

KOLFRAM EDUCATIONAL SERVICES KAMPALA



PRE NATIONAL MOCK EXAMINATION 2024

SET THREE (BLUE PRINT)

INTEGRATED SCIENCE



Time allowed: 2 hours 15 minutes

Index Number:

Random Number						Personal Number		

Candidate's Name:

Candidate's Signature:

School ID:

District ID:

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Read and follow these instructions carefully:

1. This paper has **two** sections: **A** and **B**. Section **A** has **40** questions and section **B** has **15** questions. The paper has **14** printed pages.
2. Answer **all** questions. **All** answers to both sections A and B must be shown in the spaces provided.
3. All answers **must** be written using a **blue** or **black** ball point pen or ink. Any answer written in pencils other than on graphs and diagrams will **not** be marked.
4. No calculators or **electronic** pens are allowed in the examination room.
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 EXAMINER'S USE ONLY

QN. NO.	MARKS	EX'ER'S INITIAL
1 -10		
11 - 20		
21 - 30		
31 - 40		
41 - 43		
44- 46		
47- 49		
50- 52		
53- 55		
TOTAL		

Turn Over

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SECTION A: 40 MARKS

(Questions 1 to 40 carry one mark each)

1. Apart from being pests, how else are weaver birds harmful in the environment?

Weaver birds cause noise pollution in the environment.

Below is the head of a snake. Use it to answer the questions 2 and 3.



2. Name the type of snake shown above.

Poisonous snake

Reason: It has a pair of fangs attached to the poison glands

3. State any one reason why snakes move with their tongues out.

- ✍ For protection
- ✍ Easy trapping of its prey

The diagram below is of equipment found in the poultry house. Use it to answer question 4.



4. How is the equipment above important to the poultry farmers?

It helps the poultry farmers in putting water for birds to drink

Wrong response: Poultry farmers used it for drinking water

Reason: Poultry farmers do not use the equipment above to drink water

5. Write down any one way of acquiring land for farming in Uganda.

- ✍ By buying land
- ✍ Through inheriting land
- ✍ From donation
- ✍ Through hiring land

Wrong responses: Through deforestation

6. Mention one reason why stones are grouped under non-living things.

- ✍ Stones do not breathe.
- ✍ Stones do not move.
- ✍ Stones do not grow.
- ✍ Stones do not feed.
- ✍ Stones do not reproduce.

- ✍ Stones do not excrete.
- ✍ Stones do not respond to stimuli.

7. Why do most solid objects sink in water?

Most solid objects sink in water because they have more density than water.

Wrong response: They are more denser than water

8. Name the symbol of electric circuit below.



Voltmeter

Wrong response: Voltage/ volts

9. Give any one common characteristic among compound leaves.

- ✍ They have many leaflets.
- ✍ They have many leaf stalks

Wrong response: They are all green/ found in plants

Reason: All trees are found on plants

Compound leaves are leaves with more than one leaflet on the stalk.

10. State any one way in which drugs are introduced in the body.

- ✍ By swallowing (tablets)
- ✍ By injections (injectables)
- ✍ By drinking (syrups)
- ✍ By smearing (ointments)
- ✍ Through sniffing the drugs

Wrong response: through immunization

Reason: Immunization is introduced to the body through injection or other method above

11. Give any one condition that may force a new torch not to work.

- ✍ The bulb is not fixed properly.
- ✍ The dry cells are not arranged properly
- ✍ The cover is not properly fixed.
- ✍ When the dry cells are wrongly arranged.
- ✍ When the dry cells are used up.
- ✍ When the coiled filament of the bulb is blown.
- ✍ When some parts of the torch are rusted.
- ✍ When the used bulb has a higher voltage than the used torch.

12. What do you understand by the term Ossification?

Ossification is the process by which cartilages turn into bones.

Babies have more bones than an adult person because they are born with more cartilages which are joined to form bones.

*This process is called **ossification***

13. How does light affect the rate of transpiration?

Light increases the rate of water loss.

14. Name any one form of energy formed by lightning.

Heat energy, light energy, electrical energy, sound energy

Lighting is the flash of light produced as a result of electrons crossing from a negatively charged to a positively charged cloud.

It is a form of static electricity in nature.

15. State any one way you can identify a person with tape worms.

- ✍ General body weakness
- ✍ Loss of body weight.
- ✍ Loss of appetite.
- ✍ The person passes out stool with tape worms mature egg segments
- ✍ The person passes out watery stool (diarrhoea)

16. Our school pit latrine smells a lot and is always full of flies. What measures can we take to prevent this situation?

By smoking the pit latrines

17. Why is egg shell porous?

- ✍ To allow free circulation of air.
- ✍ To allow gaseous exchange to take place

18. Name the dangerous gas contained in tobacco.

Carbon monoxide

Dangerous substances found in Tobacco.

- ✍ Nicotine –Causes high blood pressure.
- ✍ Tar– causes lung cancer

19. Apart from mad dogs, state any other one animals that can spread rabies.

Wild cats, foxes, wolves, monkeys, bats, jackals, mongooses, skunks, raccoons

Rabies is caused by rabies virus which is transmitted through bites, scratches or direct contact with open wounds, eyes and mouths of most mammals.

20. Give any one importance of tongue during the process of digestion.

- ✍ It rolls food into bolus
- ✍ It is used for tasting.
- ✍ It mixes the food with saliva
- ✍ It pushes the food into the gullet

Wrong response: Helps in speaking/ talking

Reason: *Speaking/ talking is not a process of digestion*

21. Name the type of cattle whose body shape is illustrated below.



Dairy cattle

Wrong response: Diary cattle/ exotic cattle

22. State any one reason why cells are not used in mobile telephones.

- ✗ They are bulky
- ✗ They cannot be recharged
- ✗ They store power for a short time

23. Give one example of how a doctor in a hospital can use a magnet.

- ✗ Magnet is used to remove iron fragments from eyes, wounds
- ✗ They are used to pick up pins, needles or any other magnetic substances
- ✗ Magnets hold magnetic materials onto the walls
- ✗ Magnets help to close the doors in hospitals

24. Why is it not necessary for a VIP latrine to have a lid for the hole?

A VIP latrine has no lid to let in air/ to allow free air circulation in the pit

Wrong response: The lid of VIP latrines are very expensive/ hard to get

25. Why is carbon dioxide used in preserving soft drinks like sodas?

Carbon dioxide does not support the life of organisms which may breed in soft drinks.

Wrong response: It does not support burning

Reason: Soft drinks are not flammable

26. How best can builders use rocks as valuable resource in the environment?

- ✗ Rocks are used in building houses.
- ✗ Rocks are used in the construction of roads.
- ✗ Some rocks are worshiped in some culture and religions.
- ✗ Rocks are used to decorate buildings.

27. What do you understand by sludge as used in biogas production?

Sludge is waste material removed from a biogas digester.

- ✗ *Biogas is methane that is produced from rotting organic matter.*
- ✗ **An effluent** is a liquid substance obtained after production of biogas.
- ✗ **Slurry** is a mixture of dung and water that enters a biogas plant in a Semi liquid form.

28. What is soil erosion?

Soil erosion is the removal of top soil from higher to lower levels by the agent of soil erosion.

Wrong response: Soil erosion is the washing away of top soil by its agents.

Reason: Not all soil erosion is caused by running water. Animals and wind cannot wash the soil from one point to another.

29. What is hydrotropism?

Hydrotropism is the plant's growth movement towards the source of water

- ✓ *Tropism is the plants growth movement in response to stimulus (change in the environment)*
- ✓ **A stimulus is** *any change in the environment to which the plant is sensitive to the type of stimulus involved*

30. Mention one reason why some people keep pigs in their homes.

- ✗ Pigs are kept for pork which is eaten as food
- ✗ Pigs are a source of income when sold
- ✗ Keeping pigs is a source of employment
- ✗ Hairs from pigs are used for making brushes
- ✗ Their dung is used as manure.

31. Give any one reason why distilled water is not good for drinking.

Distilled water is not good for drinking because it does not contain mineral salts.

*Water obtained through distillation is called **distilled water**.*

Distillation *is the process which involves evaporation of the liquids and then condensing the vapour to liquid form.*

Decanted water is not safe for drinking because it contains germs.

32. State any one factor to consider when choosing a good first aider.

- ✗ He/she should be quick in giving first aid.
- ✗ He/she should be knowledgeable enough
- ✗ He/she should have skills
- ✗ He/she should be clean
- ✗ He should be time saving

33. How are latrines and toilets able to control faecal diseases?

They keep faeces and urine in places where flies, other insects, animals and people cannot bring them to our food and shelter.

34. State the reason why the Scrotum expands during warm days and shrinks during cold days.

Scrotum expands during warm days and contract during cold days to maintain constant temperature

Wrong response: Scrotum expands during warm days and contract during cold days to protects the testis from harm

Expansion cannot protect the testes from external harms but maintain the constant temperature

35. State the main reason why a P7 candidate should brush his/ her teeth after every meal.

Brushing helps to remove food particles which attract germs and destroy teeth.

Wrong response: To remove bad smell

Reason: Nobody eats food which smells bad.

The purpose of brushing after every meal is to remove food particles between the teeth.

36. Name any one examples of fruits grouped under berry.

Tomatoes, paw paws, guavas and water melons

A berry is a fruit which has many seeds inside.

37. Whenever Timo opens or closes his door, the hinges makes noise.

What can he do to stop the noise when he is opening the door?

- ✍ He should use rollers.
- ✍ By polishing some surfaces to reduce friction
- ✍ He should Oiling the door hinges
- ✍ Timo should apply grease on the moving part of the hinges
- ✍ He should make rough surfaces of the door smooth.

38. State any one importance of written information on various activities carried out on a farm.

- ✍ They help farmers to know the profits and losses
- ✍ They help farmers to make decisions on the farm
- ✍ They enable the government to tax the farm fairly
- ✍ They help to acquire loans from the bank

39. Give any one reason for hoof trimming in sheep.

- ✍ To avoid early infections that occur around hooves
- ✍ To enable balanced moved of the animals hence avoiding lameness.
- ✍ It avoid diseases in animals
- ✍ It facilities easy mating by males
- ✍ It promotes proper movement of animals

40. Mention any one importance of food in the body.

- ✍ Food provides energy to the body.
- ✍ Food keeps the body healthy.
- ✍ Food builds the body cells.
- ✍ Food helps to protect the body against diseases
- ✍ It boost body immunity
- ✍ Food helps the body to make energy
- ✍ Food provides warmth to the body through respiration

Section B

(Questions 41 to 55 carry 4 marks each)

41. (a) Name the group of industries which use:

(i) Skins from animals as raw materials: **Leather industries**

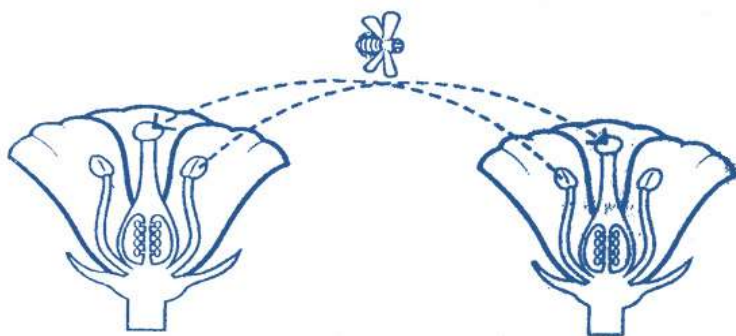
(ii) Plant materials as raw materials: **Agro based industries**

(b) Name the way in which the following animal resources are harvested.

(i) Wool: **By shearing**

(ii) Meat: **By slaughtering**

42. Below is a type of pollination. Use it to answer questions that follow.



a) Name the type of pollination illustrated above.

Cross pollination

b) Give any one example of plants that undergo cross pollination

Pawpaw, Passion fruits, maize plants /bean plants

c) State any two disadvantages of cross pollinated flowers

- ✗ Plants waste a lot of pollen grains
- ✗ Only few flowers are pollinated
- ✗ Pollination may fail due to distance barrier
- ✗ Flowers depend on external agents of pollination
 - *Pollination is the transfer of pollen grains from the anther to the stigma of a flower on a plant.*
 - *The pollen grains are the male gametes while the ovules are the female gametes in plants.*

43. (a) In which one way is the reproduction in cockroach;

(i) Similar to that of the housefly?

Both cockroach and houseflies lay eggs

(ii) Different from that of the housefly?

Cockroach undergoes incomplete metamorphosis while houseflies undergo complete metamorphosis.

(b) How are mandibles in insects similar to teeth in human beings?

Both mandibles and teeth are used for chewing food.

(c) Why are insects called oviparous creatures?

Insects reproduce by laying eggs

44. (a)How are bees important to?

(i) People:

- ✍ Bees provide people with honey/ pollinate people's food crops
- ✍ Bees maximize crop production for people
- ✍ Bees provide bee venom for treating bee patients
- ✍ Human medicines are got from bee products like honey
- ✍ Bee keeping is a source of employment to people

Wrong response: Bees pollinate people/ Bees employ people

Reason: pollination does not take place in human beings

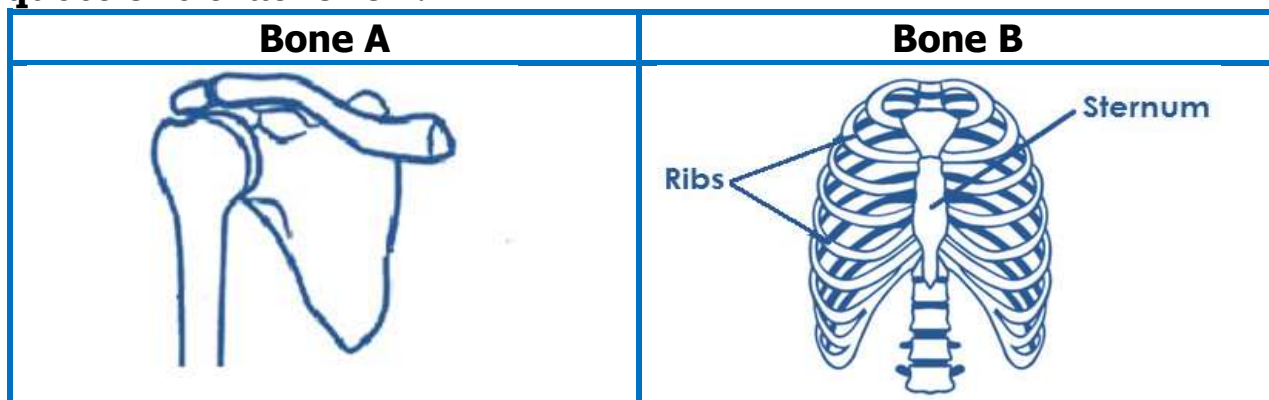
(ii) Plants:

- ✍ Bees pollinate plants
- ✍ Bee keeping helps to maintain plant population
- ✍ Bees help to increase

(b) State any one way in which bees are dangerous to people.

- ✍ Bees sting people and animals

45. Below is a diagram of a bone. Study and use it to answer the questions that follow.



(a) Name the type of bones shown above.

Flat bones

Flat bones are the bones that appear flat on the bodies.

These include the bones of the skull, scapula, patella (knee cap), sternum (Breast bones) collar bone (clavicle), pelvis, jaw bones and the ribs

(b) Name any one delicate body organ protected by the bone marked with letter B.

Heart

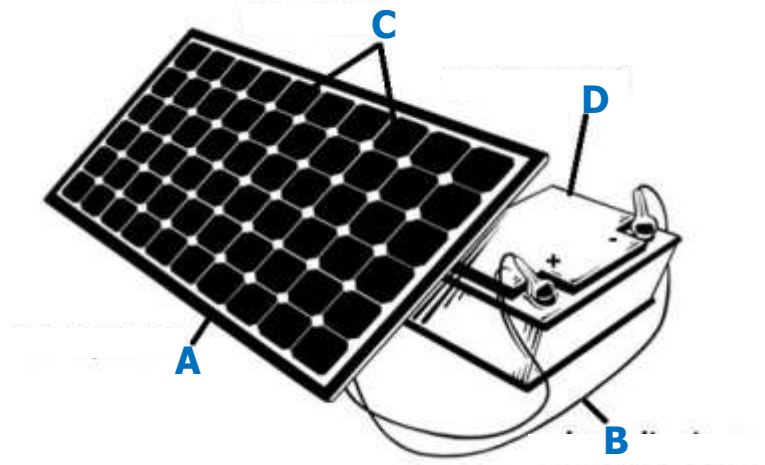
Lungs

(c) Give any two functions of the skeleton to the body.

- ✍ It gives the body shapes
- ✍ It gives support to the soft parts of the body.
- ✍ It helps in movement which is caused by the muscles attached to it.
- ✍ It provides surface for attachment of muscles.

- ✍ It stores and controls the amount of calcium and phosphorous in the body.
- ✍ It protects the delicate organs.
- ✍ Skeletons store fats in the yellow bone marrow.
- ✍ The skeletons manufactured new body cells.

46. Use the diagram below to answer the questions that follow.



(a) Name the solar system marked with letter D

Solar battery

(b) What is the use of the solar system marked with letter C?

Solar system marked with letter C changes sunlight energy into solar electricity

(c) State any two advantages of using solar electricity.

- ✍ It is friendly to the environment
- ✍ It is from a renewable source
- ✍ It serves as a renewable source of energy

47. Bwanika had the following signs and symptoms of illness:

- Pain when urinating
- Smelly discharge of pus from the penis
- Painful swelling on the testicles
- Rash and sores on the genital areas

a) State any one sexually transmitted Infection whose signs and symptoms are seen from Bwanika.

Gonorrhoea

b) Mention any two effects of the above disease to Bwanika.

- ✍ It leads to permanent damage of Bwanika's reproductive organ.
- ✍ Leads to sterility in Bwanika.
- ✍ Blocks the urethra making urination difficult and painful

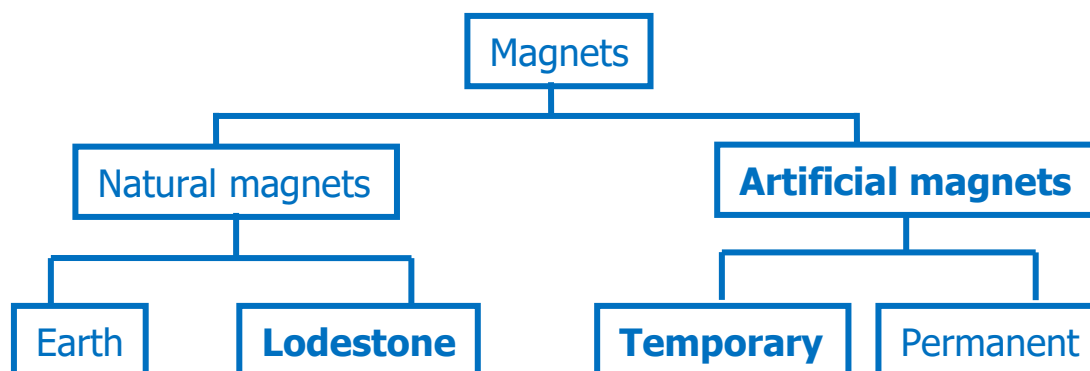
c) Give one preventive advice you would give to Bwanika to overcome such illness.

- ✍ Abstain from sex at early stages (Premature sex)
- ✍ Have regular medical check ups
- ✍ Married couples should avoid extra marital sex
- ✍ Get early treatment in case of discovered signs.
- ✍ Stop playing sex until you are completely treated

48. (a) State one reason why wood is called a non magnetic material.

- ✍ They cannot be attracted by a magnet
- ✍ They cannot be magnetized

(b) Complete the table of classification of magnets below.



49. When Mary and her friends were coming back home from school, she experienced sudden violent body movements which couldn't be controlled.

(a) What term is used to mean the condition experienced by Mary?

Convulsion

(b) State any two causes of such conditions experienced by Mary.

- ✍ Diseases/illness
- ✍ Epilepsy (Fits)
- ✍ Exposure of the body to high temperature
- ✍ Poisoning

(c) Give any one first aid that you would give to Mary then.

- ✍ Make the person get enough air supply
- ✍ Remove all the tight clothes and loosen others
- ✍ Clear the space where the victim is convulsing from
- ✍ Put an object between the teeth to prevent the victim from biting the tongue.

50. (a) How is the work of a fuse:

(i) similar to that of a switch?

The fuse and the switch all break the circuit.

Wrong response: The fuse and the switch all break the circuit at user's will

(ii) Different from a switch?

A switch breaks or completes the circuit at one's wish while a fuse breaks the circuit in case of too much currents

Wrong response: A switch breaks and completes the circuit at one's wish while a fuse breaks the circuit in case of too much currents

(b) State any two conditions that may force a fuse to break or blow

- ✍ Presence of short circuit
- ✍ High voltage
- ✍ When the fuse is too old
- ✍ Overloading of fuse

51. Below is illustration of a family planning method. Use it to answer questions that follow.



(a) Name the family planning method shown below.

Vasectomy

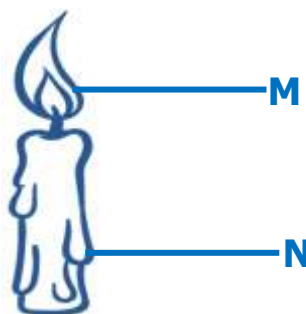
(b) State any two reasons why men are encouraged to use the method shown above.

- ✍ They are effective and well conducted
- ✍ They are convenient
- ✍ They are time saving

(c) Mention one reason why men fear family planning shown above.

- ✍ If it not done well, may cause death.
- ✍ It results into complete sterility in one's life time
- ✍ They are expensive to many families.

52. The diagram below is of a burning candle. Use it to answer questions that follow.



a) Name the type of change which take place at:

- (i) M: **Chemical change**
- (ii) N: **Physical change**

b) State any one form of energy got from a burning candle.

- ✍ Heat energy
- ✍ Light energy

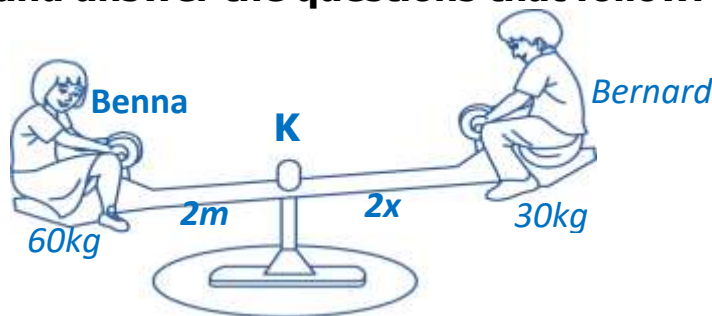
c) Mention any one condition necessary for burning to take place.

- ✍ Oxygen
- ✍ Heat
- ✍ Fuel

53. (a) State the condition necessary for the lever to be in equilibrium.

- ✍ The sum of clockwise moments equals the sum of anticlockwise moments.
- ✍ the product of clockwise moments is equal to the products of anti clockwise moments
- ✍ The sum of forces in one direction is equal to the sum of forces in the opposite direction.

(b)The diagram below shows two children playing on a see-saw. Study it carefully and answer the questions that follow.



(a) In which class of levers is the machine above classified?

First class levers

This is where the fulcrum lies between the load and effort.

Examples of first class levers

Crow bars, a pair of scissors, a water pump, pliers, a screw driver, a scale balance, see-saw, lid opener, beam balance

(b) Name point marked M.

Pivot/ fulcrum

(c) Find the value of X in m.

Solution

Load = 60Kg

Load arm = 2m

Effort = 30Kg

Effort arm = 2Xm

Load x Load arm = Effort x Effort arm

$60 \times 2m = 30 \times 2X$

$\frac{120}{60} = \frac{60x}{60}$

$2 = X$

$X = 2m$

(d) How far is Benna from Benard?

Solution

$$2m + (2x)m$$

$$2 + (2 \times 2)m$$

$$= 2 + 4$$

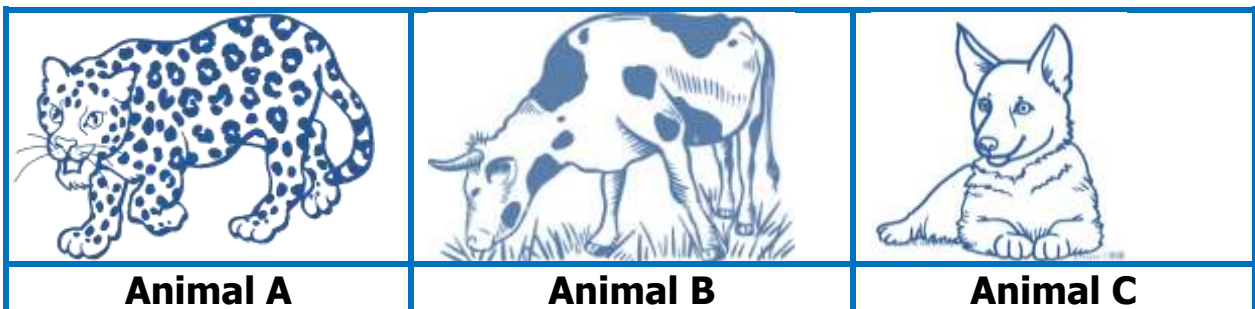
$$= 6m$$

Benna is 6m away from Benard.

54. Table below shows human body organs, the system to which they belong and the organ functions. Study and complete it correctly.

Organ	System	Organ function
Heart	Circulatory	Pumps the blood all over the body
Kidney	Excretory	Formation of urine
Pancreas	Digestive	Produces pancreatic juice
lung	Respiratory	excrete carbon dioxide from the body

55. Study the diagrams of animals below and answer the questions that follow.



(a) What is the main similarity between Animal A and animal C?

- ☒ Animal A and Animal C are carnivores
- ☒ They are all animals of prey
- ☒ They are all vertebrates

(b) State one difference between Animal B and Animal C.

- ☒ Animal B feeds on grass while Animal C feed on meat
- ☒ Animal B is herbivore while Animal C is a carnivore

(c) State any two ways of caring for all the animals above.

- ☒ By giving them food
- ☒ by giving them shelter
- ☒ by protecting them against their enemies
- ☒ by treating them when they're sick

Game Over