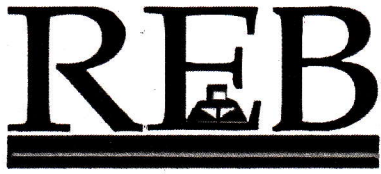


Science and Elementary
Technology

PSET

14 Nov. 2017 09: 00 AM-11: 00 AM



Rwanda Education Board

Pupil's complete index number

Province/City District Sector School Pupil

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Pupil's names

Surname:

Other names:

**NB: PUPIL'S INDEX NUMBER AND NAMES
MUST BE WRITTEN AS THEY APPEAR ON THE
REGISTRATION FORM**

PRIMARY LEAVING NATIONAL EXAMINATIONS 2017

SCIENCE AND ELEMENTARY TECHNOLOGY

DURATION: TWO HOURS

MARKS:

/100

INSTRUCTIONS

- 1) Do not open this question paper until you are told to do so.
- 2) ***This paper consists of 12 pages and 37 questions. Before starting, check if all pages and all questions are there and are arranged in ascending order.***
- 3) This paper has **two sections: A and B.**
- 4) Questions in both sections are compulsory and must be answered as instructed.
- 5) Read each question carefully before answering it.
- 6) Answer the questions in the space provided on this question paper.
- 7) You must use a **blue or black** pen and a pencil for drawing.

SECTION A: ANSWER ALL QUESTIONS.

(50 MARKS)

- 1) What is a "water level" used for? **(2marks)**
.....
.....
- 2) Name any two dangers of stagnant water.
a) **(1mark)**
b) **(1mark)**
- 3) Why is moonlight not a natural source of light? **(2marks)**
.....
.....
- 4) What is the difference between transparent and translucent objects? **(2marks)**
.....
.....
.....
.....
- 5) Name two major sources of energy used to cook food in Rwanda. **(2marks)**
(a)
(b)
- 6) Copper wires are used in electricity because: **(2marks)**
(a)
(b)
- 7) Why is the air of the atmosphere important? **(2marks)**
(a)
(b)
- 8) Name any two properties of solids.
(a) **(1mark)**
(b) **(1mark)**
- 9) What is meant by the term "mass" of a body? **(2marks)**
.....
.....

10) A dry piece of wood floats on water because: **(2marks)**

.....
.....

11) State any one law of reflection of light. **(2marks)**

.....
.....

12) What is meant by the term "refraction" as applied to an oblique incident ray of light travelling from air through water? **(2marks)**

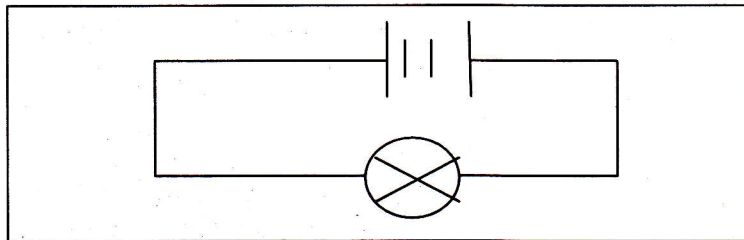
.....
.....
.....

13) Mention any two methods of heat transfer.

(a) **(1mark)**

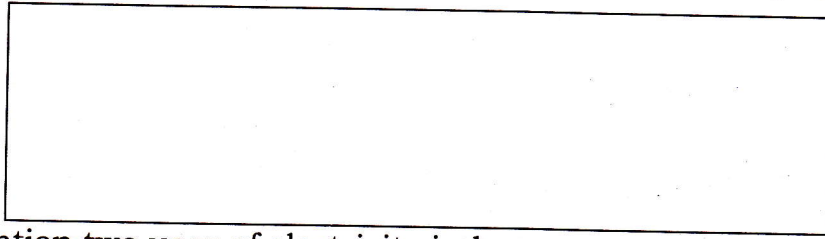
(b) **(1mark)**

14) Below is a diagram of a simple electric circuit. Why does the lamp not light? **(2marks)**



.....
.....

15) Draw the diagram in question (14) so that the lamp lights. **(2marks)**



16) Mention two uses of electricity in homes.

(a) **(1mark)**

(b) **(1mark)**

17) Name two sources of sound.

(a) **(1mark)**

(b) **(1mark)**

18) Give two examples where sound is stored and is heard whenever it is needed.

(2marks)

(a)

(b)

19) Name any two types of simple machines.

(a) **(1mark)**

(b) **(1mark)**

20) State two ways of purifying dirty water.

(a) **(1mark)**

(b) **(1mark)**

21) How can you change the state of ice to liquid state?

(2marks)

.....

.....

22) Name two types of shadows.

(2marks)

(a)

(b)

23) Heat energy is used for:

(2marks)

(a)

(b)

24) Two properties of a magnet are:

(a) **(1mark)**

(b) **(1mark)**

25) What is a "magnetic compass"?

(2marks)

.....

SECTION B: ANSWER ALL QUESTIONS. (50 MARKS)

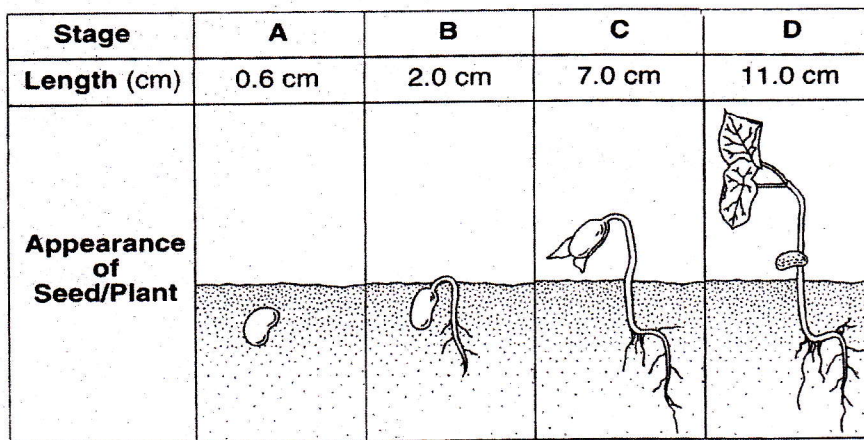
26) Complete the following table by the missing words.

An example is done for you on the first row.

Deficiency of (Lack of)	Disease
Proteins	Kwashiorkor
.....	Rickets
Iodine
..... ...	Beri beri
Iron

(4marks)

27) The diagram below shows the process by which a bean seed grows into a plant.



Name the process shown by the above diagram.

(1mark)

.....

(a) Give three conditions necessary for the process above to take place.

(i)

(1mark)

(ii)

(1mark)

(iii)

(1mark)

(b) How many centimeters (cm) has the bean plant grown from stage B to stage D?

..... (1mark)

28) (a) The reproductive part of a plant is the (1mark)

(b) Give two uses of flowers in the environment.

(i) (1mark)

(ii) (1mark)

29) (a) The difference between pollination and fertilization is that

Pollination is

..... and

Fertilization is

..... (2marks)

(b) The two types of pollination are:

(i) (1mark)

(ii) (1mark)

(c) Fill in the blanks with the appropriate word.

After fertilization, the becomes the fruit and

the becomes the seed. (2marks)

30) Using arrows (→), match the following organs of the urinary system to their functions: (4marks)

Organs

Functions

Ureter

Where urine is produced

Kidney

Brings urine from the kidneys to the bladder

Urethra

Where urine is stored

Bladder

Where urine is eliminated from the body

31) (a) Name two types of blood circulation that happen in the human body.

(i) (1mark)

(ii) (1mark)

(b) Do all arteries carry oxygenated blood?

..... (1mark)

(c) Explain your answer given in (b) above.

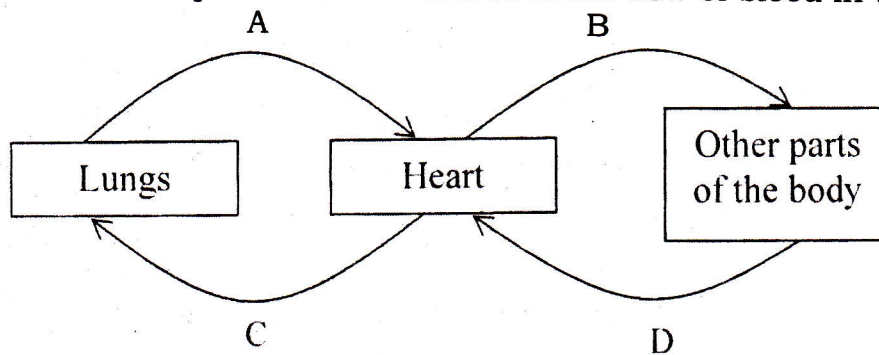
.....
..... (1mark)

(d) Give two things which happen to blood from the heart when it reaches the lungs.

(i) (1mark)

(ii) (1mark)

32) The diagram below shows the circulatory system of a human. The arrows represent the direction of the flow of blood in the body.



Name the blood vessel A, B, C and D.

Blood vessel A is (1mark)

Blood vessel B is (1mark)

Blood vessel C is (1mark)

Blood vessel D is (1mark)

33) (a) Alveoli are small bags found in the **(1mark)**

(b) Why are we advised to breathe through the nose rather than through the mouth? **(2marks)**

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

34) (a) What is "suffocation"?

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

(b) How can you help a person who is suffocating?

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

(c) Name a disease caused by smoking.

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

35) (a) One of the diseases we can get from eating dirty/ unclean food is:

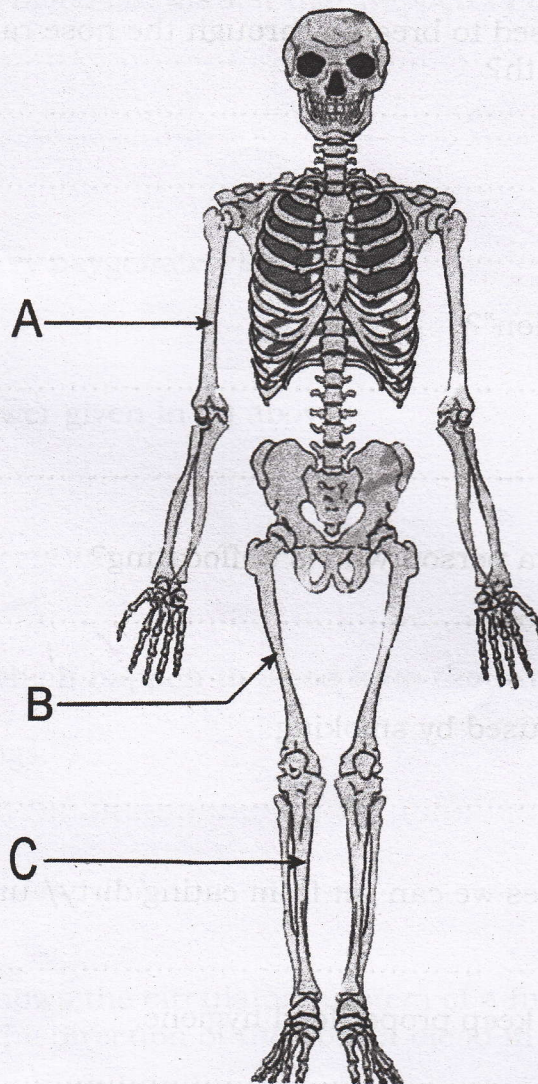
..... **(1mark)**

(b) Give two ways to keep proper food hygiene.

(i) **(1mark)**

(ii) **(1mark)**

36) (a) The diagram below shows the human skeleton.



Name the bones A, B and C.

A is (1mark)

B is (1mark)

C is (1mark)

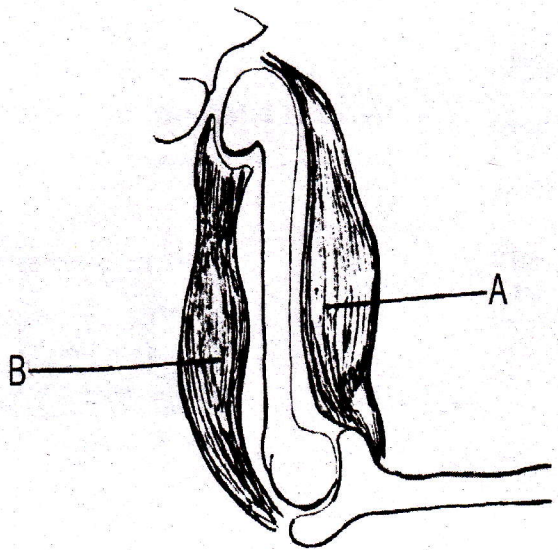
(b) Give one function of the human skeleton.

..... (1mark)

(c) Give one danger of walking or sitting in bad position.

..... (1mark)

37) (a) The diagram below shows the muscles of the arm.



Name the muscles A and B.

A is (1mark)

B is (1mark)

(b) What happens:

(i) to muscle A when the arm is bent? (1mark)

.....
.....

(ii) to muscle B when the arm is bent? (1mark)

.....
.....

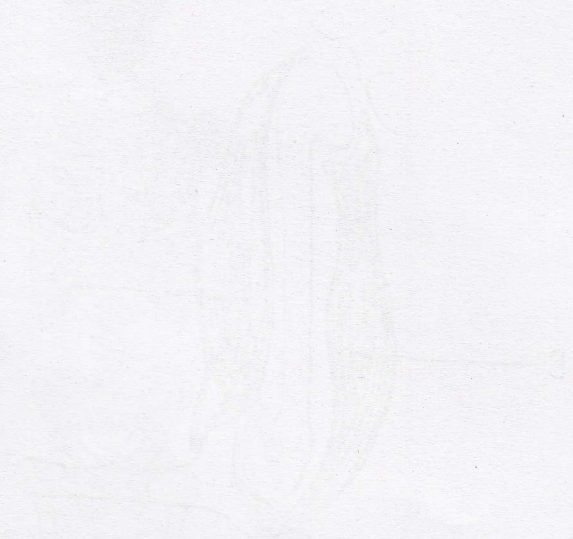


Figure 10. The structure of the cell wall of a plant cell.

(a) Label the layers of the cell wall in Figure 10.

(b) Explain the function of the cell wall.

(c) What is the main component of the cell wall?

(d) Describe the structure of the cell wall.

(e) Explain the function of the cell wall.

(f) What is the main component of the cell wall?