

# SCIENCE PLE 2022 EXTRACT

PUPIL'S COMPLETE INDEX NUMBER				
Province/city	District	Sector	School	Pupil
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PUPIL'S FULL NAME				
Surname : _____				
Other names: _____				

## SECTION A: Attempt all questions. (50 marks)

- List down any two examples of agricultural tools.  
\_\_\_\_\_  
\_\_\_\_\_
- What is the difference between a "Spirit level" and a "Plumb line"?  
\_\_\_\_\_
- Explain one use of a flash disk.  
\_\_\_\_\_
- How would you reduce friction in a machine and other bodies?  
\_\_\_\_\_
- How is communication important to people?  
\_\_\_\_\_
- Complete the table below:

Tool	Use
Clamp	
	Cutting metals
bellow	
- Which two ways can you use to prevent accidents in a mechanic's workshop?  
\_\_\_\_\_  
\_\_\_\_\_
- Explain how toys are useful to children.  
\_\_\_\_\_
- List two popular programming languages for children.  
\_\_\_\_\_  
\_\_\_\_\_

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

**Material**

**Use**

a) Spatula, hoe handle

i) Learning objects

b) Square, cube triangle

ii) Toy objects

c) Doll, teddy bear

iii) Utility objects

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

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

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

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14. Match the ICT terms below with their meaning.

**Terms**

**Meaning**

a) Hardware

i) Computer programs

b) Internet

ii) Physical components of a computer

c) Software

iii) Worldwide 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.

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

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

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?

a) 78%

b) 21%

c) 0.1%

19. Give any two diseases associated with polluted water.

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20. Explain the difference between "Evaporation" and "Condensation".

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21. Give any two human activities that can cause Global warming.

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22. Give any two types of soil.

23. Explain why fertilizers are used in agriculture.

24. Why has the government of Rwanda Stopped the use of plastic bags?

25. Why is it necessary for all homes to have toilets/latrines?

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### SECTION B: ATTEMPT ALLQUESTIONS

26. Match the diseases with their symptoms.

**Diseases**

i. Tapeworms

ii. Pneumonia

**Symptoms**

a) Difficulty in breathing

b) Worms might be seen in droppings

27. Suggest any two conditions of a good chicken house.

28. Match each animal with its respiratory organs.

**Animals**

a) Tilapia

b) Spider

c) Mosquito

d) Man

**Respiratory organs**

i) Book lungs/trachea

ii) Gills

iii) Spiracles

iv) Lungs

29. Why is the government of Rwanda emphasizing that there should be at least one cow per family?

30. Name two animals that breathe through spiracles.

31. What is the difference between "Photosynthesis and "Transpiration"?

32. Match each part of the flower with its function.

**Parts of a flower**

a) Petals

b) Sepals

c) Stigma

d) Style

e) Ovary

f) Anther

**Function**

i) Contains ovules

ii) Receives pollen grains

iii) Holds stigma in position

iv) Produces pollen grains

v) Protect young flower

vi) Attract pollinators

33. Draw the female part of a flower and name its parts.

34. Give the difference between "Pollination" and "Fertilization".

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

Organ	Sense	Nerve
Eye	sight	
Tongue		Gustatory/ lingual
Ear	Hearing	
	Smell	Olfactory nerve

36. Complete the sentences below with appropriate terms.

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

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

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37. Give the difference between "Short-sightedness" and "Long-sightedness".

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

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.

In boys \_\_\_\_\_

In girls \_\_\_\_\_

40. Mention any three functions of blood in the human body.

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41. Describe what happens to the ribs and lungs when we breathe in and out.
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42. Suggest two ways of preventing the spread of Sexually Transmitted Diseases (STDs)
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43. Give the difference between sperm and ovum in terms of their shape and size.
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44. Match the process in A with its meaning in B.
- | Process (A)      | Process (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.
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46. Matter can change from one state to another. State any one example to support this statement.
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47. Give two reasons why some objects sink in water.
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48. Give any two properties of liquid.
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49. Give any two uses of electricity in our daily life.
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50. An object has a mass of 95 g and a volume of 19 cm. Calculate its density.