#### **GREENHILL ACADEMY SCHOOLS**

### PRE-PLE JOINT SET TWELVE 2023 INTEGRATED SCIENCE

#### Time Allowed: 2 Hours 15 Minutes

INDEX NO:	Random No.					Pe	erson	al No.	

Stream:

#### Do not open this booklet until you are told to do so.

#### **Read the following instructions carefully**

- 1. This paper consists of two sections: A and B.
- 2. Section A has 40 questions (40 marks).
- 3. Section B has 15 questions (60 marks)
- Attempt all questions. Answers to both sections must be written in spaces provided.
- 5. All answers must be written in blue or black ballpoint pen or ink but not in pencil. All work done in pencil, except diagrams, will NOT be marked.
- 6. Crossing out of answers will lead to loss of marks.
- Any handwriting that cannot be easily read may lead to loss of marks.
- 8. Wrong spellings will lead to loss of marks.

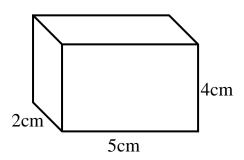
FOR EXAMINERS USE ONLY					
QN.NO.	MARK	SIGN			
1-10					
11-20					
21-30					
31-40					
41-43					
44-46					
47-49					
50-52					
53-55					
TOTAL					

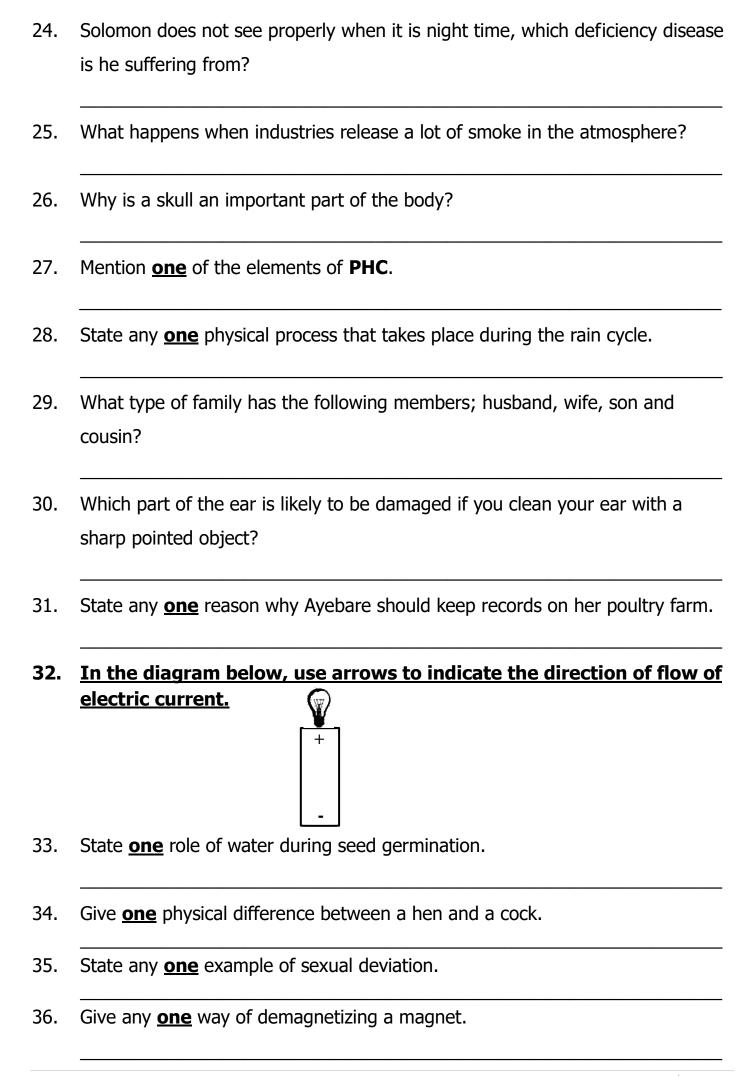
#### **SECTION A: (40 MARKS)**

1.	Name any <b>one</b> mineral that is necessary for proper growth of bones.
2.	How do fungi reproduce?
3.	What type of change takes place if wood is burnt to ashes?
4.	How do we call the turning point of a machine?
5.	Why does a coin placed in water sink?
6.	Which gas is found in the largest quantity in the atmosphere?
7.	Identify any <b>one</b> of injury that requires the application of cold water on the affected part?
8.	Bakecura saw lightning from a distance. A few seconds later, he heard the sound of thunder. Why did he see lightning before hearing thunder?
	The diagram below is a sealed soda bottle.
	space Space
9.	What is the advantage of the space shown in the diagram?
10.	Name a safety device which breaks the circuit in case of too much flow of the current.
11.	Mention <b>one</b> body organ which is damaged when one drinks too much alcohol.
12.	What is refraction of light?
	·

- Name any **one** component of blood. 13. State any **one** importance of a woodlot to school. 14. How is docking important in sheep rearing? 15. State any **one** way of improving soil fertility. 16. Joanna who sits 2 metres away from a fire place gets warmed by the heat 17. from the fire. How does the heat from the fire reach Joanna? Name the enzyme found in the mouth that helps in the digestion of cooked 18. starch. Identify the type of smoking where one inhales tobacco smoke directly from a 19. burning cigarette. State **one** characteristic of images formed in a pinhole camera. 20.
- 21. What is the danger of taking drugs which are not prescribed by a medical worker?
- 22. How are insulators important to electricity engineer?

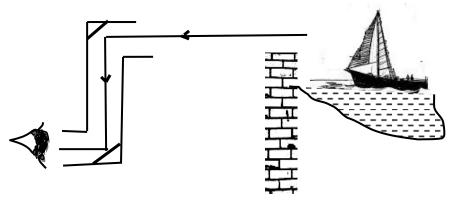
#### 23. The diagram below shows a chalk box. Find its volume.





		iagram below shows a prions 38, 39 and 40.	part of a plant. Use it to answer	
N	lame	the roots marked <b>M</b> .		
G	ive a	ny <u>one</u> example of a plant	with such roots in (a) above.	
— Н	low is	s respiration an important p	process to animals?	
	Γhe t	SECTI table below shows types	ON B: of electricity and their sources.	
	The t	SECT:  table below shows types plete the gaps by filling  Hydro-electricity	S of electricity and their sources.  the missing parts.  Fossil fuels	
	The t	SECT:  table below shows types plete the gaps by filling  Hydro-electricity  Geothermal electricity	ON B:  of electricity and their sources. the missing parts.	
	Comp (i) (ii) (iii) (iv)	SECT:  table below shows types plete the gaps by filling  Hydro-electricity  Geothermal electricity	S of electricity and their sources.  the missing parts.  Fossil fuels  The sun	
	(i) (ii) (iv)	SECT:  table below shows types plete the gaps by filling  Hydro-electricity  Geothermal electricity  What are non-flowering pla	Sof electricity and their sources.  the missing parts.  Fossil fuels  The sun  ts which reproduce by means of sport ferns.	es a
	(i) (ii) (iii) (iv)	SECT:  Table below shows types  plete the gaps by filling  Hydro-electricity  Geothermal electricity  What are non-flowering plan  from mosses, liverworts and  (i)	Sof electricity and their sources.  the missing parts.  Fossil fuels  The sun  ts which reproduce by means of sport ferns.	es a

#### 43. The diagram below shows an instrument used by sailors.

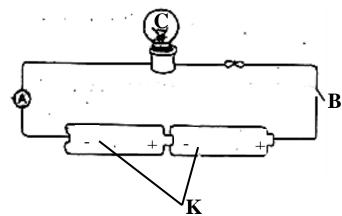


- (a) Name the instrument shown above.
- (b) How is the instrument above useful to people?
- (c) Name **two** types of reflection as used in light energy.
  - (i) \_\_\_\_\_
  - (ii)
- 44. (a) Name the state of change that takes place when a solid turns into a liquid.
  - (b) What force holds molecules of the same kind together?
  - (c) State **one** difference between a gas and a liquid.
  - (d) What happens to the volume of water when it freezes?
- 45.(a) Define the term immunity
  - (b) Identify **one** way the body acquires immunity naturally.
  - (c) Name the childhood immunisable disease that causes lameness.

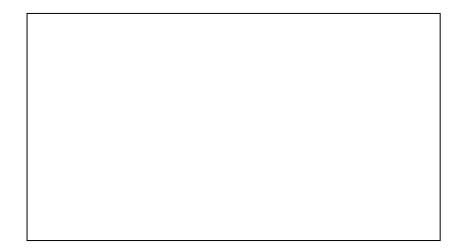
46.	(a)	State <b>one</b> way of protecting school buildings from being struck by lightning.
	(b)	How is lightning important to the soil?
	(c)	Name any <b>one</b> form of energy of lightning in the environment.
	(d)	State any <b>one</b> danger of lightning in the environment.
47.	Stuc	dy the illustration of the pulley system and use it to answer the
	<u>que</u>	stions about it.  140N
	(a)	Name the type of pulley system above.
	(b)	Which component of air is the above machine used for in a school.
	(c)	Use letter <b>E</b> to show the effort on the machine above.
	(d)	What is the effort required to raise the load of 140N as shown above?
48.	(a)	What virus causes <b>AIDS</b> ?
	(b)	What type of blood cells are attacked by the virus that causes AIDS?
	(c)	State any <b>one</b> traditional practice that may lead to transmission of <b>AIDS.</b>

49.	Brea	Breastfeeding is highly recommended because mother's milk contains almost						
	all f	ood values.						
	(a)	Name any two food values found in breast milk.						
	(b)	Which food value is missing in breast milk?						
	(c)	State any <b>one</b> disadvantage of bottle feeding.						
50.	(a)	Why should a hole of a pit latrine be covered when not in use?						
	(b)	Why should a pit latrine be built at least 30m away from a water source?						
	(c)	State any <b>one</b> way of keeping the pit latrine clean.						
	(d)	Identify <b>one</b> disease that may break out at school as a result of poor disposal of faeces.						
51.	(a)	Mention <b>two</b> non-living components of the environment.  (i)						
		(ii)						
	(b)	State <b>one</b> non-living thing on which plants depend.						
	(c)	What is the growing of crops and trees together called?						
52.	(a)	Identify the set of teeth that develops first in the mouth of a two-year baby.						
	(b)	Name <b>two</b> ways of caring for the teeth.  (i)						
		(ii)						
	(c)	Identify <b>one</b> disease that affects the teeth.						

#### 53. Study the diagram and answer the questions that follow



- (a) Name the part marked **B**.
- (b) State the forms of energy produced by part marked **C**.
- (c) Draw a symbol representing part **K** as shown in the diagram above.



- 54. (a) State any **one** quality of essential drugs.
  - (b) State **one** reason why essential drugs should be properly prescribed.
  - (c) Give any  $\underline{\textbf{two}}$  examples of essential drugs.

(i)\_\_\_\_\_

(ii)\_\_\_\_\_

## 55. Study the illustrations of lenses and use them to answer the questions about them.





- (a) Identify the lens marked with **D** and **E**.
  - (i) **D**\_\_\_\_\_
  - (ii) **E**\_\_\_\_\_
- (b) Give **two** examples of optical instruments.
  - (i)\_\_\_\_\_
  - (ii)\_\_\_\_\_

\*\*\*\*\*END\*\*\*\*

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