



SUREKEY EXAMINATIONS BOARD
PRE-PLE EXAMINATION SERIES ONE

2022

INTEGRATED SCIENCE

Time Allowed: 2 hours 15 minutes

EMIS No.						Personal No.		

Candidate's Name:

Candidate's Signature:

School Name:

District Name:

Read the following instructions carefully:

- Do not forget to write your **school** or **district name** on the paper.
- This paper has two sections: **A** and **B**.
Section **A** has **40** questions and section **B** has **15** questions. The paper has **16** printed pages.
- Answer **all** questions. **All** working for both sections **A** and **B** must be shown in the spaces provided.
- All** answers **must** be written using a **blue** or **black** ball point pen or ink. Any work written in pencil will **not** be marked.
- Unnecessary **changes** in your work and handwriting that cannot be read easily may lead to **loss of marks**.
- Do not fill anything in the table indicated: **"For Examiners' use only"** and boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn. No.	MARKS	EXR'S NO.
1 – 10		
11 – 20		
21 – 30		
31 – 40		
41 – 43		
44 – 46		
47 – 49		
50 – 52		
53 – 55		
TOTAL		

SECTION A: 40 MARKS

Questions **1** to **40** carry **one mark** each

1. Name the disease vector that breeds in fast flowing water.

.....

2. State any **one** way in which coal is used as an energy resource.

.....

3. Which process in animals increases the amount of carbon dioxide in in the atmosphere?

.....

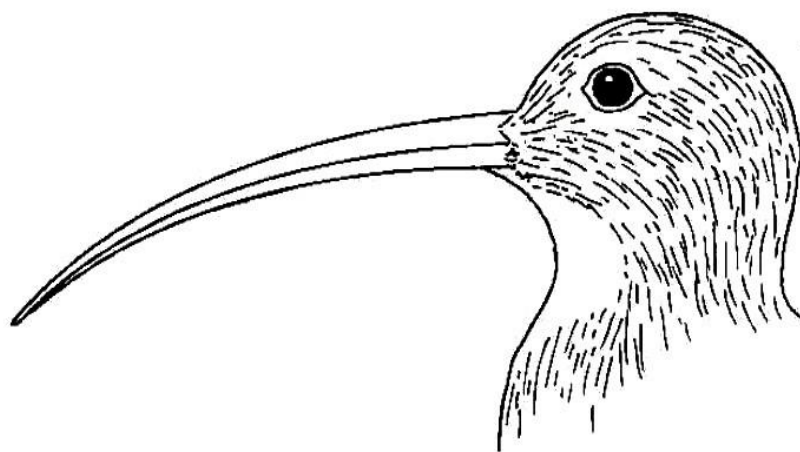
4. Name the component of soil formed from weathering of rocks.

.....

5. What is the function of a micropyle on a germinating bean seed?

.....

The diagram below shows a beak of a bird. Use it to answer questions **6** and **7**.



6. What kind of food does a bird with the beak above eat?

.....

7. How are birds with such a beak useful to crop farmers?

.....

8. Which system of keeping cattle controls tickborne diseases on the farm?
.....
9. State the principle on which an electric bell works.
.....
10. State any **one** condition under which a mother may be stopped from breast feeding the baby.
.....
11. Give any **one** example of the chemicals used in treating water for drinking.
.....
12. State any **one** way in which the breeding of lice can be controlled.
.....
13. Which method of heat transfer enables people to light charcoal stoves?
.....
14. State any **one** factor that a bee keeper should consider when setting a hive.
.....
15. How is a maize plant able to withstand the weight of the fruits during flowering stage?
.....
16. State the method used to separate liquids with different densities.
.....



17. Give any **one** way in which a school health committee is important at School.

.....

18. Why should houses of goats be built with wooden floors?

.....

The diagram below is of a device used to store sound. Use it to answer questions **19** and **20**.



19. Name the method of storing sound that involves the use of the above device.

.....

20. State any **one** way of reproducing sound stored using the above device

.....



21. How is the urinary bladder different from the gall bladder in terms of their function?

.....

.....

22. State any **one** factor that a doctor considers when prescribing drugs to a patient.

.....

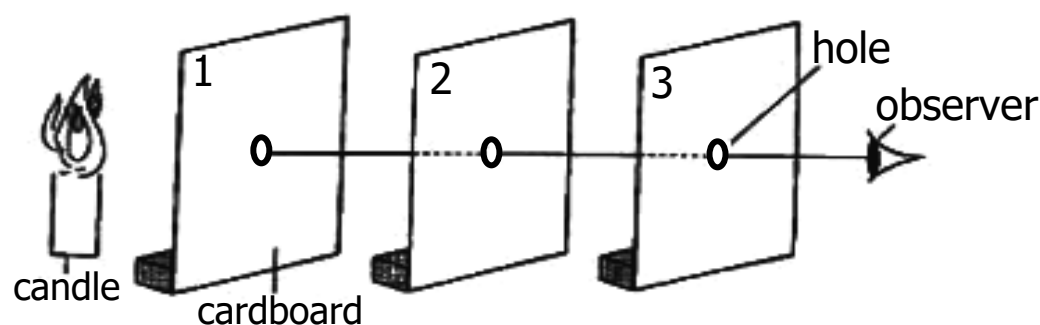
23. Name the method of preserving food where blocks of ice are put in fresh fish.

.....

24. State any **one** way in which the spread of germs can be prevented.

.....

The experiment below was carried out to find out how light travels. Study and use it to answer questions **25** and **26**.



25. Give the role of the candle in the above experiment.

.....

26. State what would happen to the observer if cardboard **2** was displaced in a way that its hole is not in the same line with that of 1 and 3.

.....

27. How is ash useful in an Ecosan latrine?

.....

28. Name the type of temporary magnet made using electricity.

.....

29. Give any **one** reason why used engine oil should be applied on wood for electricity poles.

.....

30. Apart from synovial fluid, which other substance helps to reduce friction between bones at a joint?

.....

31. Mention any **one** system of keeping poultry that can be used for commercial purposes.

.....

32. Give any **one** characteristic of crustaceans.

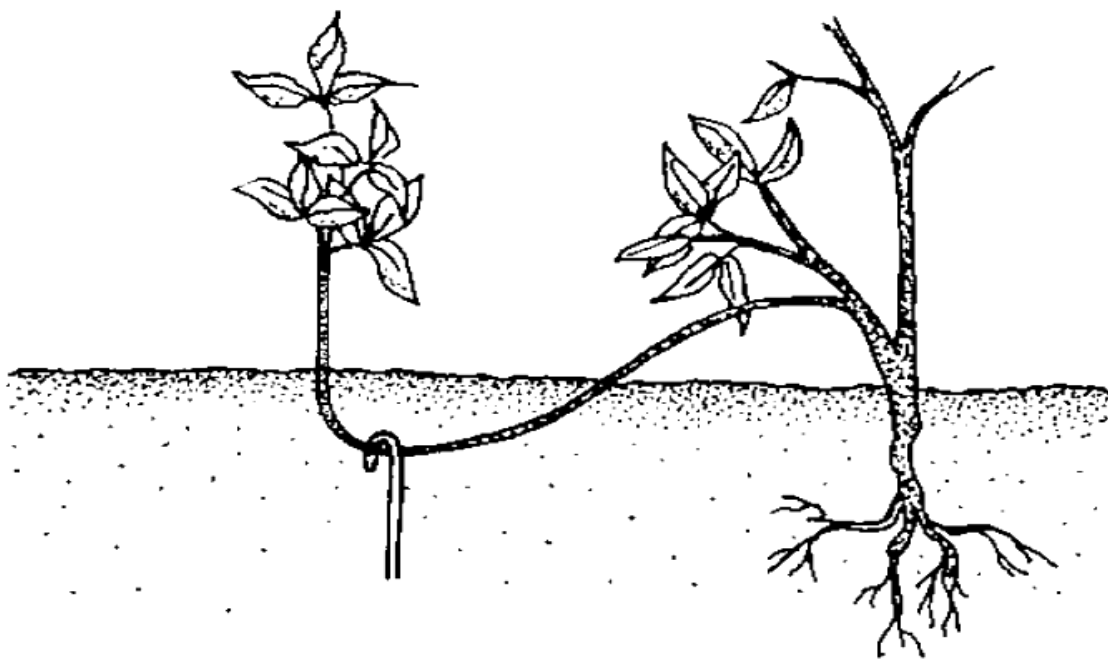
.....

33. How do hookworms affect the circulatory system?

.....

.....

The diagram below shows a method of artificial vegetative propagation. Use it to answer questions **34** and **55**.



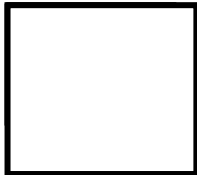
34. Identify the method of artificial propagation shown above.

.....

35. Give any **one** advantage of the above method of propagation.

.....

36. Which body system is attacked by bronchitis?
.....
37. Why does a pen fail to write on paper where oil has been poured?
.....
.....
38. Mention any **one** condition that can lead to fever.
.....
39. Give any **one** way in which non bio degradable wastes can be reused at home.
.....
40. Which type of changes in living things do not involve chemical reactions?
.....

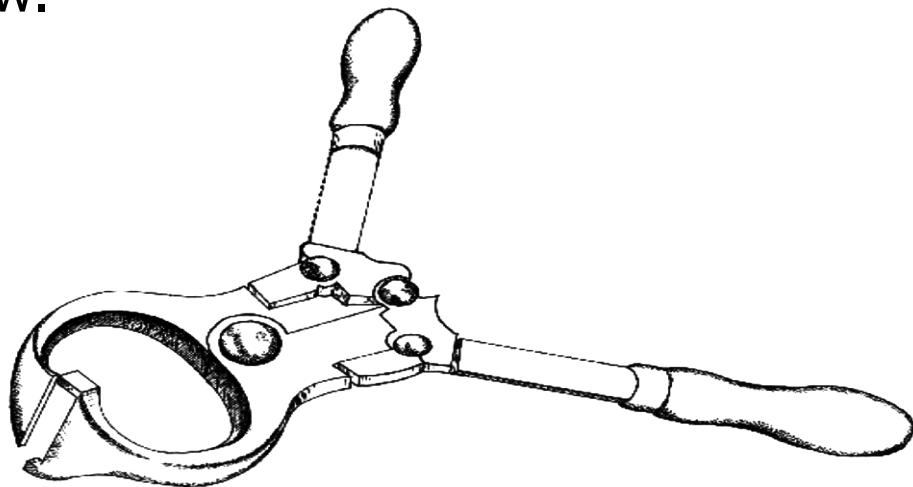


SECTION B: 60 MARKS

Questions **41** to **55** carry four marks each.

41. a) Name the group of crops that provide multiple harvests.
.....
- b) Write down any **two** examples of crops named in (a) above.
- i)
- ii)
- c) State any **one** method used when harvesting the crops written in (a) above.
.....

42. The diagram below shows a farm tool. Study and use it to answer the questions that follow.



- a) Name the farm tool shown in the diagram above.
.....
- b) Which farm practice is done using the farm tool shown in the diagram above?
.....
- c) State any **one** reason why farmers carryout the farm practice given in (b) above.
.....

- d) Give any **one** way of caring for the farm tool shown in the diagram above.

.....

43. a) State the importance of each of the following parts to a vein.

i) thin walls.

.....

ii) wide lumen.

.....

- b) How are arteries able to prevent the back flow of blood yet they have no valves?

.....

- c) Why do arteries have thick walls?

.....



44. a) State what happens to each of the following when ice melts;

i) volume

ii) density

- b) Give any **two** ways in which melting is important to people.

i)

ii)

45. The diagram below shows a certain plant process. Study and use it to answer the questions that follow.



- a) Name the plant process shown the diagram above.
.....
- b) State any **two** factors that affect the rate of the above process.
 - i)
 - ii)
- c) In which **one** way is the above process beneficial to plants?
.....

46. a) Name the waste material excreted by the liver.
.....
- b) Apart from excreting wastes, give any **two** other functions of the liver.
 - i)
 - ii)
 - c) Which disease of the liver is caused by excessive drinking of alcohol?
.....



47. In the table below, list **A** shows alloys and list **B** shows the metals used to make each alloy in the wrong order.

List A : alloy	List B : metal
Brass	Iron and copper
Bronze	Copper and zinc
Solder	Copper and tin
Steel	Lead and tin

Write the correct combination of metals for each of the alloys in the space provided below.

- i) Brass
- ii) Bronze
- iii) Solder
- iv) Steel

48. a) State the importance of a cistern tank on a flush toilet.

.....

b) Why is the cistern tank on a flush toilet raised above the bowl?

.....

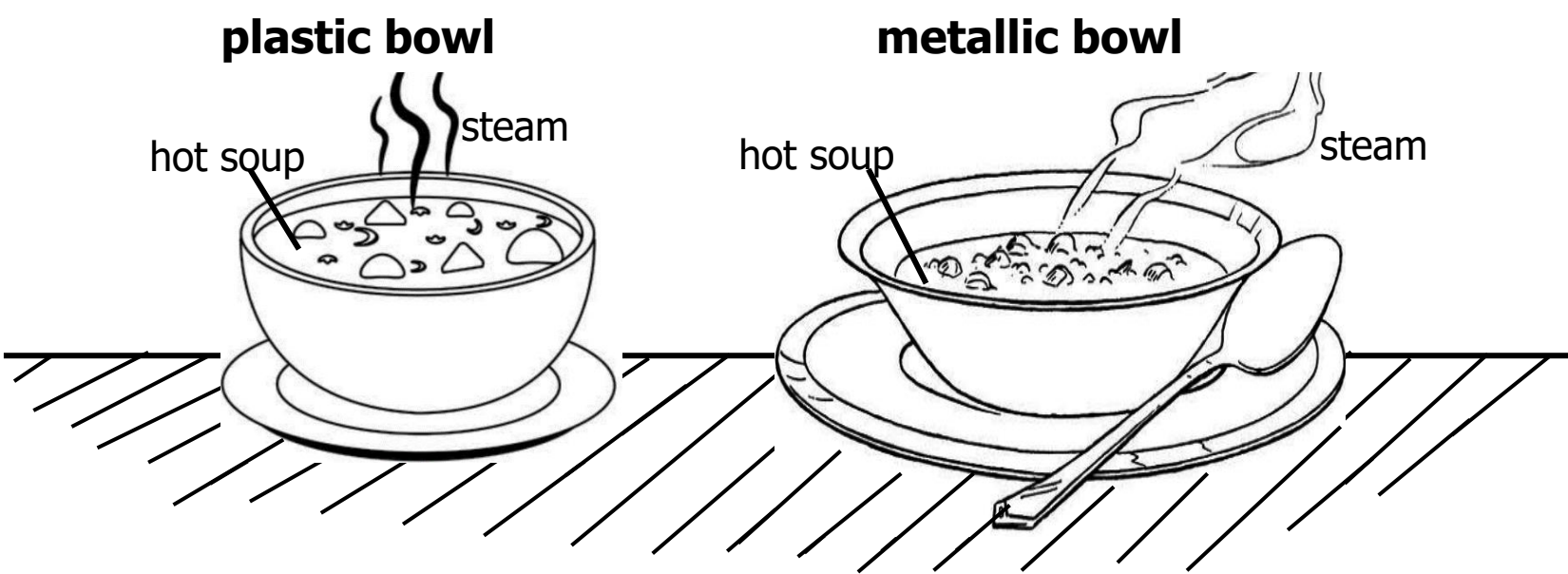
.....

c) In which **two** ways is the water that remains in the bowl of a flush toilet after flushing of an advantage?

i)

ii)

49. The diagram below shows a plastic bowl and a metallic bowl containing hot soup which was left to cool. Study and use it to answer the questions that follow.



- a) In which bowl will the soup cool faster?
.....
- b) Why would the soup cool faster in the mug you have given in (a) above?
.....
- c) What physical process leads to the cooling of soup in the bowls shown in the above diagrams?
.....
- d) In which state of matter is soup shown in the above bowls?
.....

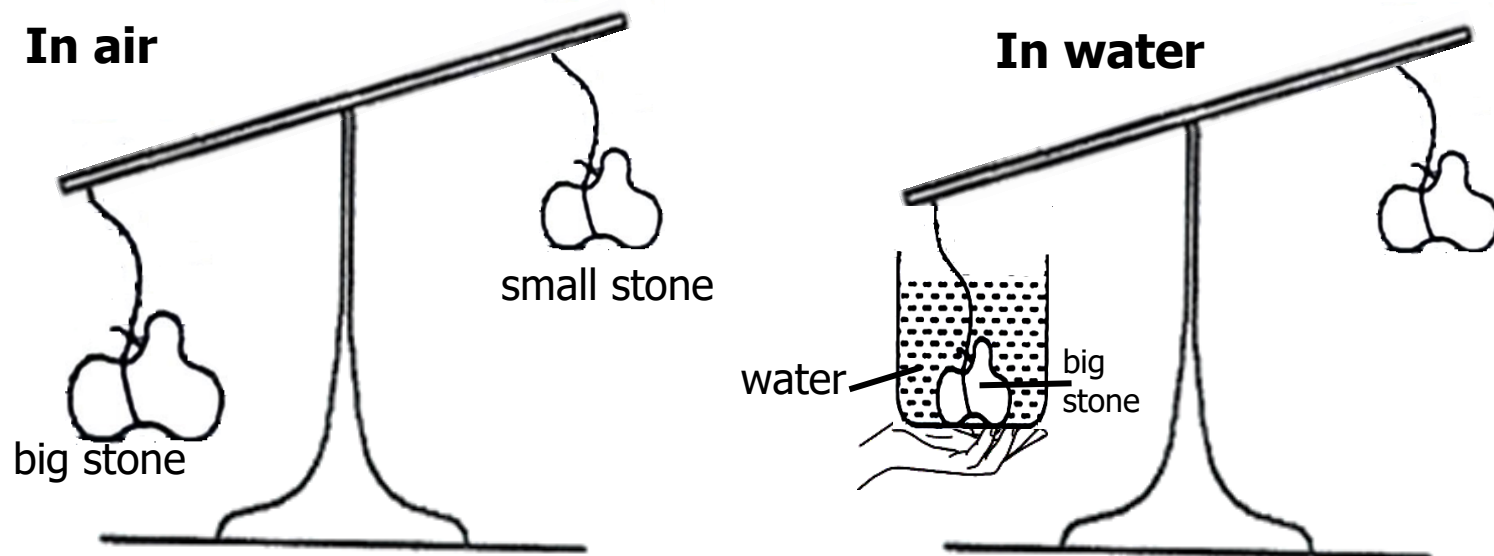


50. a) How does prolonged breast feeding help in birth control?
.....
- b) Apart from prolonged breast feeding, mention any **two** other natural methods of family planning.
- i)
 - ii)

- c) State any **one** way in which the use of natural methods of family planning is better than artificial methods.

.....

51. The diagram below shows an experiment carried out by a Primary five class. Study and use it to answer the questions that follow.



- a) In which medium does the stone weigh less?
-
- b) Why does the stone weigh less in the medium you have given in (a) above?
-
- c) Name the force that acts on the stone in water according to the above experiment.
-
- d) What does the above experiment show about measurement?
-

52. a) Give any **two** reasons why it is important to keep the body clean.
- i)
- ii)
- b) State any **two** dangers of failing to keep the body clean.
- i)
- ii)



53. a) Which method of making alcohol produces the highest alcohol concentration?
-
- b) State any **two** ways in a medical worker uses alcohol.
- i)
- ii)
- c) In which way does alcohol affect the digestive system?
-
-

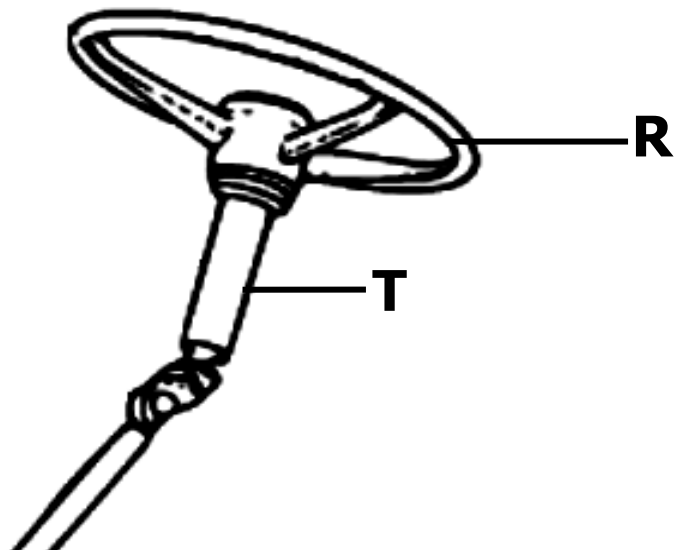
54. a) State the importance of each of the following items when giving first aid to a casualty;
- i) gauze
-
- ii) razorblade
-

b) Give any **two** qualities of a good First Aider.

i)

ii)

55. The diagram below shows a simple machine. Study and use it to answer the questions that follow.



a) To which group of simple machines does the above machine belong?

.....

b) Name the parts marked **R** and **T** on the simple machine above;

i) **R**

ii) **T**

c) How does the above simple machine simplify work?

.....



