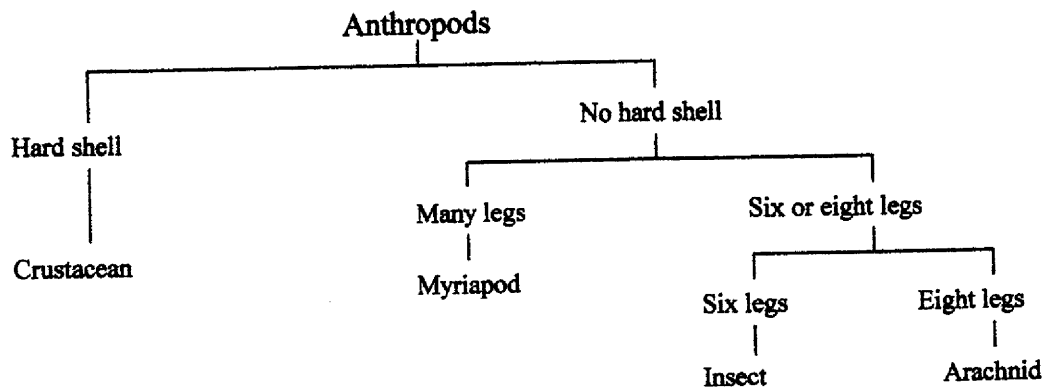
(4)

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



(4)

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



(i) A _____ B _____ C _____ D _____

(iii) The two main groups of animals are the _____ (animals with backbone) and the _____ (animals without backbones).

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**?



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

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

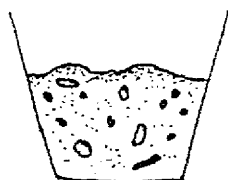
Decide which group each belongs to and complete the table:

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

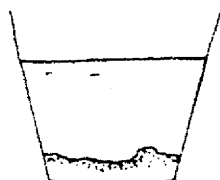
mammal	reptile	bird	fish	amphibian

(8)

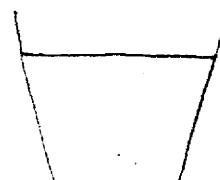
4 (a) Give the name of the method you would use to **separate** the following mixtures. Underline the **apparatus** you would use to separate each mixture. The first one has been done for you.



Mixture A
sand and pebbles



Mixture B
sand and water



Mixture C
salt and water

(i) Mixture A

(ii) Mixture B

(iii) Mixture C

Sieving

Sieve , beaker, tripod,
bunsen burner, funnel,
filter paper, evaporating
dish

Sieve , beaker, tripod,
bunsen burner, funnel,
filter paper, evaporating
dish

Sieve , beaker, tripod,
bunsen burner, funnel,
filter paper, evaporating
dish

(4)

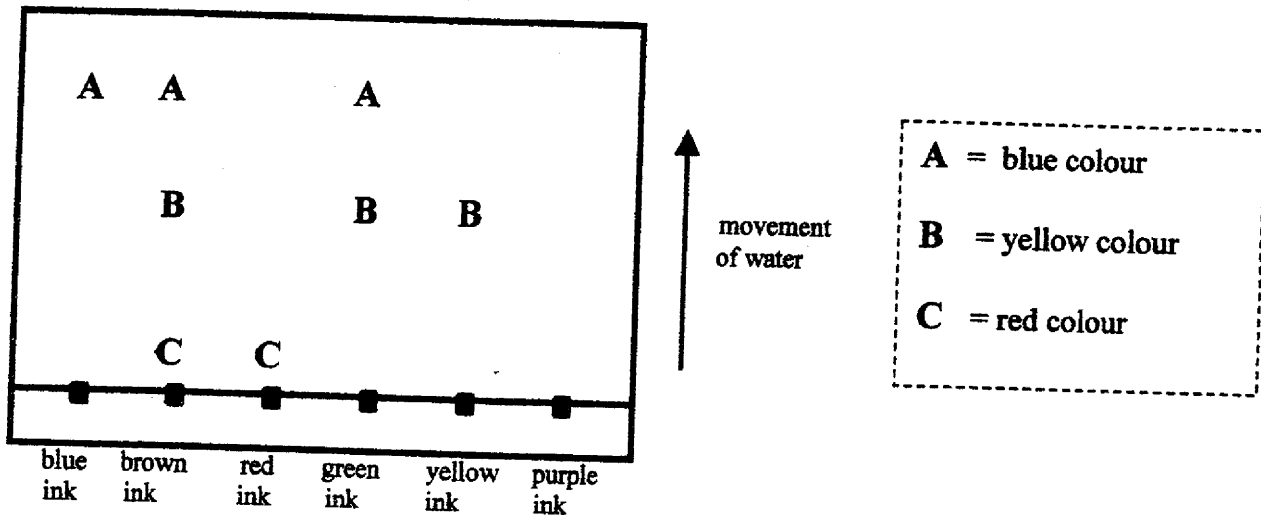
(b) John then collected a bucket full of sea water. The sea water contained sand, salt and water.

Write three sentences to describe how John could **separate** the sand and salt from the sea water.

(3)

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

The results for purple ink are missing



- (i) Give the colour of an ink which contains three dyes _____ (1)
- (ii) The purple ink is a mixture of red and blue dyes.
- On the diagram draw the results you would expect from purple ink. (1)
- (iii) Jane did the same experiment. Her results were different. Why?

_____ (2)

5 Complete these sentences:

- (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°C it will _____.
- (v) Something that is easily set on fire is said to be _____ (5)

- (b) This passage is about **the water cycle**. Fill in the blanks.

The Water cycle takes place when the _____ heats the sea and causes the water to _____. This vapour rises from the sea and _____ into tiny drops of water.

The droplets group together and form _____. When these droplets become heavy

enough they fall as _____ which runs into rivers and then into the sea. (5)

6 Complete the table to show the **energy transfers** involved.

- (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.

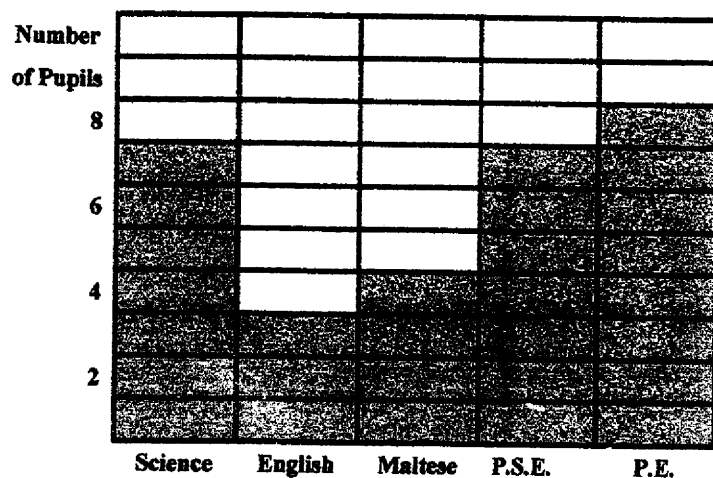
(a) Which **instrument** did they use? _____

(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°C . _____ (1)
- (iii) The pulse rate means how fast you can run. _____ (1)
- (iv) Ice melts at 0°C . _____ (1)

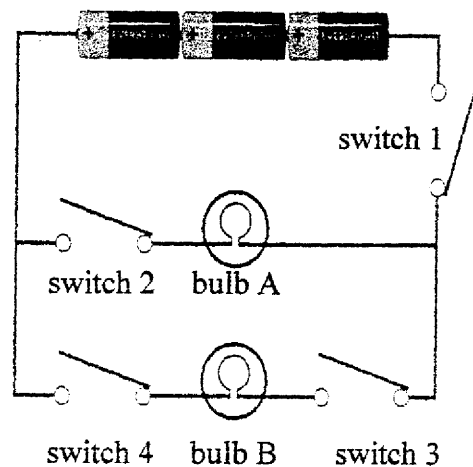
8 Mary has made a circuit with two bulbs, three batteries and four switches.

(a) What will happen if Mary:

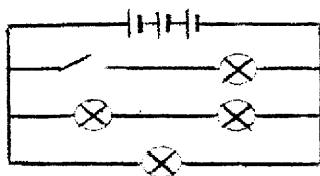
(i) Closes switches 1 and 2?

(ii) Closes switches 3 and 4?

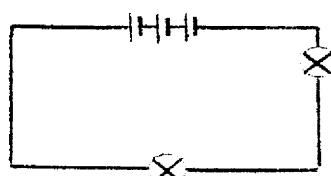
(iii) Which switches have to be closed for both bulbs to light?



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



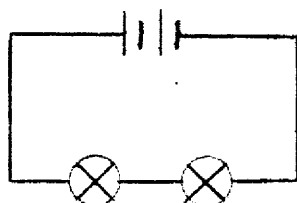
(i) _____



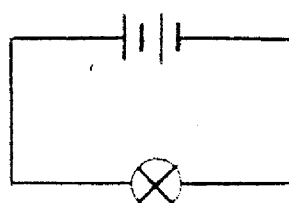
(ii) _____

(c) Tick the circuit where the current is higher.

A



B



(3)

(2)

(1)

(d) Name the **symbols**:

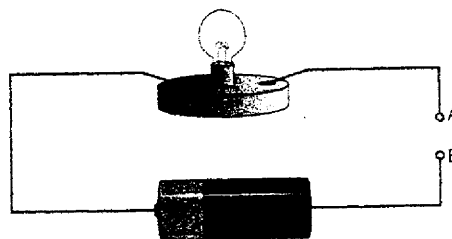


(i) _____ (ii) _____ (iii) _____ (iv) _____

(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 _____.

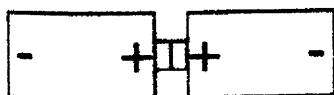
(2)

(c) Underline the word from the list that describes substances that **conduct** electricity.

magnets metals plastics shiny solids

(1)

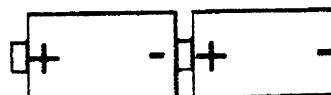
(d) Draw a circle round the set of batteries that will work if used in an electrical circuit.



(a)



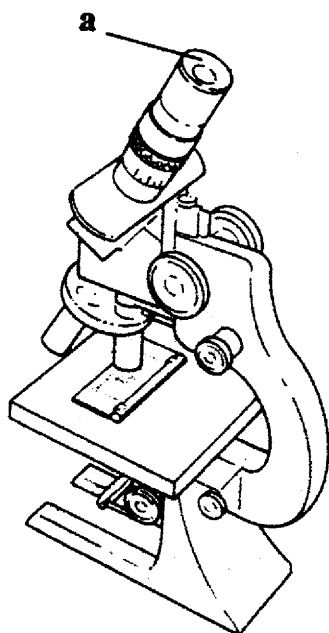
(b)



(c)

(1)

10 (a) Look at the **microscope** and answer the following questions:



(i) Why do we use a microscope?

(ii) Where would you put the microscope slide?

(iii) How would you put the object in focus?

(iv) What is the part labelled "a" called?

(4)

(b) The **plant** is made up of different parts.

Each part has a job to do.

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	
Protects the flower bud	
Makes the seeds	

(5)