

**ELEMENTARY SCIENCE AND
TECHNOLOGY**

PEST

07 NOV. 2012 9.00AM -11.00AM

Pupil's complete index number

Province/City District Sector School Pupil

--	--	--	--	--	--	--	--	--	--

Pupil's names

Surname:

Other Names:

REPUBLIC OF RWANDA



RWANDA EDUCATION BOARD (REB)

PRIMARY LEAVING NATIONAL EXAMINATIONS 2012

NOVEMBER 2012

ELEMENTARY SCIENCE AND TECHNOLOGY

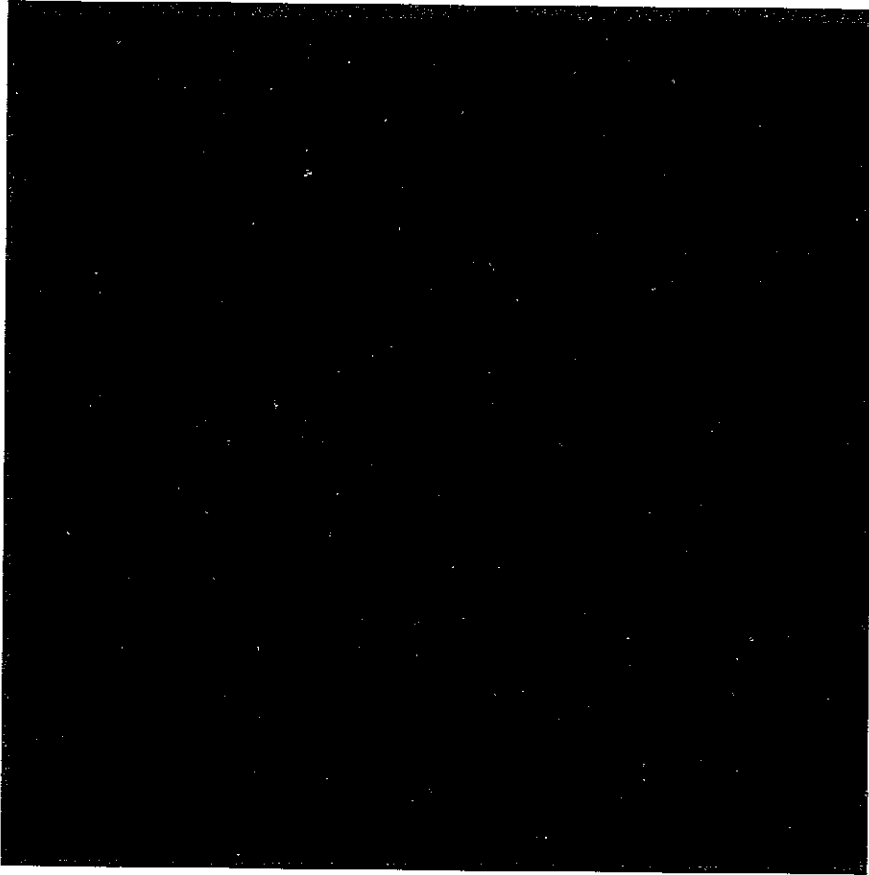
DURATION: Two hours

Marks:

/ 100

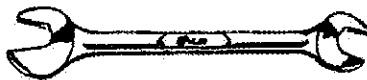
Instructions

- In the space provided, write your index number and names in full as written on your registration form.
- Answer all questions.
- Write your answers in the space provided on your question paper.
- Read each question carefully before answering it.
- Do not make unnecessary changes.



SECTION A (50marks)

1. The tool below is used in mechanics.



(a) What is the name of the tool?

..... (1mark)

(b) This tool is used to

..... (1mark)

2. Running water on hillsides causes soil erosion. How can this erosion be prevented?

.....

..... (2marks)

3. Mention two dangers that stagnant water can cause.

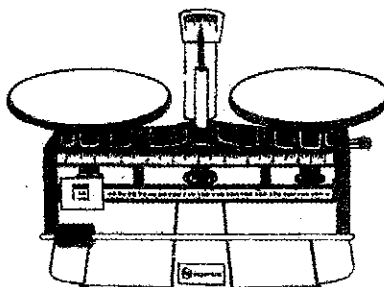
(2marks)

.....

.....

.....

4. Below is an instrument used in everyday life.



(a) What is this instrument called?

(1mark)

.....

(b) Which of the following quantities is this instrument used to measure: weight, mass, force of a body? **(1mark)**

.....

5. Given the following objects: wooden door, sunglasses, glass in a window. Which of them is?

(a) opaque? **(1mark)**

(b) Transparent? **(1mark)**

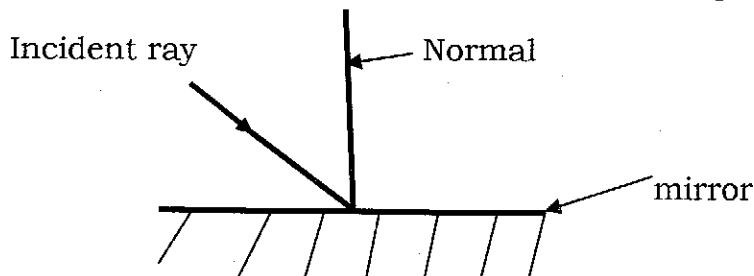
(c) translucent? **(1mark)**

6. The mass of a stone is 200g and its volume is 80 cm³. Calculate the density of the stone. **(2marks)**

.....

.....

7. The diagram below shows reflection of light from a plane mirror.



Complete the diagram and show: reflected ray, angle of incidence and the angle of reflection. **(3marks)**

8. Water exists in three states. What are the common names of these states? **(3marks)**

(a).....

(b).....

(c)

9. Mention two ways of making water from a lake safe for drinking. **(2marks)**

(a).....

(b).....

10. If you have some meat you want to keep for more days without getting spoilt, which two ways can you use to preserve it? **(2marks)**

(a)

(b).....

11. Which type of energy helps us to see objects and to read books? **(2marks)**

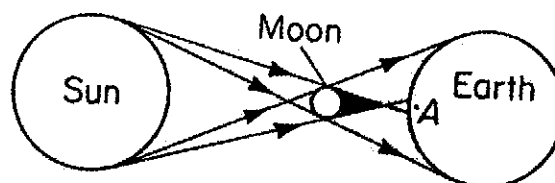
.....

12. (a) By which heat transfer method does heat from the sun reach the earth? **(1mark)**

(b) To boil water in a saucepan heat is applied underneath the saucepan. Which heat transfer method does the heat reach the water at the top in the saucepan?

.....**(1mark)**

13. Below is an eclipse of the sun by the moon. The tip of the umbra has failed to reach the earth's surface. What is the name of this type of eclipse? **(2marks)**



14. An echo is a property of sound called **(2marks)**

.....

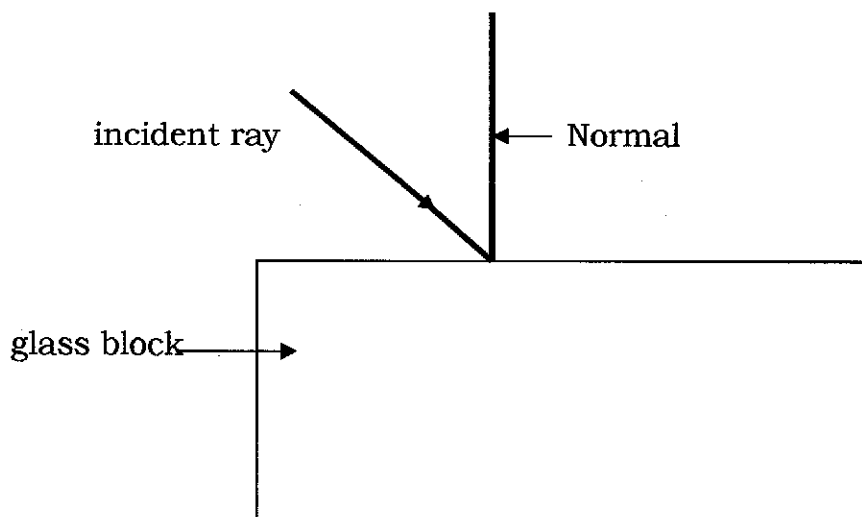
15. Modern technology has made it possible to store sound. Give two ways of storing sound. **(2marks)**

(a)

.....

(b)

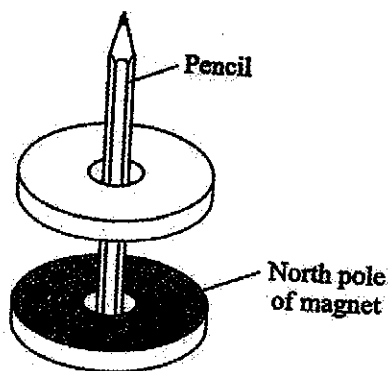
16. Below is a glass block and a light ray entering it. Complete the diagram to show the path of the ray through the glass block. Label emergent ray. **(3marks)**



17. A magnet strongly picks copper. Is this statement correct? **(2marks)**

.....

18. The diagram below shows two circular magnets.



Complete the following sentence : The top magnet floats above the bottom magnet because the two poles are facing each other and similar poles

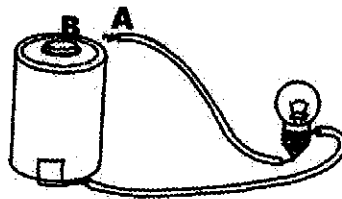
(2marks)

19. Suppose you dissolve salt in water, how can you get back the salt? **(3marks)**

.....

.....

20. The diagram below shows an electric lamp, connecting wires and a battery.



(a) Can the lamp indicated in the diagram give light?
..... (1mark)

(b) Explain your answer.
..... (2marks)

(c) What would you observe when the end of wire A is connected to the terminal B?
..... (1mark)

(d) What will happen if there are two lamps in the circuit and one battery?
..... (1mark)

21. Which different methods can you use to cook potatoes? (2marks)

.....
.....

SECTION B (50 marks)

22. a) A lung disease caused by bacteria is called..... (1 mark)
.....

b) In what ways is the housefly dangerous to people? (1 mark)
.....
.....

c) State two diseases spread by the housefly to people. **(2 marks)**

.....
.....

23. a) The difference between AIDS and HIV is that **(1 mark)**

.....
.....

b) The main method through which AIDS can be spread is **(1 mark)**

.....

c) In what way is the spread of AIDS similar to that of gonorrhea? **(1 mark)**

.....

24. a) Three characteristics of birds are. **(3 marks)**

(i).....

(ii).....

(iii).....

b) In what ways are birds similar to reptiles? **(1 mark)**

.....

c) A cow is called a ruminant because

..... **(1 mark)**

d) (i) Which category of animals carry their young ones in a pouch? **(1 mark)**

(ii) Give one example of animals that carry their young ones in a pouch **(1 mark)**

25. a) The part of the flower that receives pollen grains is

..... **(1 mark)**

b) (i) The female part of a flower is called..... **(1 mark)**

(ii) The parts that make up the female part of the flower are. **(3 marks)**

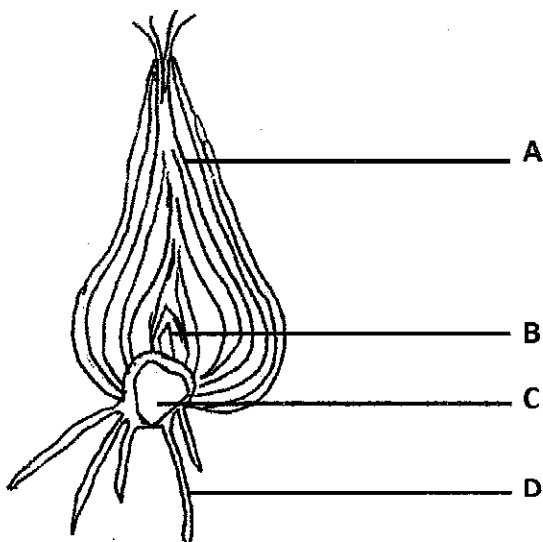
.....

26. a) Fill in the table below with three differences between insect and wind pollinated flowers. **(3 marks)**

Insect pollinated flowers	Wind pollinated flowers
(i)	
(ii)	
(iii)	

b) Fertilization is **(1mark)**

27. The diagram below is of an Onion.



Name the parts A, B, C and D.

(4 marks)

- A
- B
- C
- D

28. a) How is a stem useful to plants?

(2 marks)

.....

.....

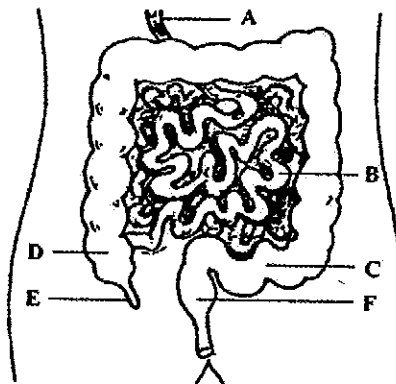
b) Besides carrying out photosynthesis, how else are leaves useful to plants?

(1 mark)

.....

29. The diagram below shows the lower part of the alimentary canal.

Use it to answer the questions that follow.



a) Name the parts marked A, B, C, D, E, F.

(3 marks)

- A
- B
- C
- D
- E

F

b) What important process takes place in part C? **(1 mark)**

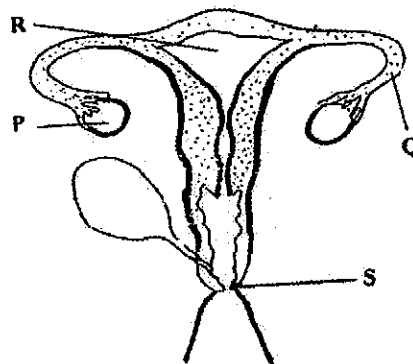
.....

c) How is part F useful? **(1 mark)**

.....

.....

30. The diagram below shows the female reproductive organs.



a) Name the parts marked P, Q, R, S. **(4 marks)**

P

Q

R

S

b) What is the function of part P? **(1 mark)**

.....

c) Name at least one process that takes place in part R. **(1 mark)**

.....

d) What type of fertilization takes place in people? **(1 mark)**

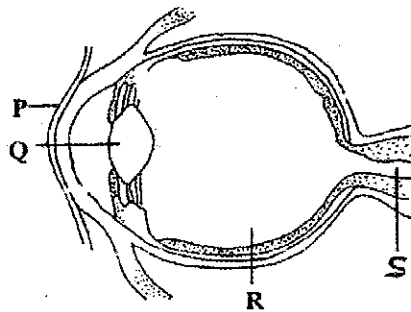
.....

- e) How is such fertilization different from that in amphibians (frog, toads, etc.)?

(2 marks)

.....
.....

31. The diagram below shows a human eye.



- a) Name the parts labeled P, Q, R, S.

(4 marks)

P

Q

R

S

- b) What is the function (use) of part Q?

(1 mark)

.....

- c) Which part of the eye is sensitive to light rays and so send messages to the brain?

(1 mark)

.....