

Science and Elementary
Technology

PSET

19/07/2022 09: 00-11: 00 AM



Pupil's complete index number

Province/ City	District	Sector	School	Level	Pupil	Year
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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, 2021-2022
SCIENCE AND ELEMENTARY TECHNOLOGY

Duration: Two hours

Marks:

INSTRUCTIONS

- 1) Do not open this question paper until you are told to do so.
- 2) This paper has **two sections: A and B**.
- 3) Questions in both sections are compulsory and must be answered as instructed.
- 4) Read each question carefully before answering it.
- 5) Answer the questions in the space provided on this question paper.
- 6) You must use **a blue or black** pen and a pencil for drawing.

SECTION A: ATTEMPT ALL QUESTIONS (50 marks)

1) List down any two examples of agricultural tools. **(2 marks)**

(i)

(ii)

2) What is the difference between a spirit level and a plumb line? **(2 marks)**

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3) Explain any one use of a flash disk. **(1 mark)**

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4) How would you reduce friction in a machine and other bodies? **(2 marks)**

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5) How is communication important to people? **(2 marks)**

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6) Complete the table below. **(3 marks)**

Tool	use
clamp	
Bellow	Cutting metals

7) Which two ways can you use to prevent accidents in a mechanic's workshop? **(2 marks)**

(i)

(ii)

(2 marks)

8) Explain how toys are useful to children.

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.....

(2 marks)

9) List any two popular programming languages for children.

(i)
(ii)

(3 marks)

10) Match the category of materials below with their corresponding use.

Materials	Use
a) Spatula, hoe handle.	i) Learning objects
b) Square, Cube, Triangle.	ii) Toy objects
c) doll, teddy bear	iii) Utility objects

(2 marks)

11) List any two materials we use to make learning objects.

(i)
(ii)

(2 marks)

12) Which techniques would you use when making a basket?

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.....

(3 marks)

13) Explain how a computer is useful in our daily life.

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.....
.....

14) Match the ICT terms below with their meaning.

(2 marks)

Terms

Meaning

- | | |
|----------------|---|
| a) Hard ware | i) Computer programs |
| b) Internet | ii) Physical component of a computer |
| c) Software | iii) World wide interconnection |
| d) Application | iv) Instructions written by computer specialist |

15) Air is a mixture of gases. Give any two examples of gases found in air.

(2 marks)

- (i)
- (ii)

16) Give any one chemical substance from industries that destroys Ozone layer.

(1 mark)

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17) In order to send and receive an e-mail, both the sender and receiver must have.....

(2 marks)

- | | |
|-----------------|-------------------|
| a) Bank account | b) e-mail account |
| c) Post office | d) e- banking |

18) Which of the following is the percentage of Nitrogen in the atmospheric air?

(1 mark)

- | | | |
|--------|--------|---------|
| a) 78% | b) 21% | c) 0.1% |
|--------|--------|---------|
-
-

19) Give any two diseases associated with polluted water.

(2 marks)

- (i)
- (ii)

20) Explain the difference between evaporation and condensation. **(2 marks)**

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21) Give any two human activities that can cause global warming. **(2 marks)**

(i).....
(ii)

22) Give any two types of soil. **(2 marks)**

(i).....
(ii)

23) Explain why fertilizers are used in Agriculture. **(2 marks)**

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24) Why has the government of Rwanda stopped the use of plastic bags? **(2 marks)**

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.....

25) Why is it necessary for all homes to have toilets/latrines? **(2 marks)**

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SECTION B: ATTEMPT ALL QUESTIONS (50 marks)

26) Match the diseases with their symptoms. **(2 marks)**

Diseases

Symptoms

i) Tapeworms

a) Difficulty in breathing

ii) Pneumonia

b) Worms might be seen in droppings

27) Suggest any two conditions of a good chicken house. **(2 marks)**

(i)

(ii)

28) Match each animal with its respiratory organs. **(2 marks)**

Animals	Respiratory organs
a) Tilapia	i) Book lungs/trachea
b) Spider	ii) Gills
c) Mosquito	iii) Spiracles
d) Man	iv) Lungs

29) Why is the government of Rwanda emphasizing that there should be at least one cow per family? **(1 mark)**

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.....

30) Name two animals that breath through spiracles. **(2 marks)**

(i)

(ii)

31) What is the difference between photosynthesis and transpiration? (2 marks)

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.....

32) Match each part of a flower with its function. (3 marks)

Parts of flower	Function
a) Petals	i) Contains ovules
b) Sepals	ii) Receives pollen grains
c) Stigma	iii) Holds stigma in position
d) Style	iv) Produces pollen grains
e) Ovary	v) Protect young flower
f) Anther	vi) Attract pollinators.

33) Draw the female part of a flower and name its parts. (2 marks)

34) Give the difference between pollination and fertilization (2 marks)

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35) Study the table below and fill in the missing information.

(4 marks)

Organ	sense	nerve
eye	sight	
Tongue		Gustatory /Lingual
ear	Hearing	
	smell	Olfactory nerve

36) Complete the sentences below with appropriate terms.

(2 marks)

a) Organs that help us to see, hear, smell, taste, and feel are called

.....

b) Our body is supported by a framework of bones called

.....

37) Give the difference between short sightedness and long sightedness

(1 mark)

.....
.....

38) Observe the following food substances in the table and give the end products after digestion.

(3 marks)

Food substances	End product
Carbohydrates	
Proteins	
Fats	

39) Give any one important hormone that helps in the growth of the body during adolescence in both boys and girls.

(2 marks)

In boys:

In girls:

40) Mention any three functions of blood in the human body. **(3 marks)**

(i)

(ii)

(iii)

41) Describe what happens to the ribs and lungs when we breath in and out. **(2 marks)**

Breathing in:

.....

Breathing out:

.....

42) Suggest two ways of preventing the spread of sexually transmitted diseases (STDs). **(1 mark)**

(i)

(ii)

43) Give the difference between sperm and ovum in terms of their shape and size. **(2 marks)**

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44) Match the process in **A** with its meaning in **B** **(2 marks)**

Process (A)	Meaning (B)
a) Ovulation	i) Union of sperm and ovum
b) Implantation	ii) Period from fertilization to birth.
c) Fertilization	iii) The release of ovum by the ovary.
d) Pregnancy	iv) Attachment of the embryo to the uterus

45) State two consequences of early teenager pregnancy. (2 marks)

(i).....

(ii).....

46) Matter can change from one state to another. State any one example to support this statement. (1 mark)

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47) Give two reasons why some objects sink in water. (2 marks)

(i).....

(ii).....

48) Give any two properties of liquid. (2 marks)

(i).....

(ii).....

49) Give any two uses of electricity in our daily life. (2 marks)

(i).....

(ii).....

50) An object has a mass of 95 g and a volume of 19 cm³. (1 mark)

Calculate its density.

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