

**SCIENCE AND ELEMENTARY
TECHNOLOGY
PSET**

23/10/2013 9.00 a.m-11.00 a.m

Pupils complete index number

Province/City district Sector school Pupil

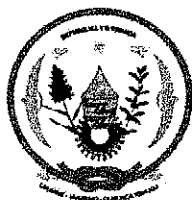
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Pupil's names

Surname:.....

Other names.....

REPUBLIC OF RWANDA



RWANDA EDUCATION BOARD

PRIMARY LEAVING NATIONAL EXAMINATIONS 2013

Science and Elementary Technology

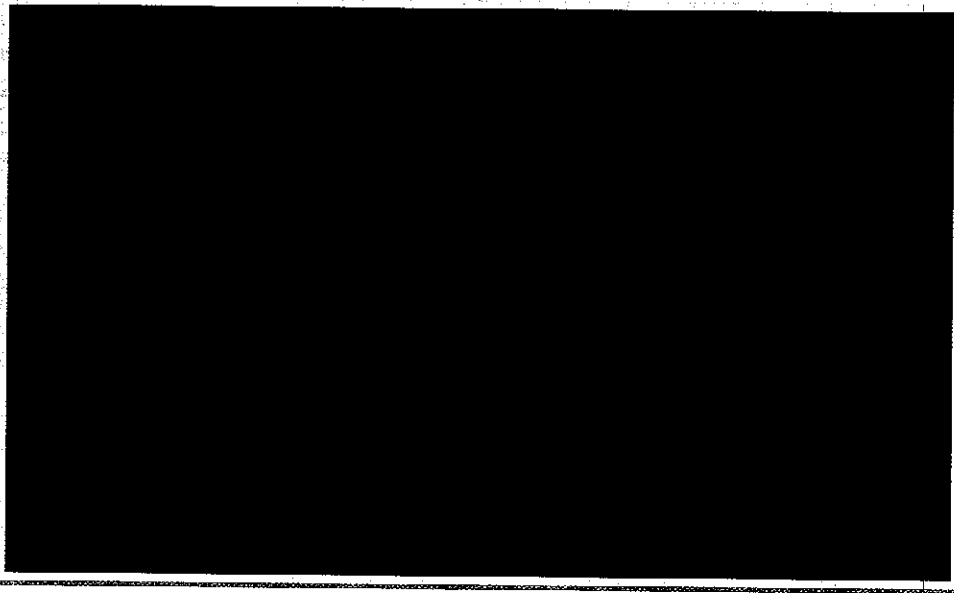
Duration: Two hours

Marks:

/100

INSTRUCTIONS

- 1) Don't open this question paper until you are told to do so.
- 2) This paper consists of 12 pages and 37 questions. Before starting, verify if all pages and all questions are there and are arranged in order.
- 3) Write your complete index number and names in full (as written on your registration form) in the spaces provided above.
- 4) This paper has Two sections: A and B
- 5) Questions in both sections are compulsory and must be answered as instructed.
- 6) Read each question carefully before answering it.
- 7) Answer the questions in the space provided on this question paper.



ANSWER ALL QUESTIONS (100 marks)

SECTION A (50 marks)

1. The tool below is used in mechanics .



This tool is called and it is used to or
.....the bolts. **(2marks)**

2. Why does a piece of dry wood float on water while an iron nail sinks to the bottom of water? **(2marks)**

.....
.....

3. Two ways through which lake water is made dirty are:

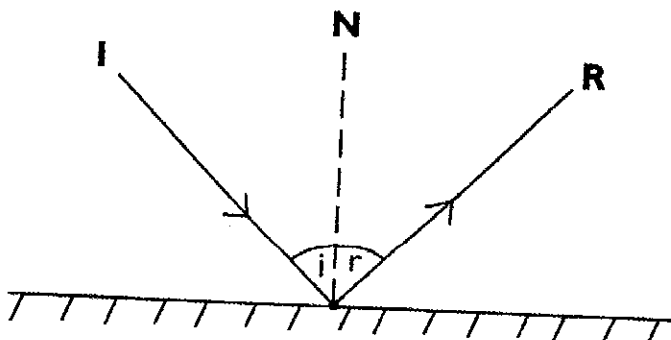
a)..... **(1mark)**

b) **(1mark)**

4. The moon light at night comes from **(2marks)**

.....
.....

5. The figure below shows a ray of light being reflected by a plane mirror.



Which is

a) The incident ray?

..... (1mark)

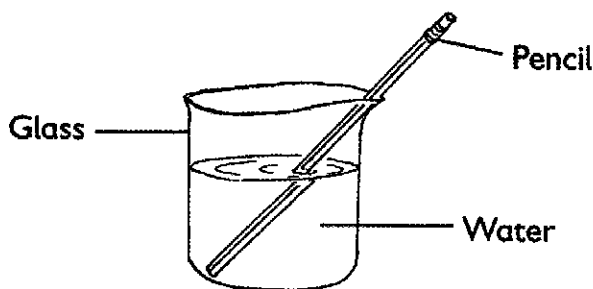
b) The angle of reflection?

..... (1mark)

6. Use the figure in question 5 above and state the relation between angle i and r . (2marks)

.....
.....
.....

7. A pencil is put in water. See figure below. The pencil appears bent.



a) How does the pencil appear when it is removed from the water? (1mark)

.....

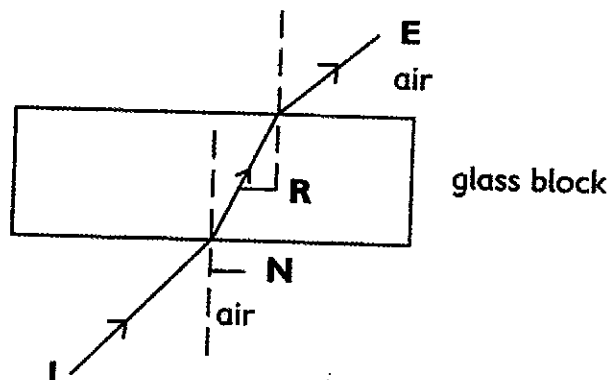
b) The pencil inside water appears as if it is bent because

.....
.....

(1mark)

8. Light rays bend or change direction when they move from water into the air. This bending of light rays as they move from water to the air is called of light. The speed of light in is not the same as the speed of light in air. (2marks)

9. The figure below shows a ray of light travelling from the air through a glass block and then to the air.

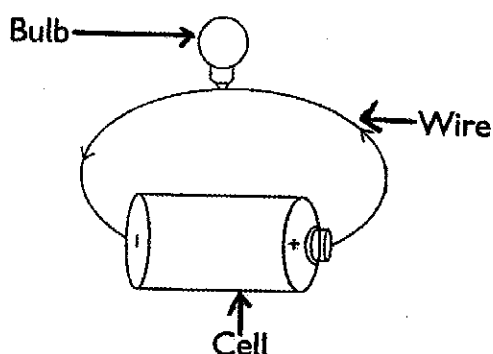


The name of

a) ray **R** is (1mark)

b) ray **E** is..... (1mark)

10. The figure below shows a complete electric circuit.



What is the use of :

a) the cell? (1mark)

b) the wire? (1mark)

11. Mention any two dangers electricity can cause in homes.

a)

..... (1mark)

b)

..... 1mark)

12. In a house which has electricity you can find switches and sockets fixed on walls. What is the use of :

a) switches ?

.....

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

b) sockets ?

.....

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

13. Mention any two ways to avoid dangers caused by electricity.

a) **(1mark)**

b) **(1mark)**

14. Electricity produced by running water is called

..... **(2marks)**

15. The type of energy that enables us to hear is called

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

this energy is produced by.....bodies. **(1mark)**

16. Does sound travel through

a) liquids ?..... **(1mark)**

b) vacuum ? **(1mark)**

17. Two reasons that explain why musical sounds and other noises from far distance sources heard more at night than during the day time are: **(2marks)**

.....

.....

.....

18. Water can exist in three states. How can you change water from a liquid to a gas state? **(2marks)**

.....

19. Read the following statements and write TRUE if it is correct and FALSE if it is wrong.

a) A liquid has a fixed volume. **(1mark)**

b) A gas has a fixed volume. **(1mark)**

20. Two methods of heat transfer from a hot body to a cold place are:

a) **(1mark)**

b) **(1mark)**

21. a) The method of heat transfer from the sun to the earth is :

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

b) When it is a cold day or cold night you feel cold because your body is losing heat. The heat transfer method by which your body loses heat is called

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

22. We cook food in saucepans which are made of aluminium metal because

..... **(2marks)**

23. Heat from the sun is useful and we do not pay money when we use it.

Why is it good to dry maize in sunshine before storing them? **(2marks)**

.....

24. a) Complete this equation : $\text{MASS} = \text{DENSITY} \times \dots\dots\dots$ **(1mark)**

b) The unit of density is **(1mark)**

25. The mass of a solid is 270 g and its volume is 300 cm³. Calculate the density of the solid. **(2marks)**

.....

.....

SECTION B : Answer All questions

26. a) A germ is..... **(1 mark)**
- b) Name any two types of germs. **(2 marks)**
- i.....
- ii.....
- c) Three ways in which germs can be controlled are: **(3 marks)**
- i.....
- ii.....
- iii.....
27. a) Give any three uses of food to living organisms. **(3 marks)**
- i.....
- ii.....
- iii.....
- b)
- i. A balanced diet is **(1 mark)**
-
- ii. State components of a balanced diet. **(3 marks)**
-
-
-
28. a) Two functions (uses) of proteins to living organisms are: **(2 marks)**
- i.....
- ii.....
- b) Why should children have more proteins than adults? **(1 mark)**
-
-

29. The diagram below shows different animals.



a) In which ways are animals A, B and C similar?

(1 mark)

.....

b) How is reproduction of animal C different from that of other animals?

(1 mark)

.....

c) Animal A belongs to a class of animals called

(1 mark)

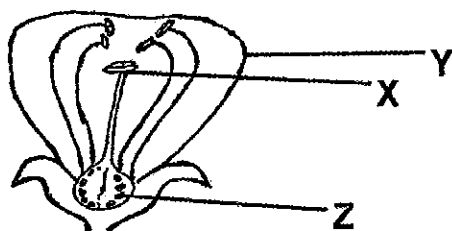
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d) Animal D protects itself against enemies by.....

(1 mark)

.....

30. The diagram below is of a flower.



a) The part labeled X is called.....

(1 mark)

b) The use of the part labeled Y to the flower is:

(1 mark)

.....

c) What does the part labeled Z become after fertilization?

(1 mark)

.....

31. a) What are Sexually Transmitted Diseases (STDs) ?

(1 mark)

.....

b) Give any three examples of STDs. **(3 marks)**

i.....

ii.....

iii.....

c) One way in which STDs can be controlled is.....

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

32. a) What is the shape of the kidney?

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

b) Two main functions of a kidney are: **(2 marks)**

i.....

ii.....

33. Three ways in which health problems can be solved without the use of drugs are: **(3 marks)**

a).....

b).....

c).....

34. a) The ear is used for.....

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

b) Three main parts of the ear are : **(3 marks)**

i.

ii.

iii.

c) The part of the ear that is likely to be damaged if one uses a sharp object to clean it is

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

35. A man has the food named below to feed his family .Use the list to answer the questions below.

Mangoes, Beans, Rice, Potatoes, Green dodo.

a) His wife has anemia. Which food from the list would you advise her to eat? **(1 mark)**

b) Give reasons for your answer above. **(1 mark)**

.....

.....

c) This man's child has Kwashiorkor and advised to eat beans. Why? **(1 mark)**

.....

36. Vertebrate animals have bony skeleton within their bodies. Give any two uses of skeleton. **(2 marks)**

i.....

ii.....

37. a) Give at least two secondary sexual characteristics that are similar to both boys and girls. **(2 marks)**

i.....

ii.....

b) Give at least two different secondary sexual characteristics for :

i. boys. **(2 marks)**

.....

.....

ii. Girls. **(2 marks)**

.....

.....

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