

SUCCESS ACADEMIC FOUNDATION OF UGANDA (SAFU)

PRE - PRIMARY LEAVING EXAMINATION SET I, 2022



INTEGRATED SCIENCE

Time Allowed: 2 Hours 15 Minutes

EMIS NO	PERSONAL NO
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Candidate's Name: _____

Candidate's Signature: _____

School Name: _____

District Name: _____

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

1. This paper is made up of Sections A and B
2. Section A has 40 short answer questions (40 marks)
3. Section B has 15 questions (60 marks)
4. Answer All questions. All answers to both Sections A and B must be written in the spaces provided
5. All answers must be written using blue or black ball point pen or ink. Diagrams should be drawn in pencil
6. Unnecessary alteration of work may lead to loss of marks.
7. Any handwriting that cannot be read may lead to loss of marks.
8. Do not fill anything in the boxes indicated

FOR EXAMINERS' USE ONLY

Qn. No.	Marks	Final Mark
1 - 10		
11 - 20		
21 - 30		
31 - 40		
41 - 43		
44 - 46		
47 - 49		
50 - 52		
53 - 55		
TOTAL		

For Examiners' Use Only

Turn Over

SECTION A

Questions 1 to 40 carry one mark each.

1. Name any one example of a non-insect vector.
2. Which type of brooding encourages egg eating?
3. Give any one plant source of proteins.
4. State one common characteristic among all arthropods.
5. How are the alveoli adapted to dissolving gases?

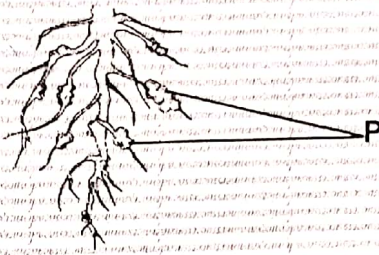
The diagram below shows a part of a skeleton. Study and use it to answer questions 6 and 7.



6. Which skeletal disorder affects part marked X?
7. How is joint marked Y similar to hinges of a door?
8. State any one quality of essential drugs.
9. How is cross breeding important in cattle management?
10. State the reason why a husband and a wife should go for gonorrhoea treatment together.
11. Give any one way in which images are similar to echoes in the way they are formed.
12. Name any one sexually transmitted disease that can be spread due to poor personal hygiene.
13. In which class of levers does the effort move a shorter distance than the load?
14. To which group of snakes is a puffadder?

15. Give any one way in which the larva stage of a housefly is useful in the environment.

The diagram below shows a certain root system. Study and use it to answer questions 16 and 17.



16. Name the group of dicotyledonous plants with such root system.

17. State the function of organisms stored in part marked P on the diagram above.

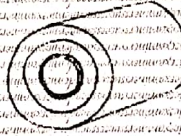
18. Name any one disease which is both water habitat vector and water contact.

19. Name any one aspect looked at during a health parade.

20. Name the energy resource from which nuclear electricity is generated.

21. Give any one advantage of using natural insemination in cattle management.

Use the diagram below to answer question 22.

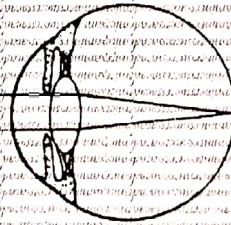


22. Give any one reason why the diagram above is of an artery.

23. How can the strength of an electromagnet be increased?

24. State any one reason why a tecomatan seed is likely to be dispersed by wind.

The diagram below shows images formed in a human eye. Study and use it to answer questions 25 and 26.



25. Why is the above human eye said to be normal?

26. How are the images formed in the human eye?
27. Besides washing hands with clean water and soap, state any one other way people can safeguard themselves against COVID-19.
28. Why do fruit farmers pollard their fruit trees?
29. How are chemical changes similar to biological changes?
30. State one way in which the ileum is adapted to its function?
31. Why is polio vaccine administered more than once?
32. Give any one way for caring for vulnerable people.
33. How is urine excreted from the body?
34. State any one danger of excessive use of artificial fertilizers.
35. Why is the volume of an avocado measured using displacement method?
36. State the reason why convalescents should be fed on food rich in proteins.
37. How is distilled water important to doctors?
38. During which mechanism of breathing does the diaphragm become dome shaped?
39. State one importance of weather forecast to a farmer.
40. How is the use of solar electricity helpful to conserve plants?

SECTION B (60 MARKS)

Questions 41 to 55 carry four marks each.

41. Match parts of the female reproductive system in part A of the table to their functions in part B.

Part A	Part B
a) Ovaries	prevents germs from entering the womb.
b) Vagina	produce oestrogen and progesterone hormones.
c) oviduct	receive the penis during copulation.
d) Cervix	site for fertilisation



- a) Ovaries
- b) vagina
- c) oviduct
- d) cervix

42. a) Name the process by which plants make starch under the presence of sunlight.

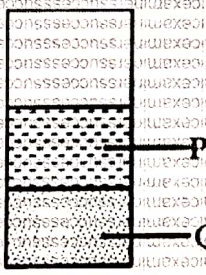
b) Which part of air increases in the atmosphere during the process mentioned in (a) above?

c) How do the following parts aid the named process in part (a) to take place

i) hair roots

ii) stomata

Two liquids, paraffin and water were mixed together. Study the diagram below and answer questions that follow.



43. a) Name liquid marked P and Q

i) P

ii) Q

b) Why did the above liquids form distinct layers?

c) How can the liquids above be separated?

44. a) Why is a person with blood group AB said to be a universal recipient?

b) Give any one viral disease of the circulatory system

c) State one reason why blood should be screened before transfusion.

d) Give any one way of keeping the circulatory system in its proper working conditions.

45. Wind refers to air in motion.

- Which form of mechanical energy is possessed by wind?
- State any one way wind is used as an energy resource.
- How can wind be useless to people who use water transport?
- State any one way trees reduce the effects of strong wind.

46. (a) Name the addictive drug found in tobacco?

- Give any one example of a drug abused by smoking.
- State any one reason people give for smoking.
- Name one body system affected by smoking.

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



- Name the simple machine shown in the diagram above.
- To which group of simple machines is the tool above?
- With the help of an arrow and letter P show the position of the load on the machine above.
- State any one way of improving the efficiency of the machine shown in the diagram above.

48. (a) How is the mode of heat transfer in liquid state different from that of solid state?

- State any one effect of heat loss to gaseous state of matter.
- Give the method of preserving milk that occurs with reduction in temperature.
- How is heat transfer by radiation useful to the people?

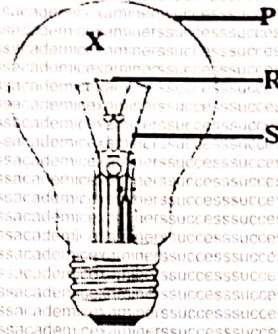
49. a) Besides lack of iron, state any one other cause of anaemia in human beings.
- b) Give any one foodstuff rich in iron.
- c) Apart from anaemia, give one other example of a mineral deficiency disease.
- d) State the best way malnutrition can be prevented among infants

50. Health concerns refer to health problems affecting people in a given community.
- a) Which health concern is addressed by protecting water sources from contamination?
- b) Besides the health concern mentioned in (a) above, give any two other examples of health concerns
- i) _____
- ii) _____
- c) State any one reason why people should practise good health lifestyles.

51. a) Give the meaning of the term essential drugs
- b) Give any one example of essential drugs
- c) What name is given to essential drugs that control pregnancies?
- d) How can essential drugs be kept safe?

52. a) State the major route through which AIDS is spread from one person to another.
- b) Name the germ that causes AIDS
- c) Give any one sign shown by AIDS victims.
- d) State the best way school going children can prevent themselves from contracting AIDS.

The diagram below shows an electric bulb. Study and use it to answer questions that follow.



53. a) Name part marked S on the above electric bulb.
- b) State the adaptation of part marked R to its function.
- c) Name any one part of air found in part marked X.
- d) State the role of part marked S on the above electric bulb.

54. a) State the major reason why farmers mulch their gardens.
- b) Name any one material used by farmers to mulch their gardens.
- c) State any one disadvantage of mulching gardens.
- d) How does mulching improve soil fertility?

55. Below are disorganized steps of extracting local salt from ash. Rearrange them to come up with the right order.

- a) Filter to obtain a filtrate.
- b) Crystals of salt will remain in the saucapan.
- c) Add water and stir to dissolve salt in ash.
- d) Boil the filtrate until it evaporates to dryness.


- a)
- b)
- c)
- d)

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INTEGRATED SCIENCE MARKING GUIDE, 2022

NO.	Correct answers
1.	Ticks, itch mites, fresh water snails, mad dogs
2.	Natural brooding
3.	Beans/groundnuts/cow peas/soya beans
4.	Have segmented bodies/have jointed legs
5.	They are moist
6.	Fracture
7.	Both joint Y and a door hinge allow movement in one plane
8.	Affordable/accessible/safe if used properly/effective if used properly/ cure diseases/reduce pain/prevent pregnancies
9.	Improves the quality of local breeds
10.	To prevent reinfections
11.	Both are formed by reflection
12.	Candidiasis
13.	Third class levers
14.	Poisonous snakes
15.	Helps people to locate dirty places in the environment
16.	Legumes/leguminous crops
17.	Fix nitrates into the soil
18.	Bilharziasis
19.	Cleanliness of the uniform/teeth/fingernails
20.	uranium
21.	Cheap/does not need skilled labour /give animals their sexual rights
22.	It has a narrow lumen - It has a thick wall.
23.	Increasing voltage in the circuit /increasing the number of turns in a solenoid
24.	Has wing-like structures /is light
25.	The image is formed on the retina
26.	By refraction of light.
27.	Wearing face masks/sanitizing/keeping social distance / immunization
28.	To make harvesting easy
29.	Both are irreversible
30.	Fairly long / has very many villi
31.	To build a stronger immunity against polio
32.	By feeding them on a balanced diet/by washing for them/by taking them for treatment, etc
33.	Through urination/urinating
34.	Kill soil organisms / destroy soil texture
35.	An avocado has an irregular shape
36.	To replace the worn-out body cells / to repair the worn-out body tissues
37.	For mixing drugs
38.	Exhalation / breathing out / expiration
39.	Helps them to know when to plant their crops
40.	People use solar electricity for cooking instead of cutting down trees for wood fuel
SECTION B	
41.	a) produce oestrogen and progesterone hormones b) Receives the penis during copulation c) site for fertilisation d) prevents germs from entering the womb
42.	a) photosynthesis b) oxygen c) i) hair roots absorb water from the soil. ii) Stomata allow in carbon dioxide.
43.	a) i) paraffin ii) water b) They have different densities c) Using a separating funnel
44.	a) He gets blood from all other blood groups b) HIV/AIDS c) Prevent transfusion of a wrong blood group / infected blood

	d) Feeding on a balanced diet / performing physical body exercises / drinking plenty of fluids etc
45.	a) Kinetic energy b) Turns wind mills to produce electricity / pumps water from underground c) Strong wind capsizes boats d) They act as windbreaks/ they reduce the strength of wind.
46.	a) Nicotine b) Tobacco / marijuana c) To feel warm / concentrate on work / fit in their peer groups etc d) Respiratory system / circulatory system
47.	a) Pair of pliers b) levers c)  d) Oiling / greasing (lubricating)
48.	a) Heat transfer in solid state is by conduction while in gas state is by convection b) Changes gaseous state to liquid state/causes condensation c) refrigeration d) helps to dry harvested crops helps to dry wet clothes/helps people to receive warmth from fire places
49.	a) hookworm infestation b) beans / meat / tomatoes / liver c) goitre
50.	a) Poor water supply b) poor sanitation / food insecurity or inadequate food supply / antisocial behaviour c) to protect themselves against diseases / prevent obesity
51.	a) Are drugs which people use to meet their common health problems b) Panadol / kigaji / ssero / coatem / ARVs / etc c) contraceptives d) Keeping them in lockable facilities / keeping them in dry places / keeping them away from direct sunlight / keeping them out of reach of children
52.	a) Having unprotected sex with an infected person b) HIV (Human Immunodeficiency Virus) c) Loss of body weight / red lips / dry cough / night sweating etc. d) Abstaining from sex / saying no to sex
53.	a) lead wire b) part R is coiled c) Nitrogen / Argon d) Conducts electricity from the contact to the filament.
54.	a) Keep moisture in the soil b) Dry grass / coffee husks / dry banana leaves etc c) mulches can easily catch fire and destroy crops / hide crop pests / un dried mulches/ may grow into weeds
55.	a) Add water and stir to dissolve salt in ash b) Filter to obtain a filtrate c) Boil the filtrate until it evaporates to dryness d) Crystals of salt will remain in the saucepan