



SURREKEY EXAMINATIONS BOARD  
**PRE-PLE EXAMINATION SERIES TWO**

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:**

1. Do not forget to write your **school** or **district name** on the paper.
2. This paper has two sections: **A** and **B**.  
Section **A** has **40** questions and section **B** has **15** questions. The paper has **15** printed pages.
3. Answer **all** questions. **All** working for both sections **A** and **B** must be shown in the spaces provided.
4. **All** answers **must** be written using a **blue** or **black** ball point pen or ink. Any work written in pencil will **not** be marked.
5. Unnecessary **changes** in your work and handwriting that cannot be read easily may lead to **loss of marks**.
6. 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 first type of teeth to grow in the mouth of a baby.

.....

2. Which digestive juice does not contain enzymes?

.....

3. Name the gas used by cattle farmers to preserve semen for artificial insemination.

.....

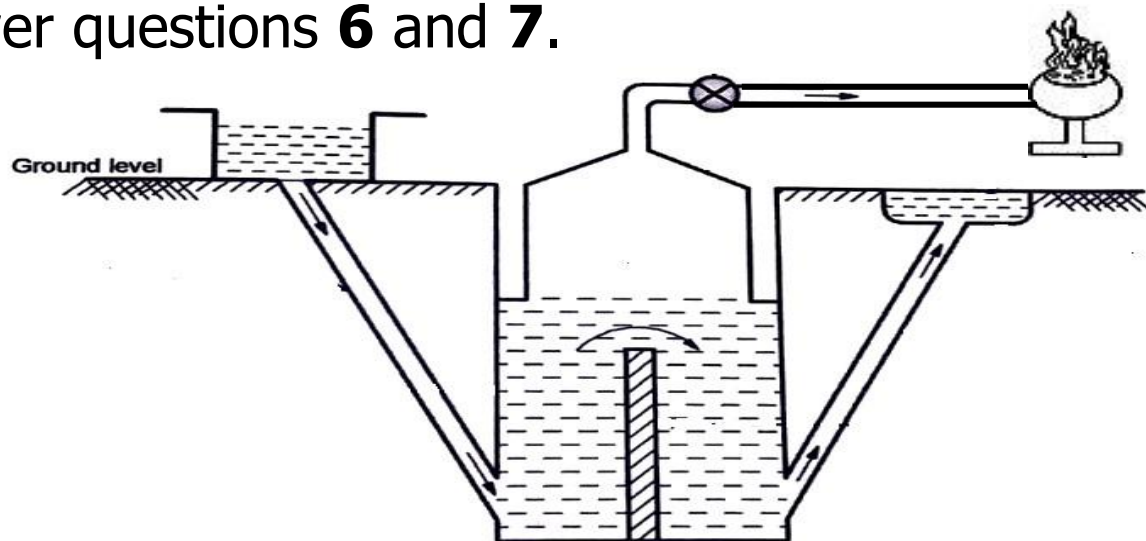
4. In which way is blubber useful to a whale when in water?

.....

5. State any **one** way in which a housefly contaminates food.

.....

The diagram below shows an equipment used to produce fuel. Use it to answer questions **6** and **7**.



6. Identify the fuel obtained from the above equipment.

.....

7. Give any **one** reason why the above equipment is buried in the ground.

.....

8. State any **one** way in which plant leaves are adapted to photosynthesis.

.....

9. Apart from the comb, name any **one** other feature that differentiates a cock from a hen.

.....

10. Mention any **one** method of family planning that destroys sperms in the gonads.

.....



11. State the difference between the feeding of a dog and that of a goat.

.....

.....

12. Why is it difficult to use a burdizzo when castrating boars?

.....

13. State the body organ that regulates blood sugar.

.....

14. Which property of sound enables a bat to locate its food?

.....

The diagram below is of a disease vector. Study and use it to answer questions **15** and **16**.



15. Which communicable disease is spread by the disease vector shown in the diagram above?

.....

16. In which way is the breeding of the vector different from that of a mosquito?

.....

.....

17. State the role of melanin pigment in the human skin.

.....

18. Give any **one** reason why water is not used in thermometers.

.....

19. Name the type of bees that make honey in the hive.

.....

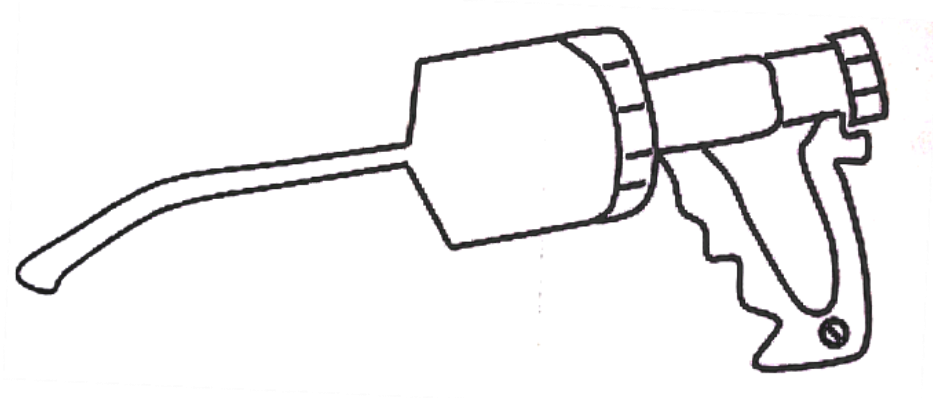
20. In which way are proteins in the diet of a pregnant woman important in the development of the baby in the womb?

.....



21. Which part in an electric circuit safeguards the circuit in case of high voltage?  
.....
22. How does litter prevent eggs from breaking in a poultry house?  
.....
23. State any **one** method of controlling soil exhaustion.  
.....
24. State the importance of having enough rest and sleep to human health.  
.....

The diagram below shows a farm equipment used on a cattle farm. Use it to answer questions **25** and **26**.



25. Name the farm equipment shown in the diagram above.  
.....
26. How is the above equipment useful to a cattle farmer?  
.....
27. Which group of non-flowering plants are able to make their own food?  
.....

28. By what process does paraffin move up to the wicks of a kerosene stove during cooking?

.....

29. State any **one** reason why most birds are able to fly.

.....

30. Which crop pest is prevented by putting rat guards on the stands of a granary?

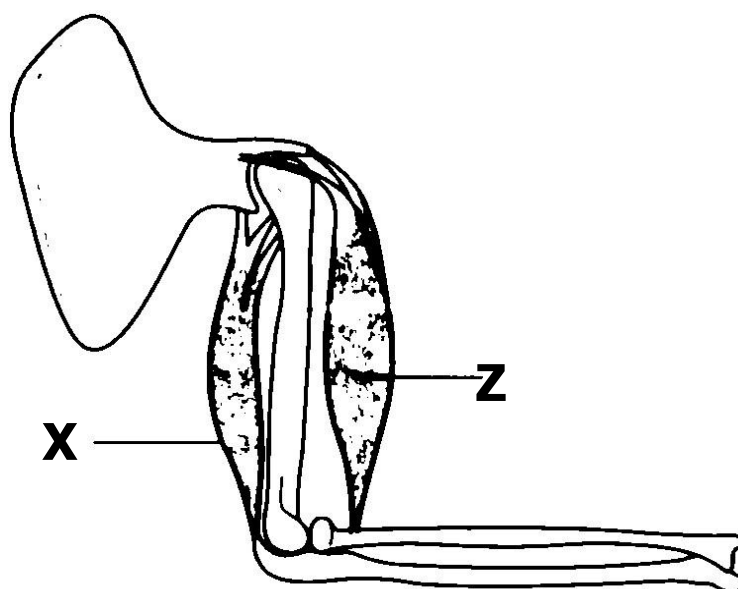
.....



31. Name the food deficiency disease that causes poor eye sight.

.....

The diagram below shows antagonistic muscles. Study it to answer questions **34** and **35**.



32. What happens to the muscle **Z** when the arm is raised?

.....

33. Why are the above muscles called antagonistic muscles?

.....

34. Write down any **one** animal fibre used in textile industries.

.....

35. Name the germ that causes AIDS in human beings.

.....

36. State any **one** way in which smoking affects the health of an individual.

.....

37. Which disease attacks both human beings and rabbits?

.....

38. Name the component of blood that controls bleeding at the cut.

.....

39. Why does a cockroach die when it passes through flour?

.....

40. In which way does lightning improve the fertility of the soil?

.....



## SECTION B: 60 MARKS

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

41. a) Mention **two** methods of making compost manure.

i) .....

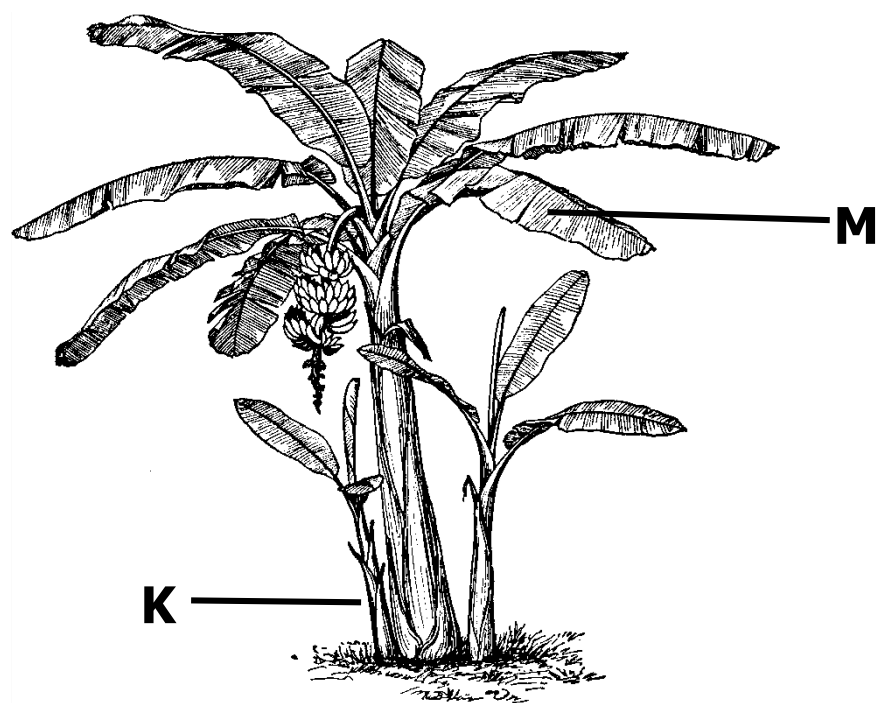
ii) .....

b) State the importance of each of the following materials when making compost manure.

i) ash .....

ii) water .....

42. The diagram below shows a food crop. Study and use it to answer questions that follow.



a) Name the part marked **K**.

.....

b) State the importance of the part you have named in (a) above to a crop farmer.

.....



c) Why does a crop farmer cut off part marked **M** before planting the above food crop?

.....

d) Which farm practice does a crop farmer do to support the above food crop during fruiting stage?

.....

43. a) Give any **two** signs and symptoms of bilharziasis.

i) .....

ii) .....

b) State any **two** ways in which the spread of bilharziasis can be controlled among human beings.

i) .....

ii) .....



44. a) Name the part of the lens camera that has the same function as each of the following parts of the human eye.

i) pupil .....

ii) iris .....

b) Why are images formed in the lens camera and human eye appear upside down?

.....

c) Apart from appearing upside down, state any **one** other characteristic of images formed by both the lens camera and the human eye.

.....

45. The following list is of animals belonging to different classes of arthropods. Study carefully and use it to answer the questions that follow.

**Scorpion, Butterfly, Centipede, Mite**

- a) To which class of arthropods does a butterfly from the list above belong?

.....

- b) Which class of arthropods is not represented in the list above?

.....

- c) Name any **one** animal from the list which is an arachnid.

.....

- d) Give any **one** way in which all the above arthropods are similar.

.....

46. a) Why is it not good to share the same injecting syringe during treatment of a particular disease?

.....

- b) How useful is sterilization of cutting and piercing instruments in hospitals?

.....

- c) Apart from injection, state **one** other method in which drugs are administered into the body.

.....

- d) Give any **one** reason why essential drugs should be prescribed before being given to a patient.

.....



47. The diagram below shows a farm practice done in sheep keeping. Study and use it to answer the questions that follow.



- a) Identify the farm practice shown in the diagram above.

.....

- b) In which season is the above farm practice done?

.....

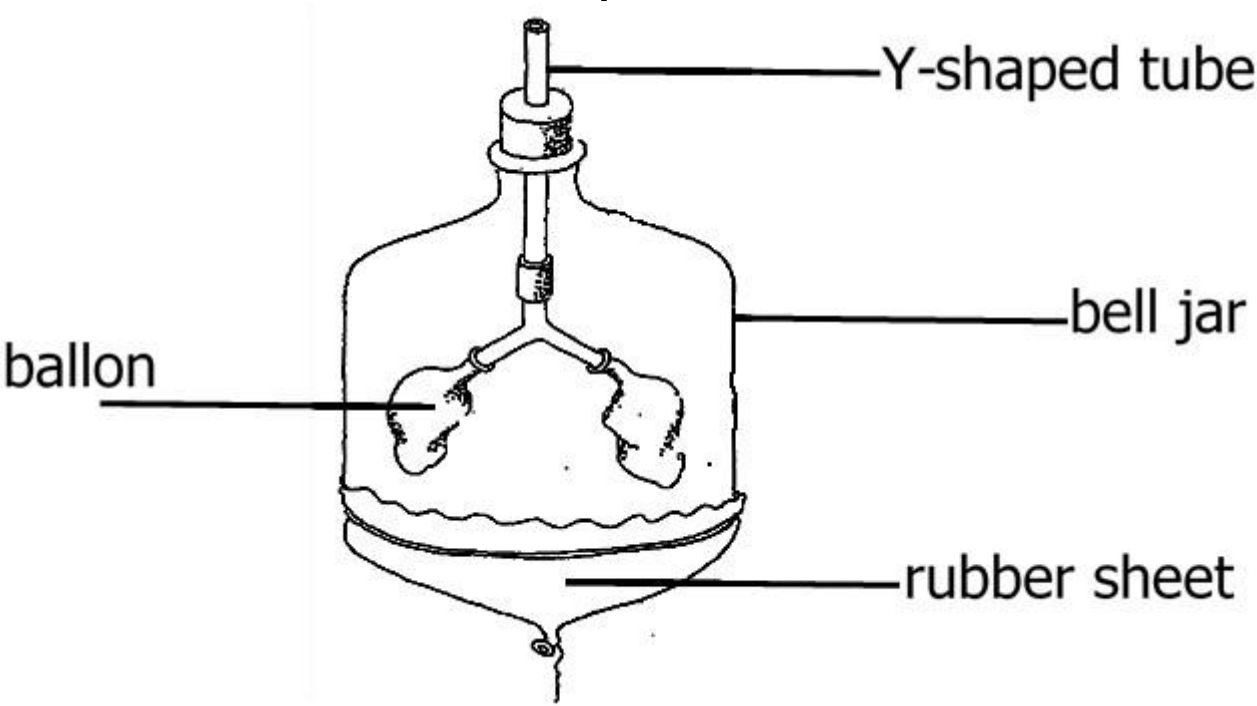
- c) Why is the farm practice done in the season you have given in (b) above?

.....

- d) Mention the product obtained from the farm practice shown in the diagram above.

.....

48. The diagram below shows a model of a certain body system. Study it and use it to answer the questions that follow.



- a) Which body system is shown by the model above?  
.....
- b) What does each of the following material on the model represent on the body system you have given in (a) above?
  - i) Y-shaped tube .....
  - ii) balloons .....
- c) State what happens to the balloons when the rubber sheet is pulled downwards.  
.....

49. a) Write down any **two** diseases that breakout at home due to lack of latrines.
- i) .....
  - ii) .....
- c) Why should a pit latrine be built at least 30 metres away from a water source?  
.....

c) Which type of pit latrine requires a lid on its hole?

.....

50. In the table below, list **A** shows forms of accidents and list **B** shows their first aid measures in the wrong order.

List A: <u>Accidents</u>	List B: <u>First aid</u>
Fainting	Perform tepid sponging.
Nose bleeding	Dip the injured part in cold water.
Burns	Lean the casualty forward.
Fever	Raise the legs higher than the head.

Write the correct first aid for each of the form of accident in the spaces provided below.

- i) Fainting: .....
- ii) Nose bleeding: .....
- iii) Burns: .....
- iv) Fever: .....

51. a) Name the physical process in matter that helps in the following activities.
- i) Drying clothes after washing .....
  - ii) Making ice cream .....
- b) State any **two** ways of putting out petrol fire in case of an outbreak.
- i) .....
  - ii) .....

52. a) Give any **one** negative effect of floods in the environment.  
.....
- b) Apart from floods, mention any **two** other natural causes of environmental degradation.
- i) .....
- ii) .....
- c) Write down any **one** of the 6R<sup>s</sup> in waste management.  
.....
- 
53. a) Apart from nuts and bolts, name any **one** other simple machine which is classified as a screw.  
.....
- b) State any **two** ways in which screws are useful to people.
- i) .....
- ii) .....
- c) Give any **one** factor that affects the proper working of screws.  
.....
54. a) Mention any **two** examples of chemical changes that take place in living things.
- i) .....
- ii) .....

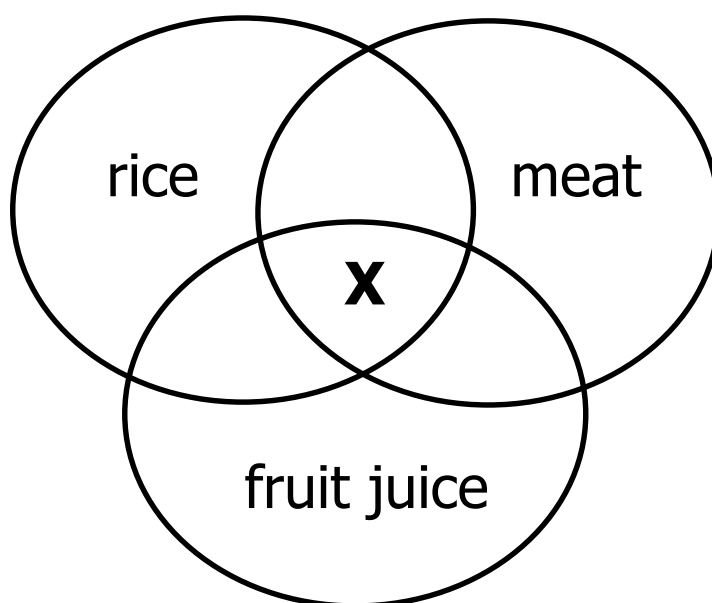
b) State any **one** characteristic of chemical changes.

.....

c) How is moulting in animals similar to germination in plants?

.....

55. The diagram below shows food stuffs eaten by family members in a certain home. Study and use it to answer the questions that follow.



a) What does part marked **X** represent in the diagram above?

.....

b) How does the father from the family who is a builder benefit from eating rice in the diagram above?

.....

c) Which foodstuff from the diagram above would you recommend the mother to give her children to prevent kwashiorkor?

.....

d) Mention any **one** other class of food that you would recommend the family to include in their diet above.

.....

