# THE DREAM EDUCATION CONCERN

*"Quest for excellence"*

## PRIMARY SEVEN PLACEMENT SET- 1 -2025

### INTEGRATED SCIENCE OFFICIAL MARKING GUIDE


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FOR ALL EXAMINATIONS FROM BABY TO P.7

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TURN OVER

## SECTION A (40 MARKS)

| NO | RESPONSE AND RELATED CONTENT | CLASS | TOPIC | TERM |
|---|---|---|---|---|
| 1 | Give the meaning of the term brooding.<br>Brooding is the giving of special care to chicks below eight weeks.<br>Related content<br>Types of brooding<br>-Natural brooding<br>-Artificial brooding<br>Natural brooding<br>Natural brooding is a method where a mother hen takes care of her chicks<br>Artificial brooding<br>Artificial brooding is a method where chicks are kept in a special place called a brooder<br>A brooder<br>A brooder is a special structure where chicks below 8weeks of age are kept and cared for<br>Advantages of Natural brooding<br>-Natural brooding is cheap to farmers<br>-The hen looks or food from the environment<br>-Toe pecking is reduced in chicks because they move with their mother<br>-It saves the farmer from buying artificial brooder<br>-The hen provide security for the chicks<br>Disadvantages of Natural brooding<br>-It cannot be used on large scale<br>-Chicks are eaten by wild animals like kites, eagles and cats since they just move with the mother<br>Advantages of Artificial brooding<br>-Many chicks are kept at ago<br>-Chicks are protected from predators<br>-It can be used for commercial purpose | P5 | KEEPING OF POULTRY & BEES | 1 |

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| | -It is easier to feed chicks from one place<br>**Disadvantages of Artificial brooding**<br>-It is expensive to buy feeds for chicks<br>-The chicks need constant and special person to take care of them<br>-It needs constant supply of warmth which can be expensive<br>**Types of brooders**<br>-Kerosene /paraffin brooder<br>-Charcoal brooder<br>-Infrared lamp brooder<br>**Reasons for feeding chicken**<br>-To enable them produce good meat<br>-To make them grow fast and healthy<br>-To enable them lay good number of eggs<br>**Classes of a balance diet in poultry feeds**<br>**Carbohydrates**<br>This gives energy to the body of the bird<br>**Proteins**<br>This promotes growth and fattening and it's got from soya beans, insects, ground nut etc.<br>**Fats**<br>It gives more energy and heat to the birds<br>It's got from ground nuts, peas etc.<br>**Mineral salts**<br>Calcium and phosphorous, it helps in making of hard eggs | | | |
| 2 | State any one example of pouched mammals.<br>Kangaroo<br>Wallabies<br>Koala bears<br>Related content<br>**Pouched / marsupials mammals**<br>These are mammals which have a pouched pocket on their abdomen<br>**Note:** The word marsupials means a pouch / bag | P6 | CLASSIFICATION OF LIVING THINGS | 1 |

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| | **Flying mammals**<br>Bats are the only flying mammals<br>**Note:** The common characteristic of all flying mammals is that they fold attachment to the fore limbs which act as wings<br>**Types of bats**<br>-Fruit eating bats<br>-Insect eating bats<br>-Blood sucking bats (vampire bats)<br>-Bats are nocturnal animals which are dormant during day time and active at night<br>-Echoes are used by bats to find their way out<br>**Note:** Nocturnal animals are animals which are only active at night and dormant during day time while diurnal animals are animals which are active during day time and dormant at night<br>**Sea mammals (Cetaceans)**<br>Cetaceans are animals which live in seas<br>**Characteristics of sea animals**<br>-They don't have gills but breathe through lungs<br>-They give birth to live young ones<br>-They breast feed their young ones<br>-They have a large area of fats under the skin called blubber which keeps them war | | | |
| 3 | **Convert 25°C to Fahrenheit.**<br>**Solution process**<br>Formula =<br>$°F = (C \times \frac{9}{5}) + 32$<br>What we have<br>C = 25°<br>F = ?<br>Let's substitute in as below following the formula | P5 | MATTER & ENERGY | 2 |

°F = (C° x 9/5) +32°

°F = (25 x 9/5) + 32°

°F = (~~25~~ 5° x 9/~~5~~ 1) +32°

°F = (5 x 9) + 32°

°F = 45 + 32

°F = 77°

**Related content**

Let's prove by converting 77°F to °C as below

Use the formula below

C° = (°F – 32) x $^{5}/_{9}$

What we have

F = 77°

C = ?

Let's substitute as below using the formula

C° = (°F – 32) x $^{5}/_{9}$

C° - (77° - 32) x $^{5}/_{9}$

Arrange vertically to subtract as below

```
  7 7°
- 3 2
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  4 5°
------
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C° = (45) $^{5}/_{9}$

C = (~~45~~ 5) x $^{5}/_{~~9~~ 1}$

C° = (5 x 5)

C° = 25°C

Therefore 77°F will equal to 25°C

Therefore our answer is correct because it has gone back to our original question

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| | **Burning**<br>Burning is a chemical reaction in which heat and light are produced<br>**Note:** The gas which is needed for burning to take place is oxygen<br>The gas which is needed for stopping / putting off burning is carbon dioxide and for this reason, it is used in fire extinguishers to put off fire<br>**Methods used to put off fire**<br>-Using fire extinguishers<br>- Using dust and sand<br>-Using water (but the one caused by petrol)<br>-Rolling oneself on the ground<br>**Reasons why water is not recommended to put off electric and petrol fire**<br>-Petrol is less dense than water so it floats on water and fire continues burning<br>-Water is good conductor of electricity so one can get serve shock | | | |
| 4 | **What is the main function of the large intestines is the digestive system of man?**<br>To absorb water<br>**Related content**<br>**Functions of different parts of the digestive system**<br>**(a) The Duodenum**<br>It's first section of small intestines<br>It receives bile and pancreatic juice through the pancreatic duct<br>**(b) Ileum**<br>It's where digestion of food ends<br>It's where absorption of food takes place<br>**Note:** The large intestine absorbs water and mineral salts from the remaining indigestible<br>**(c) The stomach**<br>Its where we find itch (acid) and it's use is to kill the germs that escape along with the food that we eat | P5 | DIGESTION | 3 |

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| | It's where digestion of proteins begins from being acted up on by the gastric juice enzymes<br>**(d) Rectum**<br>It keeps the undigested waste materials before they are passed out<br>**Disorder of digestion**<br>-Constipation<br>-Indigestion<br>-Vomiting<br>**Causes of constipation**<br>-Lack of roughages in the diet<br>-Drinking little water<br>-Lack of physical exercise<br>**How to prevent constipation**<br>-Eat fruits and vegetables<br>-Drink water before and after eating food<br>**Causes of indigestion**<br>-Stomach ache<br>-Heart burns<br>-Tiredness / fatigue<br>**Diseases of the digestive system**<br>-Appendicitis<br>-Cholera<br>-Typhoid<br>-Dysentery<br>**Note:** Please help learners to know how to identify the diseases of digestive system and the disorder of digestion since majority tend to misunderstand what to answer where | | | |
| 5 | Give any one reason why clay soil has the highest water retention capacity?<br>-Clay soil particles are very small and tightly packed , which allows it retain water well<br>-Clay soil has small air spaces in between | | SOIL | 2 |

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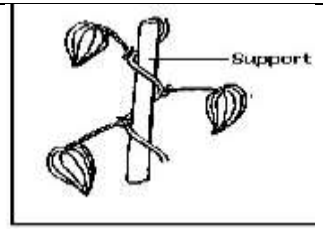
| | -Clay soil has fine particles that reduce air spaces<br>**Related content**<br>-Soil PH is the degree of acidity or alkalinity of soil<br>-Soil structure is the arrangement of particles in the soil<br>**Characteristics of clay soil**<br>-It has the smallest particles<br>-It is sticky<br>-It has little humus<br>-It drains water slowly<br>**Note:** Clay soil is the best soil for pottery work / modeling<br>**Characteristics of sand soil**<br>-It has the biggest particles<br>-It has rough particles<br>-It drains water quickly<br>**Note:** It is the best soil for building<br>**Characteristics of Loam soil**<br>-It' a mixture of sand and clay soil<br>-It has a lot of humus<br>-It is dark in colour<br>**Note:** Loam soil is the best for crop farming because it is well aerated<br>Weathering is the process by which rocks break down into small particles to form soil<br>**Soil profile**<br>Is the vertical arrangement of soil layers from the top to the bottom<br>**Agents of weathering**<br>-Animals<br>-Earth quakes<br>-Plants<br>-Flowing water<br>-Strong wind | | | |
| 6 | Name the method of climbing by plants shown below | P4 | PLANT LIFE | 1 |




Twining

**Related content**

**Stems**

These are parts of the flowering plant on which leaves and fruits are born

**Functions of stems to plants**

-They support the structure of the shoot i.e. branches, flowers etc.
-They conduct food from leaves to other parts of a plant
-Green stems help in the process of photosynthesis
-Some stems store food for the plant

**Example of stems which keep food for the plants**

-Sugar cane
-Yams
-Finger plant
-Irish potatoes

**Uses of stems to man**

-Many stems are used as food
-Some stems are used as local medicine
-Some stems are used to make poles
-Some stems are source of timber

Kinds / types of stems

-Upright stems
-Underground stems
-Climbing stems
-Creeping stems

**Reasons why plants climb others**

-Plants climb others to get sunlight

-Plants climb others for support
-To expose their fruits for seed dispersal
-To get enough air

**Ways how plants climb others**

-By use of tendrils
-By thinning eg some yams some beans
-By use of hooks and thorns
-By clasping

**Creeping stems**

These are stems which run along the ground

Examples of plants with creeping plants

-Water melons
- Pumpkins
-Sweet potatoes
-Straw berry
-Morning glory

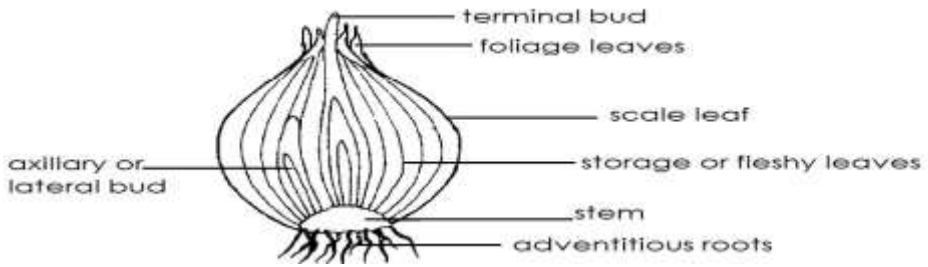
**Bulbs**

A bulb is an underground stem

**Examples of bulbs**

-Onions
-Garlic
-Leak
-Shallots

**Structure of a bulb**



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| 7 | Give the meaning of a seed bed.<br>A seed bed is a large piece of land where seedlings are planted for further growth<br>Related content<br>Hardening off<br>Is the making of seeds get used to harsh climatic conditions<br>How is hardening off done<br>-Reduced water<br>-Removing thatched roof/ shelter<br>Note: Hardening off help to expose seedlings to sunlight to make their own food<br>Transplanting<br>Transplanting is the transfer of seedlings from the Nursery bed to the main garden or seed bed<br>Reasons why transplanting is done in the evening<br>-The weather is cool in the evening which help seedlings not to lose then they are able to absorb which prevents wilting<br>-Evening transplanting help plants to have long hours of the night which helps roots to absorb enough water<br>Note: Summary of the above explanation<br>To prevent wilting of seedlings caused due to excess transpiration<br>Ways of caring for crops<br>-Thinning<br>-Mulching<br>-Watering<br>-Gap filling<br>-Pruning<br>-Manuring | P4 | PLANT LIFE | 1 |
| 8 | Name the structures which are used on kitchens and factories to let the smoke out.<br>Chimney<br>Related content | P5 | HEAT ENERGY | 2 |

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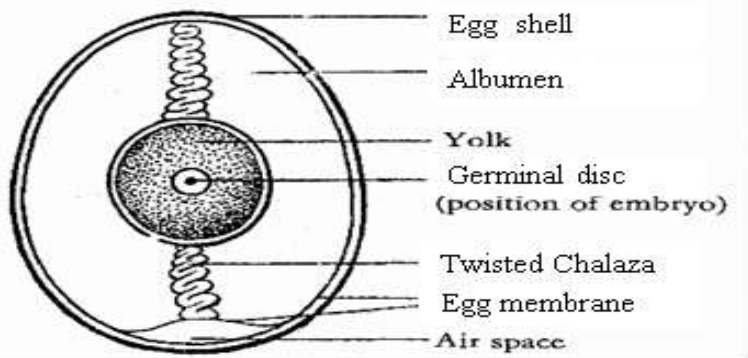
| | **Ventilation**<br>Ventilation is the circulation of air / exchange of gases<br>**Importance of different structures on a house**<br>**Ventilators**<br>They let out warm air<br>**Windows**<br>They let in fresh air<br>**Doors**<br>They let in fresh air<br>**Importance of heat transfer by radiation in the environment**<br>-Radiation is used while roasting meat, fish and chicken in an oven<br>-It enables us to warm our bodies while using heaters or warmers<br>-Heat from the fire reaches our bodies by radiation<br>**Examples of radiation in nature**<br>-Heat from the sun reaches us by radiation<br>-Heat from fire reaches the maize being roasted by radiation<br>**Importance of heat transfer by conduction**<br>-Conduction of heat enables us to iron our clothes<br>-It helps us to cook using saucepans<br>-It is used in smelting of metals<br>-It is used in cutting and welding of metals | | | |
| 9 | State the reason why the egg shell is porous.<br>To allow gaseous exchange<br>**Related content**<br>How the egg shell is adopted to it's function of gaseous exchange<br>It is porous<br>**Reasons why layers should be given mash (feeds) rich in calcium**<br>To lay hard shelled eggs<br>**Functions of different parts of an egg** | P6 | CLASSFICATION OF LIVING THINGS | 1 |




**Egg shell**

It protects the inner parts of an egg

**Air space**

-It keeps oxygen for the embryo

-It supplies oxygen to the embryo

**Egg yolk**

It provides proteins to the embryo

**Albumen (egg white)**

It provides water and proteins to the embryo

**Embryo**

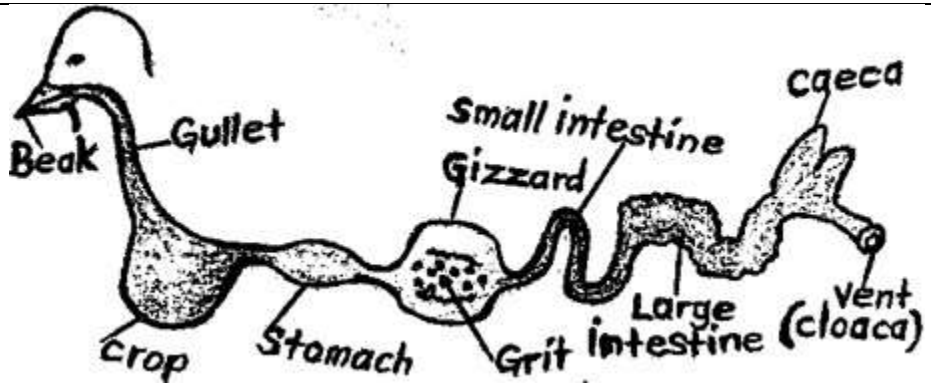
It develops into a young bird

**Germinal disk**

It develops in to an embryo after fertilization

**Note:** An embryo is found into a fertilized egg while germinal disk is found in unfertilized egg

**The digestive system of a bird**




**Beak**
-It picks food
-It passes food to the crop
**Crop**
-It stores food for a short time (it is used for temporary storage)
-It moistens and softens food
-It produces crop milk to feed chicks eg in pigeons
**Note:** Things which happen to food while in the crop of a bird
-Food is moistened
-Food is softened
**Examples of birds that do not have a crop**
-Owl
-Geese
-Button quail
**Gizzard**
It crushes or grinds food
**How is a gizzard adopted to its function**
It has grit/stones which helps in crushing of food
**Note:** Which parts of the digestive system of a human being does the same function as the gizzard in a bird
-Teeth

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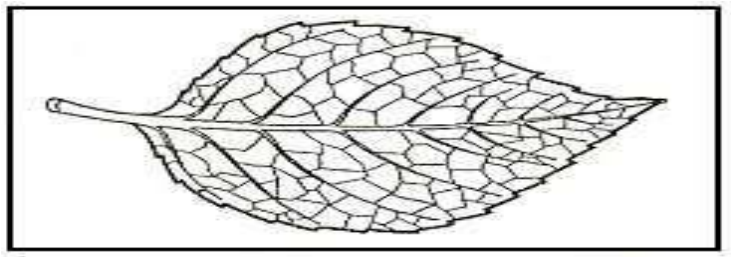
| | Reason for the above answer (teeth) is that both are used in crushing food<br>**Grit**<br>They crush food into small particles. So they are small stones found in the gizzard<br>**How is the gizzard able to withstand the grit?**<br>-It has thick muscular walls<br>**Small intestines / ileum**<br>-It is where digestion of food ends<br>-It is where food absorption takes place<br>**Main process that takes place in the small intestines**<br>-Food absorption<br>-Food digestion | | | |
| 10 | **Identify the type of leaf venation below.**<br>  <br>**Network leaf venation**<br>**Related content**<br>**Leaf venation**<br>This is the arrangement of vein in the leaf<br>**Types of leaf venation**<br>-Network venation<br>-Parallel venation<br>**Network venation**<br>This is the type of leaf venation where a leaf makes a net like structure | P4 | PLANT LIFE | 1 |

**Note:** Network venation is mostly characterized by dicotyledonous plants

**Examples of plants with network leaf venation**

-Bean plants
-Soya
-Black jack plant
-Pease
-Mango plants
-Ground nuts

**Parallel leaf venation**

This is the type of leaf venation where the veins run from the leaf stalk to the apex of the leaf parallel to another

**Note:** The veins in this type of venation do not meet and hence the name parallel venation

Parallel leaf venation is characterized mostly in monocotyledonous plants

**Examples of plants with parallel leaf venation**

-Maize plants
-Sugar cane
-Banana plants
-Sorghum

**Types of leaves**

-Compound leaves
-Simple leaves

**Simple leaves**

These are leaves with one leaf blade on the leaf stalk

**Characteristics of simple leaves**

-They have one leaflet on the stalk

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| | -They have one leaf magine<br>-They have one leaf stalk | | | |
| 11 | Mention any one characteristics of testudines<br>-They have hard shells<br>-They protect the animal from predators<br>-They have four limbs<br>-They have very long life span<br>-Tortoises can live between 150 – 300years<br>-Turtles live for about 20 – 40years<br>Related content<br>Examples of testudines<br>-Tortoise<br>-Turtle<br>-Terrapin<br>Note: Terrapin are turtles that live in fresh and salty water<br>Testudines<br>These are reptiles which have hard bony shells<br>How do tortoise and terrapin protect them selves<br>By hiding in the shell<br>What do we call the upper and lower shells of turtles and turtoises<br>Upper shell is called – Carapace<br>Lower shell is called – Plastron<br>Food for tortoises and turtles (testudes)<br>-Insects<br>-Small animals<br>-Vegetation<br>Mouting<br>This is the shedding off the outer skins in reptiles<br>Reasons why reptiles moult<br>To grow / increase in size<br>How do snakes hear / detect movement / vibration<br>Snakes hear vibration with the help of inner ear inside their jaw bones | P6 | CLASSFICATION OF LIVING THINGS | 1 |

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| | Reasons why snakes move while bringing out their forked tongue<br>-For smelling<br>Food for snakes<br>-Small insects<br>-Eggs<br>Groups / classes of snakes<br>-Venom snakes<br>-Non-venom snakes<br>-Constrictors<br>Venom snakes<br>These are snakes which have venom<br>Examples of venom snakes<br>-Cobra<br>-Death adder<br>-Coral snakes<br>-Water moccasins<br>Characteristics of venom snakes<br>-They have triangular heads<br>-They have venom<br>-They have a slit –like (elliptical) eye pupil | | | |
| 12 | Give any one cause of soil exhaustion.<br>-Mono cropping<br>-Over cultivation<br>-Leaching of mineral salts<br>-Over grazing<br>-Soil erosion<br>-Over use of soil fertilizers<br>Related content<br>Soil exhaustion<br>Soil exhaustion is the loss of soil fertility<br>Leaching | P5 | SOIL | 2 |

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| | Leaching is the washing of mineral salts from the upper layers to the lower layers of the soil<br>**Causes of leaching**<br>-Soil erosion<br>-Deep ploughing<br>-Floods<br>**Soil conservation**<br>Soil conservation is the maintenance of soil fertility<br>**Methods of soil conservation**<br>-By carrying out crop rotation<br>-By mulching the garden<br>-By growing legumes<br>-By afforestation<br>-By terracing<br>-Through contour ploughing<br>**Intercropping**<br>This is the practice of growing two or more crops on the same plot at the same time<br>**Ways how intercropping is important to soil**<br>It prevents soil exhaustion when legumes are planted<br>**Alley cropping**<br>This is where food crops are grown between rows of trees<br>**Bush fallowing**<br>This is the practice of leaving the land to grow bushy for some time<br>**Importance of bush fallowing**<br>It helps the soil to regain its fertility | | | |
| 13 | State any one importance of keeping our bodies clean.<br>-To control the spread of germs<br>-To remove dirt from the bodies<br>-To prevent bad body smell<br>-To be smart and healthy<br>-To prevent teeth diseases | P4 | PERSONAL HYGIEN | |

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| | -To prevent skin diseases<br>Related content<br>Personal hygiene<br>Personal hygiene is the general cleanliness of our bodies<br>Parts of the body that needs proper cleaning<br>-Fingers / finger nails<br>-Hair<br>-Face<br>-The teeth<br>-The skin<br>Things that should be kept clean<br>-Clothing<br>-Beddings<br>-Tooth brush<br>-Shoes<br>Ways of keeping our bodies clean<br>-Bathing regularly<br>-Washing clothes regularly<br>-Ironing clothes and beddings regularly<br>-Shaving over grown hair<br>-Brushing the shoes regularly<br>-Washing hands before eating or touching food<br>Reasons why we wash our hands<br>-To remove germs and dirt<br>-To prevent diseases<br>When do we wash our hands<br>-Before preparing food<br>-Before serving food<br>-After visiting the latrine<br>Items used to keep our bodies clean<br>-Soap<br>-Water | | | |

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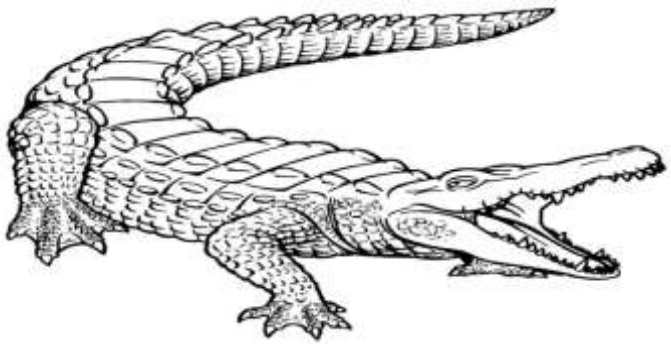
| | -Sponge<br>-Comb<br>-Towel<br>-Tooth paste | | | |
| | The diagram below is of a reptile. Use it to answer questions 14 and 15.<br>  | P6 | CLASSFICATION OF LIVING THINGS | 1 |
| 14 | Mention the reason why the above animal sometimes gape / open its mouth widely?<br>-To cool down body temperature<br>-To cool themselves | | CLASSFICATION OF LIVING THINGS | 1 |
| 15 | How is the sun's heat important to the above female reptiles?<br>Sun's heat provide s the right temperature for eggs to hatch.<br>Related content<br>Examples of crocodilians<br>-Alligator<br>-Gavial<br>-Crocodile<br>Characteristics of crocodiles and alligators<br>-They have strong tails for swimming, attacking their enemies<br>-They have strong pointed teeth for tearing their prey<br>-They have streamlined bodies for reducing friction in water<br>-They reproduce by laying eggs<br>How are crocodiles adapted to their life in water<br>-They have strong tails for swimming | | CLASSFICATION OF LIVING THINGS | 1 |

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| | -They have streamlined bodies to overcome viscosity in water<br>-Their bodies allow eyes and nostrils to be outside water<br>**Importance of reptiles to man**<br>-Some reptiles attract tourists eg crocodiles<br>-Some reptiles eat insect pests eg chameleon<br>-Some reptiles have skins which can be sold for income<br>-They provide skins for leather industries<br>-Some reptiles are source of food to man<br>**Note the following terms**<br>**Oviparous animals**<br>These are animals which lay eggs<br>**Viviparous animals**<br>These are animals which produce living young ones<br>**Viviparous**<br>These are animals that give birth to live young ones from the eggs that hatch inside their bodies<br>**Terrestrial animals**<br>These are animals which mainly live on land<br>**Aquatic animals**<br>These are animals which live mainly in water | | | |
| 16 | Give the importance of an ovipositor to a queen bee.<br>To lay eggs<br>**Related content**<br>**Apiculture**<br>Apiculture is the keeping and management of bees<br>An apiary is a farm of bees OR is a place where many bee hives are kept<br>An apiarist is a person who keeps bees<br>**Reasons why people keep bees**<br>-Bees pollinate crops for easy fertilization<br>-Bees provide honey to man<br>-Honey from bees can be sold to get money<br>-Honey is used to sweeten bread and tea | P5 | KEEPING OF POULTRY & BEES | 1 |

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| | -Bees provide man with bee wax<br>-Honey is a source of carbohydrates to man<br>**Types of bees in a hive**<br>-The queen bee<br>-The drone bee<br>-The worker bee<br>**a) The queen bee**<br>-It lays eggs<br>-It mate with a drone once in a life time<br>**Characteristics of a queen bee**<br>-It has long abdomen<br>-It is the largest bee in the hive<br>-It has a sting<br>Note: The queen feeds on royal jelly by the nurse bee<br>**b) Worker bee**<br>These are sterile female bees in a hive<br>**Note:** Sterile bees are unable to produce or lay eggs<br>**Characteristics of worker bees**<br>-They are many in number<br>-They cannot lay eggs and do not have the ovipositor<br>-They have stings used for defence<br>-They have a pollen basket on their hind legs for carrying pollen grains<br>-They are sterile bees because their reproduction organs and under developed<br>**Duties of a worker bee**<br>-They fan the hive to keep it cool<br>-They feed the brood (grub)<br>-They feed the queen bee on royal jelly<br>-They build the hive using the wax<br>-They collect the nectar, water, and pollen grains<br>**c) Drone bee**<br>The major function of the drone bee is to mate with the queen bee | | | |

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| | **Note:** Reasons why the drone bee dies after mating with the queen bee<br>Ejaculation kill the drone because it basically eviscerates their abdomen<br>**The wedding / mating / maiden fight**<br>This is a fight during which the drone bee mates with the queen bee | | | |
| 17 | State the importance of the septum of the human heart.<br>To prevent mixing of de-oxygenated and oxygenated blood<br>**Related content**<br>**Reasons why blood goes to the lungs**<br>-To pick oxygen<br>-To be oxygenated<br>-To drop carbon dioxide<br>**Functions of other parts of the heart**<br>**Pulmonary vein**<br>It carries oxygenated blood to all the body parts<br>**Aorta**<br>It carries oxygenated blood from the heart<br>**Valves**<br>They prevent the back flow of blood<br>**Semilunar valves**<br>They prevent the back flow of blood from the arteries into the ventricles<br>**Reasons why the left ventricle is thicker walled than the right ventricle**<br>-It pumps blood at a higher pressure than the right ventricle<br>**Heart beat**<br>This is the contraction and relaxation of the heart<br>**Pulse**<br>Is the number of times the heart beats per minute | P6 | THE CIRCURATORY SYSTEM | 1 |
| 18 | Give any one reason why the burnt part of the body is always put in cold water.<br>-To reduce the burning pain<br>-To reduce heat from destroying the body cells<br>-To cool down the temperature of the burnt part<br>**Related content** | P4 | ACCIDENTS | 3 |

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| | An accident is the sudden happening that can cause harm or death to the body<br>A casualty is a person who has been injured in an accident<br>**Causes of traffic road accidents**<br>-Over loading<br>-Unskilled drivers<br>-Careless driving<br>-Bad weather driving<br>-Failure to follow road signs<br>**Reasons why we give first aid**<br>-To stop bleeding<br>-To reduce pain<br>-To save life<br>**Poisoning**<br>This is the act of taking harmful or toxic substance in the body<br>**Poison**<br>Poison is any substance that can cause harm when taken into the body<br>**Examples of poisonous substances / poison**<br>-Jik<br>-Paraffin<br>-Herbicides<br>-Petrol<br>-Expired drugs<br>-Acid<br>-Insecticides<br>**Causes of poisoning at home and schools**<br>-Keeping drugs where children can reach<br>-Ignorance<br>-Poor storage of drugs<br>-Keeping poison in soda bottles<br>-Taking over dose<br>-Eating expired tinned food | | | |

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| | -Mixing insecticides before children<br>**Ways of preventing poisoning**<br>-Keep drugs out of reach of children<br>-Dispose expired drugs<br>-Avoid drug misuse<br>-Clearing bushes that hide snakes<br>-Avoid eating expired packed food<br>-Buy drugs from recommended pharmacies | | | |
| 19 | **Give any one way how the human body acquire artificial immunity.**<br>-By immunization<br>-Through injection of prepared antibodies into the body<br>**Related content**<br>**Immunity**<br>This is the ability of the body to resist diseases<br>**Types of immunity**<br>-Natural immunity<br>-Artificial immunity<br>**Natural immunity**<br>Is the type of immunity that does not involve use of vaccines<br>**Ways of acquiring natural immunity**<br>-Through breast feeding<br>-After recovering from sickness<br>**Reasons why it is dangerous to acquire immunity after recovering from illness**<br>It may lead death<br>**Artificial immunity**<br>This is the type of immunity that involves use of vaccines<br>**Vaccines**<br>These are medical drugs used for immunization<br>**Importance of vaccines**<br>They boast immunity<br>**How do vaccines boast immunity** | P5 | IMMUNISATION | 3 |

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| | -Vaccines stimulates the production of antibodies<br>-They enable the body to produce antibodies<br>**Methods of administering vaccines**<br>-Oral method<br>-Injection method<br>**Types of vaccines**<br>-Killed vaccines<br>-Live attenuated vaccines<br>-Toxoid vaccines<br>**Live attenuated vaccines**<br>These are vaccines made from weakened live germs<br>**Examples of attenuated vaccines**<br>-Yellow fever vaccine<br>-Rotavirus vaccine<br>-Measles vaccine<br>-Oral polio vaccine<br>-BCG vaccine<br>-Chicken pox vaccine | | | |
| 20 | How does deforestation cause soil erosion?<br>It leaves the soil bare exposing it to agents of soil erosion<br>**Related content**<br>**Reasons why people carry out deforestation**<br>-To get land for settlement<br>-To get land for farming<br>-For road construction<br>-For industrialization<br>-Due to charcoal burning<br>**How does our stalking and grazing cause soil erosion**<br>-Animals eat all the grass leaving the soil bare<br>-Animals carry soil in their hooves<br>**Effects of deforestation**<br>-It causes soil erosion | P5 | SOIL | 2 |

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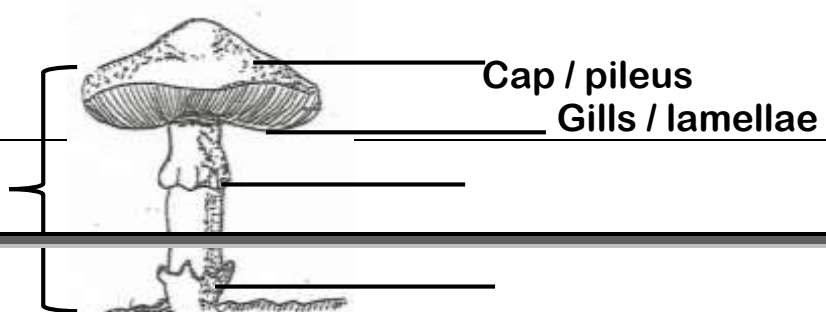
| | -It leads to drought<br>-It causes global warming<br>-It destroys habitats for wild animals<br>**Note:** Global warming is the constant rise in temperature world wide<br>**Ways or methods of controlling soil erosion**<br>-Bush fallowing<br>-Cover cropping<br>-Strip cropping<br>-Agro forestry<br>-Bundling<br>-Mulching<br>-Terracing<br>-Reforestation<br>-Contour ploughing<br>**Note:** Bundling is the making of embankment on river banks to control soil erosion<br>**How do trees control soil erosion**<br>-Trees reduce the speed of wind<br>-Trees act as wind breakers<br>**How does terracing control soil erosion**<br>-Terraces reduce the speed of flowing water | | | |
| 21 | State one reason why a mushroom is not called a plant.<br>-It has no chlorophyll while a plants has chlorophyll<br>-Mushrooms feed on dead decaying matter while plants make their own food<br>**Related content**<br>**Parts of a mushroom and their functions**<br>  <br> | P6 | BACTERIA & FUNGI | 2 |

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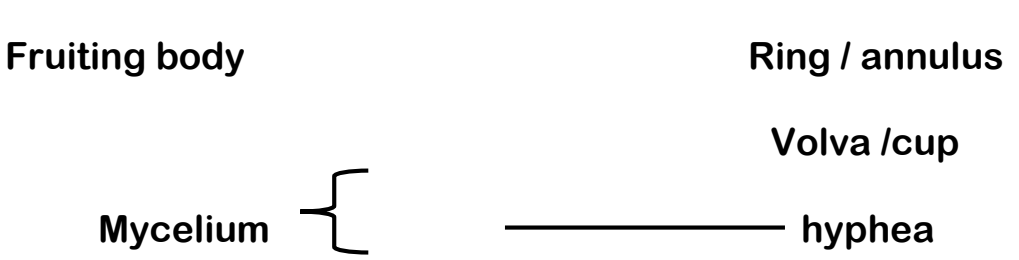
| |  <br>**Note:** The parts of a mushroom visible above the ground is called fruiting body<br>The parts of a mushroom below the ground is called mycelium<br>Functions of its parts<br>Cap / pileus<br>It protects the gills<br>Gills<br>They produce and store spore<br>Stalk / stipe<br>It holds the cap and the gills<br>Ring<br>It protects the mushroom when it's still young<br>Hyphae<br>They absorb food (Nutrients) from dead matter<br>How does yeast reproduce<br>Yeast reproduce by budding<br>The enzymes found in yeast is called zymase<br>Yeast spreads up the fermentation of alhocal<br>Conditions necessary for the growth of fungi<br>-Moisture<br>-Warmth | | | |
| 22 | State the meaning of seed viability.<br>Seed viability is the ability of seeds to germinate when all conditions are present<br>Related content | P4 | PLANT LIFE | 1 |

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| | **Conditions needed for germination to take place**<br>-Water<br>Oxygen<br>-Warmth<br>**How important / helpful are the conditions which must be present for germination to take place**<br>**Water**<br>-It softens the testa / seed coat<br>-It dissolves the food for the embryo to use<br>**Oxygen**<br>Help the embryo to carry out respiration<br>**Warmth**<br>To encourage growth of anew cells<br>Gives the enzymes necessary conditions needed to digest food for the embryo<br>**Methods of planting**<br>-Row planting<br>-Broad casting<br>**Row planting**<br>This is the planting of seeds /seedlings in line<br>**Examples of seeds /seedlings planted using row planting**<br>-Beans<br>-Ground nuts<br>-Maize<br>-Cotton<br>-Soya beans<br>**Advantages of row planting**<br>-Few seeds are used<br>-It is easy to weed the crops<br>-Spacing in line help to control pests<br>**Disadvantages of row planting**<br>-It is tiresome / takes a lot of time | | | |

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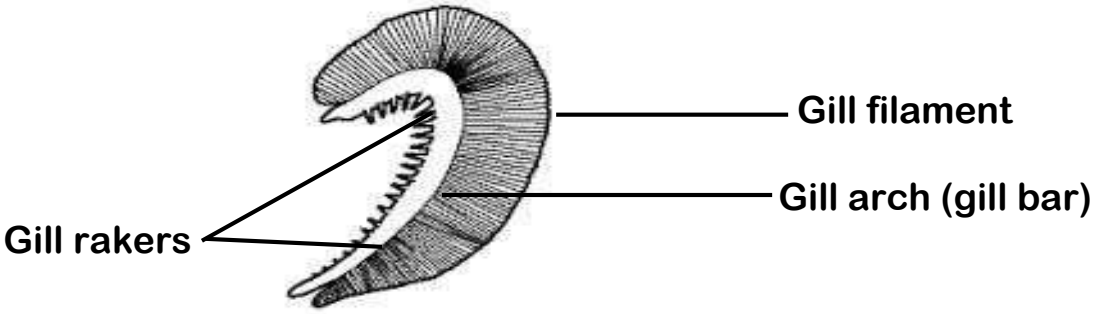
| | -It wastes land<br>-It acquires a lot of skills | | | |
| 23 | Give the reason why a fish dies when removed from water.<br>It lacks dissolved oxygen<br>Related content<br>Reasons why the gill filaments are many in number / numerous<br>To increase the surface area<br>Uses of gill filament<br>For gaseous exchange<br>Adaptation of gill filaments to gaseous exchange<br>-They are numerous / many in number<br>-They are moist<br>-They have dense network of blood capillaries<br>The structure of a gill of a fish<br>  <br><br>Gill arch (gill bar)<br>It supports the gill filaments and gill filaments<br>Gill rakers<br>-To trap solid materials from damaging the gills<br>-To filter food from water as it moves from mouth to the gills<br>How are fish with no swim bladders (cartilaginous fish) able to float on water<br>They use their funs to float on water | P6 | CLASSIFICATION OF LIVING THINGS | 1 |

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| | Examples of cartilaginous fish<br>-Shark<br>-Ray / sting ray<br>-Dog fish<br>-Skates<br>Why lung fish is called so?<br>It has gills and lungs<br>Examples of lung fish<br>-African lung fish / mud fish<br>-South American lung fish<br>-Australian lung fish<br>Reasons why lung fish take long to die when removed from water<br>-It can breathe through using a swim bladder<br>-It's swim bladder is modified into lungs for breathing<br>Reasons why lung fish produce mucus that dries into cocoon around it's body<br>To survive drought | | | |
| 24 | Give one reason why DPT vaccine is given to babies at 6 weeks.<br>Babies are born with maternal immunity that lasts for six weeks<br>Related content<br>Reasons why Tuberculosis (TB) common among AIDS patients<br>They have weak immunity / due to loss of immunity<br>How is smoking related to TB (tuberculosis)<br>Smoking worsens tuberculosis<br>Common signs in both TB and AIDs patients<br>-Chronic cough<br>-Loss of weight<br>-Severe sweating<br>Tetanus<br>It is caused by a bacteria found in soil<br>The bacteria enters our bodies through fresh cuts and wounds<br>Signs and symptoms of tetanus | P5 | IMMUNISATION | 3 |

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| | -Stiffness of muscles<br>-Stiffness of the jaw<br>-The baby stops breast feeding | | | |
| 25 | Mention any one condition of proper storage.<br>-The grain should be stored when they are dry<br>-Rat guards should be fixed on granary<br>-Stores should have good ventilation<br>-Foot crops should be dried first before storing them<br>-The roofs of the stores should not leak<br>Related content<br>Farm records<br>These are written information showing the different inputs and outputs on a farm<br>Examples of records kept by crop farmers<br>-Planting records<br>-Harvesting records<br>-Sales records<br>-Pests and disease control records<br>Uses of farm records / importance of farm records<br>-Records help farmers to know whether they are making losses or profits on a farm<br>-Records help farmers to budget for the farm<br>-Records help farmers to secure loans<br>-Records help farmers to avoid repeating mistakes<br>Changes in weather<br>Types of weather<br>-Rainy weather<br>-Windy weather<br>-Cloudy weather<br>-Sunny weather<br>Elements of weather<br>-Rain | P4 | CROP GROWING | 2 |

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| | -Cloud cover<br>-Sunshine<br>-Temperature<br>-Humidity<br>-Air pressure | | | |
| 26 | Identify any one advantage of strip grazing.<br>-Pasture is evenly used<br>-Diseases and pests are easily controlled<br>-Labor is reduced on farms<br>Related content<br>Strip grazing<br>This is where small sections called strips are created using temporary electric wire to restrict the movement of animals<br>Disadvantages of strip grazing<br>-It's expensive to maintain<br>-Few animals are kept<br>Tethering method (use of ropes)<br>Is the system where animals are tied on the peg with the rope and allowed to graze in the restricted area<br>Advantages of tethering method (use of ropes)<br>-It is cheap and appropriate to small scale farmers<br>-No fencing is required<br>Disadvantages of tethering method (use of ropes)<br>-Animals lack exercise<br>-Animals may be restricted to one type of grass<br>-Few animals can be kept<br>Free range system<br>This is the system in which animals are left to move and graze freely<br>Note: It's the commonest system in Uganda because its cheap<br>Advantages of free range system<br>-It's the cheapest method of feeding animals<br>-Animals get enough exercise | P6 | CATTLE KEEPING | 2 |

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| | -Animals feed on variety of pasture<br>Disadvantages of free range system<br>-It is difficult to manage animals<br>-It requires a lot of land<br>-Animals may stray and eat people's crops | | | |
| 27 | Calculate the volume of a stone of mass 48g and density 6g/cc<br>Solution process<br>So density $= \frac{\text{mass}}{\text{Volume}}$<br>Whereas;<br>Density (d) = 6g/cc<br>Mass (m) = 48g<br>Volume (v) = ?<br>Let's substitute in as below using the formula $D = \frac{M}{V}$<br>D = 6g/cc<br>M = 48g<br>V = ?<br>$6 = \frac{48}{V}$<br>$\frac{6}{1} = \frac{48}{V}$<br>We are to divide by the side which has the unknown after cross multiplying as below<br>$\frac{6}{1} = \frac{48}{V}$<br>1(48) = (6V)<br>$\frac{48}{6} = \frac{6V}{6}$<br>V = 8cc<br>Related content | P5 | MEASUREMENTS | 2 |

**Densities of some substances**

| Substances | densities |
|---|---|
| Gold | 19.3 |
| Mercury | 13.6 |
| Lead | 11.3 |
| Silver | 10.5 |
| Copper | 3.9 |
| Aluminum | 2.7 |
| Glass | 2.7 |

**Reasons why Aluminum is used to make bodies of aero planes**

Aluminum has low density

**Behavior of objects when put in water**

-Floating

-Sinking

Floating

This is when objects remain on top of water

**Note:** Objects remain on top of water because they are less dense than water

Liquids that float on water

-Kerosene

-Petrol

-Diesel

-Lubricating oil

-Cooking oil

**Other objects which float on water**

| | | | | |
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| | -Cork<br>-Plastic cups and plates<br>-Boats<br>-Ice<br>-Sponge<br>-Papers<br>**Sinking objects**<br>These are objects that go to the bottom of water<br>These objects are more dense that water<br>**Examples of sinking objects**<br>-Stones<br>-Sand<br>-Glass<br>-Mercury<br>-Metal rods | | | |
| 28 | State any one way how silting affects water bodies<br>-Reduces the depth of water bodies<br>-It leads to disappearance of water bodies<br>-It leads to flooding of surrounding areas<br>-Destroys habitats for aquatic life<br>**Related content**<br>**Ways of controlling silting**<br>-Controlling soil erosion<br>-A void cultivating near river banks<br>-Protect vegetation cover around water bodies<br>**Silting**<br>Silting is the deposition of fire and other solid materials like soil particles into the water body<br>**Water pollutant / water impurities**<br>Water impurities are substances which when added to water can change its natural quality<br>**Note:** Water in the reservoir poses potential energy | P6 | RESOURCES IN THE ENVIRONMENT | 2 |

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| | Flowing water poses kinetic energy | | | |
| 29 | State any one reason why rusting is regarded as chemical change.<br>-It is irreversible<br>-It is forms a new permanent substance<br>Related content<br>Rusting<br>Rusting is a chemical process that causes a red or orange coating to form on the surface of metals<br>Conditions needed / necessary for rusting<br>-Oxygen<br>-Moisture (water)<br>How important is moisture in iron rusting<br>It speeds up oxidation of iron<br>How important is rusting<br>It adds iron in the soil<br>Disadvantages of rusting<br>-It makes metals weak<br>-It spoils the colour of metals<br>-It makes sharp metals blunt<br>-It makes bolts and nuts hard to drive<br>Ways of preventing rusting and corrosion<br>-By keeping metals in cool and dry places<br>-By making alloys<br>-By painting some metals<br>Examples of metals that can rust<br>-Iron<br>-Steel<br>Examples of metals which do not rust<br>-Copper<br>-Aluminum<br>-Silver<br>-Brass | P.5 | TYPES OF CHANGES IN THE ENVIRONMENT | 2 |

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| | -Bronze | | | |
| 30 | **Name any one example of seeds which undergoes hypogeal germination.**<br>-Maize seeds<br>-Sorghum seeds<br>-Millet seeds<br>-Wheat seeds<br>-Rice seeds<br>-Oats seeds<br>**Related content**<br>Germination is the growing of a seed into a young plant<br>**Note:** A young plant is called a seedling<br>**Types of germination**<br>-Epigeal germination<br>-Hypogeal germination<br>**Epigeal germination**<br>This is the type of germination when a germinating seed carries it's cotyledon above the ground<br>All seeds which undergo Epigeal germination are dicotyledonous seeds as shown below in their<br>**Examples**<br>-Beans<br>-Soya beans<br>-Coffee seeds<br>-Orange seeds<br>-Water melon seeds<br>**Hypogeal germination**<br>This is the type of germination where the germinating seed leaves the cotyledons under the ground<br>**Differences in structural appearance between the Epigeal and hypogeal germination**<br>**A** **B** | P4 | PLANT LIFE | 1 |

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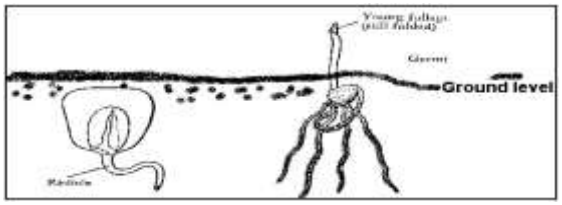
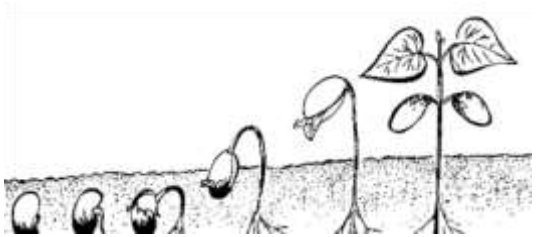
| | **Hypogeal**   **Epigeal**  **Note the following**<br>**a) Epigeal**<br>Under this type of germination all the food is kept in the cotyledons. And so they are as well dicotyledonous since they have two cotyledon<br>**b) Hypogeal**<br>Under this type of germination the seed store their food in the endosperm. And as well they have only one cotyledon | | | |
| 31 | **Identify any one method of storing sound.**<br>-Mechanical methods<br>-Magnetic methods<br>-Electromagnetic methods<br>**Related content**<br>**Echo location**<br>This is the ability of an organism to locate objects using echo<br>**Examples of animals which use echo location**<br>-Bats<br>-Whales<br>-Dolphins<br>-Propoises<br>**How is an echo formed**<br>By obstruction of sound waves / when sound waves hit the hard surface<br>**Importance of echoes / advantages** | P6 | SOUND ENERGY | 1 |

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| | -They help bats and whales to dodge obstacles<br>-They help doctors to detect heart beats<br>-They help sailors to detect the depth of water bodies<br>-They help pilots o dodge tall buildings and mountains<br>-They help blind people to dodge obstacles by using sonar sticks<br>**Disadvantages of echoes**<br>-They turn music into noise in empty rooms<br>-They prevent people from communicating clearly<br>**How echoes can be reduced in cinema halls, recording studios, conference halls and theater halls**<br>-By covering the walls with soft boards<br>-By covering the walls with sponge and thick blankets<br>**Sound reflectors**<br>These are materials that bounce /send back sound waves<br>**Characteristics of sound reflectors**<br>-They are hard<br>-They are impermeable<br>**Examples of sound reflectors**<br>-Mountains<br>-Hills<br>-Cliffs<br>-Rocks | | | |
| 32 | Give one reason why water logging is dangerous to plant roots and organisms in the soil.<br>It leads to lack of oxygen for respiration<br>**Related content**<br>**Reasons why clay soil is poorly aerated and dried**<br>It has very small spaces between its particles<br>**Reasons why clay soil is used for making ceramics and bricks**<br>It is sticky when wet<br>**Reasons why some plants cannot grow in water logged areas**<br>Due to lack of fresh air around their roots | P5 | SOIL | 2 |

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| | Examples of crops that grow well in swamps<br>-Rice<br>-Yams<br>-Sweet potatoes<br>-Sugar canes<br>-Cabbage<br>How can clay soil be improved<br>By adding humus and lime<br>Reasons why loam soil is well drained<br>It has large pore spaces / has spaced particles<br>Soil capillarity<br>This is the upward movement of water between small spaces in the soil | | | |
| 33 | State the importance of alcohol in the six's thermometer.<br>It is used to measure the lowest temperature of the day<br>Related content<br>Reasons why alcohol is used in the six's thermometer<br>It has a very low freezing point<br>Reasons why people drink alcohol<br>-To pass time<br>-To quench thirsty<br>-To fit in the peer groups of alcoholics<br>-To show that they are tough<br>-To be brave<br>Alcoholism<br>Alcoholism is a condition where a person totally depends on alcohol<br>Factors that lead to alcoholism<br>-Peer pressure<br>-Frustration<br>-Family back ground<br>-Seduction advertisement<br>-Social environment | P6 | ALHOCOL, SMOKING & DRUGS I THE SOCIETY | 1 |

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| | Body organs affected by alcohol<br>-Brain<br>-Liver<br>-Stomach<br>-Pancreas<br>-Kidney<br>-Heart<br>Effects of alcoholism to an individual<br>-It leads to brain damage<br>-It leads to loss of appetite for food<br>-Loss of jobs<br>-It leads to liver cirrhosis (liver damage)<br>How does alcohol damage the liver<br>It causes liver cirrhosis<br>How does alcohol worsens stomach ulcers<br>It leads to loss of appetite for food<br>Effects of alcohol to a family<br>-It leads to family neglect<br>-It leads to poverty<br>-It leads to sex deviation<br>-It leads to domestic violence<br>-It leads to broken marriages | | | |
| 34 | Name the deficiency disease which is caused by lack of proteins in the body.<br>Kwashiorkor<br>Related content<br>Deficiency diseases are diseases caused by lack of certain class of food in one's diet<br>Signs and symptoms of kwashiorkor<br>-Swollen moon face<br>-Brown hair<br>-Swollen hands and feet | P.4 | OUR FOOD | 2 |

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| | -The child gets anemia<br>-The child get diarrhea<br>**Prevention and control of kwashiorkor**<br>-Feed the child with food rich in proteins<br>-Take the child to hospital<br>**Below is a table showing deficiency diseases and what causes them**<br>**Diseases** / **Caused by**<br>Scurvy / lack of vitamin C<br>Marasmus / lack of carbohydrates<br>Rickets / lack of vitamin D<br>Night blindness / lack of vitamin iodine<br>Goitre / lack of vitamin B1 | | | |
| 35 | **By what process does carbon dioxide enter the stomata of the leaf?**<br>**By diffusion**<br>**Related content**<br>Photosynthesis is the process by which plants make their own food/glucose/starch<br>**Raw materials needed for photosynthesis to take place**<br>-Water<br>-Sunlight<br>**Conditions necessary for photosynthesis to take place**<br>-Water<br>-Carbon dioxide<br>**Products of photosynthesis**<br>-Glucose / starch (useful products)<br>-Oxygen (it is a waste product during the process of photosynthesis)<br>**Requirements for photosynthesis**<br>-Water, chlorophyll<br>-Sunlight | P6 | CLAASICFICATION OFPLANTS | 2 |

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| | **Importance of each requirement for photosynthesis**<br>**a) Water:** it provides the hydrogen needed to form glucose<br>**Note:** This water is got from soil<br>**b) Carbon dioxide:** It provides carbon needed to form glucose<br>**Note:** This carbon dioxide is got from the atmosphere<br>**c) Chlorophyll:** It traps sunlight<br>**Note:** This is the green pigment in the leaf<br>**d) Sunlight:** It helps to split water into hydrogen and oxygen<br>**Reasons why photosynthesis can't take place at night**<br>There is no sunlight<br>**Importance of glucose produced during photosynthesis**<br>-It is used for respiration to produce energy<br>-It is used to make insoluble starch<br>-It is used to make cellulose which build cell walls<br>**Adaptations of leaves for photosynthesis**<br>-They are broad and flat to trap sunlight easily<br>-They have thin walls to allow easy diffusion of carbon dioxide<br>-They have chlorophyll to trap sunlight<br>-They have leaf veins to transport water to all leaf cells<br>-They are properly arranged on their stems for easy exposure to sunlight<br>**Factors that affect photosynthesis**<br>-Light intensity<br>-Carbon dioxide concentration<br>-Optimum temperature<br>**How do animals benefit from photosynthesis**<br>-Animals get oxygen for respiration<br>-Some animals get food eg herbivores etc<br>**How do plants benefit from photosynthesis**<br>Plants get food | | | |
| 36 | **State the reason why avocado is not regarded as a drupe yet it has one seed.**<br>Avocado has fleshy endocarp yet drupes have dry endocarp | P6 | CLAASICFICATION OFPLANTS | 2 |

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| | **Related content**<br>**Reasons why avocado is called a single seeded berry**<br>Avocado has a fleshy endocarp<br>**Pomes**<br>These are fruits formed from the swollen receptacles<br>**Note:** It's inner core is the pericarp<br>**Examples of pomes**<br>-Apples<br>-Pears<br>**Reasons why an apple is called an accessory fruit (false fruit)**<br>It develops from the receptacle other than the ovary<br>**Dry fruit**<br>These are fruits with a dry pericarp<br>**Groups of dry pericarp**<br>-Dehiscent fruit<br>-Indehiscent fruit<br>**Dry dehiscent fruit**<br>These are dry fruits which split to disperse the seeds<br>**Examples of dry dehiscent fruits**<br>-Beans<br>-Cassia<br>-Desmodium (tick)<br>-Pease<br>-Tobacco<br>-Castor oil<br>-Sodom apple<br>**Dry indehiscent fruits**<br>-Sunflower<br>-Tridax<br>-Maize<br>-Bidens pilosa (black jack)<br>-Cashew nuts | | | |

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| 37 | **Mention any one group of people that promote (PHC) Primary Health Care.**<br>-Self-help group<br>-Religious groups<br>-Youth groups<br>-Social welfare<br>-Cooperative groups<br>-Village health communities<br>**Related content**<br>**Activities done by a community to promote PHC**<br>-Constructing public latrines<br>-Repairing damaged roads<br>-Organizing community health days<br>-Distributing public garbage containers<br>-Announcing any outbreak of diseases in the community<br>-Protecting water sources<br>**Activities done by family to promote PHC**<br>-Construction of latrines at home to promote proper disposal of human wastes<br>-Digging rubbish pits at home for proper disposal of rubbish<br>-Boiling water for drinking to prevent diarrheal diseases<br>-Setting up a plate rack at home to prevent washed utensils from getting contaminated<br>-Taking children for immunization<br>**Note:** How does digging a rubbish pit, constructing of latrines, distributing garbage containers in the community promote PHC. I refer you to the above activities done by a family in promotion of PHC.<br>**Health life style that promote good health**<br>-Feeding on a balances<br>-Doing regular body exercise<br>-Ironing clothes to kill germs and parasites<br>-Washing clothes to remove germs | P.5 | PRIMARY HEALTH CARE | 2 |

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| | -Reading books in enough light<br>Importance of getting enough rest and sleep<br>-It breaks fatigue<br>-It refreshes the brain<br>Importance of good sitting posture<br>-It prevents deformation of bones<br>-It prevents back and chest pain<br>-It prevents dislocation<br>-It help in proper working of body organs<br>Importance of performing physical exercise<br>-It reduces body weight<br>-It makes the joints flexible<br>-It makes the heart muscle grow stronger<br>-It prevents heart attack | | | |
| 38 | State any one reason why free range system is not used in urban areas.<br>-There is inadequate land<br>-It needs a big piece of land<br>Related content<br>Advantages of free range system<br>-It is cheap<br>-It saves time<br>-Birds get balanced diet<br>-Birds need little care<br>-It controls poultry vices<br>Reasons why free range system is regarded as the cheapest system of poultry keeping<br>-The farmer doesn't buy poultry feeds<br>Disadvantages of free range system<br>-It needs a big piece of land<br>-Birds can easily be stolen<br>-Birds can easily be killed by predators / wild animals<br>-Birds can easily be poisoned | P5 | Keeping poultry and bees under poultry keeping | 1 |

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| | -Eggs can easily get lost<br>-It is difficult to cull birds<br>Note: Vermins<br>These are wild animals that attack and harm domestic animals | | | |
| 39 | Mention any one function of a crop to the digestive system of a bird.<br>-It stores food for a short period of time<br>-It moistens and softens food<br>-It produces crops<br>Related content<br>Reasons why birds moult their feathers<br>To grow new feathers<br>Moulting<br>This is the shedding of old feathers in the birds<br>Reasons why birds are streamlined<br>To overcome viscosity (to reduce air resistance)<br>Importance of down feathers<br>They insulate the bird's body | P6 | Classification of living things | 1 |
| 40 | What scientific term is used to mean the removal of horn buds from the head of a young animal?<br>-Debudding<br>-Dehorning<br>Related content<br>Instruments used in debudding /dehorning<br>-Spoon dehorner<br>-Dehorning iron<br>Advantages of dehorning<br>-It increases space in the kraal<br>-It makes animals easy to handle<br>-It prevents animals from destroying the structure<br>-It prevents animals from injuring people and other animals<br>Disadvantages of dehorning<br>-It is painful to the animal | P6 | KEEPING CATTLE | 2 |

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| | -The animal may lose a lot of blood and die<br>-The wound may become septic<br>-It requires a skilled person who might be expensive to afford<br>**Reasons why farmers deworm their animals**<br>-To kill endo parasites<br>**Examples of endo parasites**<br>-Tape worm<br>-Hook worm<br>-Liver fluke<br>-Thread worm | | | |

## SECTION B (40 MARKS)

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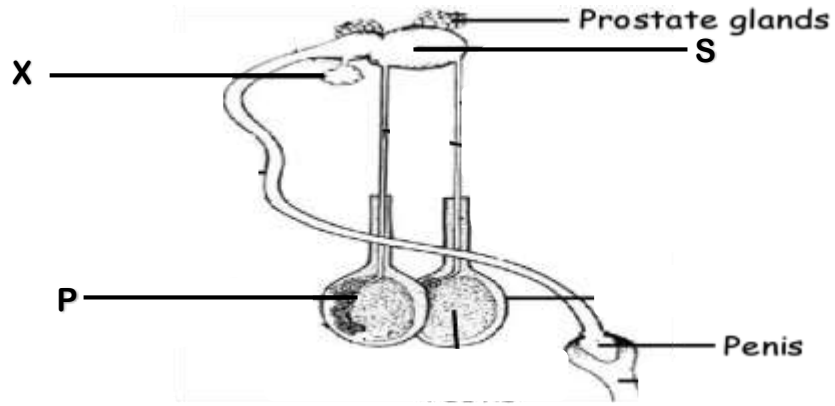
| 41 | **The diagram below shows a reproductive system of a bull. Study it carefully and answer the questions about it**<br>  <br><br>**a) Name the parts marked**<br>**X** seminal vesicle<br>**P** epididymis<br>**b) Give any one reason why part marked P is coiled.**<br>-To provide enough time for sperms to mature<br>-To delay release of sperms | P6 | KEEPING CATTLE | 2 |

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| | c) How is the penis adapted to its function?<br>-It has an erectile tissue for erection<br>-It has a sheath which protect its head (glass)<br>-It has urethra to pass out sperms<br>Related content<br>Reasons why the scrotum always hanging between legs<br>-To keep the testes at a slightly lower temperature than the rest of the body<br>How the scrotum regulate temperature around the testes on the following days<br>a) Cold days<br>It contracts for testes to move upward and get warmth from the body<br>b) Hot days<br>It relaxes for the testes to move away from the body to cool temperature<br>Functions of different parts of the reproductive system of a bull<br>Penis<br>It deposits sperms into the vagina<br>Sheath<br>It protects the glans (head of the penis)<br>Epididymis<br>It allows sperms time to mature<br>Urethra<br>It passes out sperms from the penis<br>Scrotum<br>-It protects the testes from harm<br>-It regulates temperature of the testes<br>Sperm duct<br>It carries sperms to the urethra<br>Cowper's gland<br>It produces a fluid that neutralizes acids in the urethra<br>Fertilization in s cow<br>This is the union of male and female gametes to from to form a zygote<br>Gametes<br>-These are reproductive cells | | | |

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| | -The female gamete is called ovum<br>-The male gamete is called sperm | | | |
| 42 | (a) State one importance of screening blood.<br>-It helps to discover the germs in the blood<br>-It helps to discover blood germs<br>-It promotes safe blood transfusion<br>(b) Write any two ways of increasing blood volume in the body.<br>-Feeling on food rich in iron<br>-Taking iron tablets<br>-Through blood transfusion<br>-Drinking a lot of juice<br>(c) How are blood groups formed?<br>According to the antigens in the red blood cells<br>Related content<br>General functions of blood<br>(A) Transports functions<br>-It transports digested food in the body<br>-It transports oxygen in the body<br>-It transports hormones in the body<br>-It transports metabolic wastes to excretory organs<br>(B) Protective functions<br>-It protects the body against diseases<br>-It prevents bleeding by clotting on the cuts and wounds<br>(C) Regulative functions<br>-It distributes heat in the body<br>What health problem is likely to get due to inadequate platelets in the body?<br>-Excessive bleeding in case of a cut<br>-Poor blood clotting<br>The constituents of blood plasma / components<br>-Water<br>-Hormones<br>-Antibodies | P6 | Circulatory system under general functions of blood | 1 |

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| | -Digested food (amino acids, mineral salts<br>-Urea<br>-Carbon dioxide | | | |
| 43 | (a) What first aid would you give to a person who has been bitten by a snake? (give one)<br>-Tie the bandage slightly above the bitten part to prevent the flowing of venom to the heart<br>-Apply the black stone to absorb venom from the injured part<br>-Keep the victim calm and at rest to prevent venom from spreading into the whole body<br>(b) Write down any two signs of a venomous snake bite.<br>-Two puncture wounds<br>-Bleeding from the injured part<br>-Swelling of the injured part<br>-Excessive sweating<br>(c) In one way, state how fangs are adopted to its function of injecting venom into the prey.<br>-They are hollow<br>Related content<br>Importance of venom to venomous snakes<br>-It help to kill the prey<br>Dangers of snake venom to human life<br>-It poisons blood leading to death<br>-It clots blood<br>-It destroys nerve cells<br>-It leads to internal bleeding by breaking cells and tissues<br>-It paralyzes the heart<br>Medical importance of snake venom<br>It is used to make antivenin / anti venom serum<br>Reasons why it is advisable to identify the colour, marking and shape of a snake in case of a snake bite<br>To give the right anti venin | P6 | Classification of living things under groups or classes of snakes | 1 |

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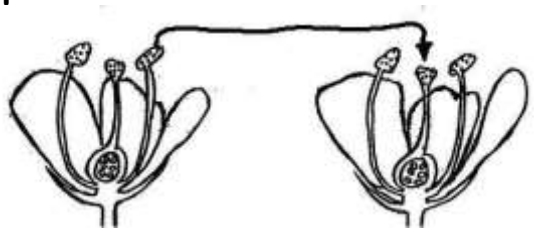
| 44 | The diagram below show a type of pollination. Study it carefully and answer the question about it<br>  <br>(a) Identify the type of pollination shown below.<br>Cross pollination<br>(b) Write the general name given to a group of petals.<br>Corolla<br>(c) Write any two examples of plants which carry out the above named type of pollination.<br>-Maize plant<br>-Coco plant<br>-Paw paw plant<br>-Cow pea plant<br>-Passion fruit plant<br>Related content<br>A table showing the difference between wind and insect pollinated flowers | P4 | Plant life under types of pollination | 2 |

| Insect pollinated | wind pollinated |
|---|---|
| Have brightly coloured petals | Have dull coloured petals |
| Have large petals | Have small petals |
| Produce scent | Produce no scent |
| Produce nectar | Produce no nectar |
| Produce few pollen grains | Produce a lot of pollen grains |
| Have sticky stigma | Have lighter stigma |
| Have heavier pollen grains | Have lighter pollen grains |

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| 45 | (a) State any one reason why subsoil tend to be rich in mineral salts.<br>Due to leaching<br>(b) Identify any two factors that influence weathering<br>-Earth quake<br>-Action of plant roots<br>-Frost action<br>-Action of heat<br>-Mining<br>-Road construction<br>(c) Suggest one reason why some plants are not able to grow crops in water logged areas.<br>Due to lack of fresh air around their roots<br>Related content<br>Weathering: This is the breakdown of rocks into smaller particles to form soil<br>Types of weathering<br>-Chemical weathering<br>-Biological weathering<br>-Physical weathering<br>How does temperature cause weathering<br>When temperatures are high, rocks expand and when temperatures are low, rocks contract and hence breaking<br>Reasons why loam soil is regarded as the best soil for crop growing.<br>-It has a lot of humus<br>-It is moderately drained<br>-It has a good water holding capacity<br>-It is moderately aerated<br>-It has moderate soil texture | P5 | Our environment under components of the environment particularly soil | 2 |
| 46 | (a) What causes convection currents?<br>Different densities of molecules<br>(b) State any two importance of convection in the environment.<br>-It enables air circulation in a house<br>-It helps in boiling of water | P5 | Matter and energy under methods of heat transfer | 2 |

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| | -It enables charcoal stoves to continue burning<br>-It enables hot water supply in a home<br>-It drives out smoke through the chimney<br>-Convection currents take away smoke from cigarettes<br>(c) State any one reason why doors and windows are put below the ventilators on a house.<br>To allow in fresh air easily<br>Related content<br>Ways of managing heat in our daily life<br>-Wearing white clothes on hot days<br>-Using umbrellas on sunny days<br>-Putting houses with white colours<br>-Putting some objects with white colours<br>Importance of ventilators on a house<br>To let out stale air<br>Reasons why stale air go up<br>It is less dense than fresh air<br>Differences between stale and fresh air<br>-Fresh air is denser than stale air<br>-Fresh air is cool while stale air is warm<br>What happens if wood is burnt in plenty of oxygen?<br>It turns into ash | | | |
| 47 | (a) How can pitch of wind musical instrument be decreased?<br>By increasing the vibrating space<br>(b) Which factor enables sound to travel in different media (state of matter).<br>Molecules<br>(c) Mention any two factors which affect the speed of sound.<br>-Temperature<br>-Wind<br>-Altitude<br>-Humidity<br>-Heat | P6 | Sound energy under transmission of sound | 1 |

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| | **Related content**<br>**Percussion instruments:** Are musical instruments that produce sound by vibration of their surface when hit<br>**Examples of percussion instruments**<br>-Marimba<br>-Xylophone/ balafon<br>-Vibraphones<br>-Drums<br>-Long drums<br>**String musical instruments**<br>These are instruments that produce sound by vibration of their strings when plucked or bowed<br>**Examples of string musical instruments**<br>-Cello<br>-Violin<br>-Bow harp<br>-Guitar<br>**Wind musical instruments:** These are instruments which produce sound by vibration of air blown in them<br>**Examples of wind musical instruments**<br>-Whistle<br>-Trumpet<br>-Panpipes<br>-Flute<br>-Saxophone<br>-Bugle | | | |
| 48 | (a) How do bacteria locomote / move?<br>By using flagella<br>(b) Give any two conditions needed by bacteria to reproduce.<br>-Food<br>-Moisture (water)<br>-Warmth | P5 | Bacteria and fungi | 2 |

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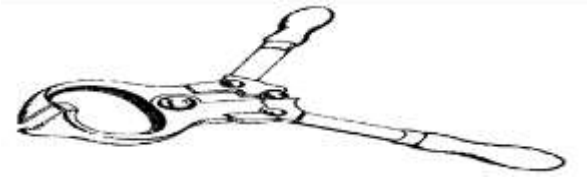
| | -Oxygen<br>(c) In one way, suggest how bacteria are able to survive harsh environmental and chemical conditions.<br>By forming endosperms<br>Related content<br>Single celled organism that reproduce by cell division (Binary fission)<br>-Bacteria<br>-Amoeba<br>-Virus<br>-Paramecium<br>Importance of bacteria (ways in which bacteria are useful)<br>-Some bacteria help to fix nitrogen in the soil eg rhizobia<br>-Some bacteria help in decomposition of organic matter eg putrefying bacteria<br>-Some bacteria help in production of vinegar<br>Reasons why it is bad to pour kerosene and oil in latrine<br>Oil kills bacteria and maggots that would reduce the volume of feaces<br>Examples of processes which need bacteria to take place<br>-Decomposition<br>-Fermentation of milk (production of cheese, butter and yoghurt)<br>-Production of vinegar<br>-Biogas production (anaerobic fermentation) | | | |
| 49 | The diagram below shows an equipment found on livestock farms. Study it and answer the questions that follows.<br>  <br>(a) Identify the farm instrument drawn above.<br>Burdizzo<br>(b) How important is the above named instrument to a cattle farm?<br>It is used in closed castration of live stock | P6 | KEEPING CATTLE | 2 |

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| | (c) In one way, state how the above named tool adopted to its functions.<br>It has a blunt pincers<br>(d) Mention any one advantage of castration in livestock farming<br>-It prevents in breeding<br>-It prevents random mating<br>-It prevents un wanted pregnancies<br>-It prevents bad smell in male animals<br>Related content<br>Calf management practices on a farm<br>-Dehorning<br>-Hoof trimming<br>-Castration<br>-Spraying<br>-Dipping<br>-Dusting<br>-Numbering / identification<br>Branding<br>This means putting marks on the body of animals using hot iron<br>Different ways of branding animals<br>-Ear notching<br>-Ear tagging<br>-Using a number lace<br>-Ear tattooing<br>-Tail bobbing<br>Castration: This is the removal or inactivation of testicles of a male animal<br>Methods of castration<br>-Open castration<br>-Closed castration<br>-Loop castration | | | |
| 50 | (a) Define drug prescription.<br>This is the information written by a medical worker on how to use a drug<br>(b) State any two factors considered when prescribing drugs. | P.6 | ALCOHOL ,SMOKING | 1 |

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| | -Age and patient<br>-Weight of the patient<br>-Kind of previous drug<br>-Duration of sickness<br>-Type of sickness<br>(c) What does the statement below represent medically? (2 x 3)<br>- Means taking 2 tablets every after 8hours<br>-Means taking 2tablets three times a day<br>Related content<br>Advantages of drug prescription<br>-It prevents wrong dose<br>-It prevents drug misuse<br>-It prevents poisoning<br>Causes of over dose<br>-Much fear for the diseases<br>-Sweetness of some drugs<br>-Self medication<br>-Drug misuse<br>-Keeping drugs in children's reach<br>Disadvantages of over dose<br>-It leads to poisoning<br>-It can lead to death<br>-It damages body organs<br>Some information manufactures put on a drug during packaging and before selling it<br>-Name of the drug<br>-Diseases cured by a drug<br>-Expiry date<br>-Composition of the drug | | AND DRUGS IN THE SOCIETY | |
| 51 | (a) State any one reason why wind mills are not commonly used in Uganda to produce electricity.<br>Uganda does not have regular windy seasons | | | |

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| | (b) Suggest any one use of wind mills.<br>-It is used to draw water from underground tanks<br>-It is used to grind grains and seeds<br>-It is used to generate wind electricity<br>(c) Outline any two dangers of wind mills to people.<br>-It is an agent of soil erosion<br>-It spreads air borne diseases<br>-It destroys houses<br>-It breaks trees and crops<br>Related content<br>General uses of minerals<br>-They are source of income when sold<br>-They are used as raw materials in industries<br>-They earn foreign exchange for the government<br>Ways of conserving minerals<br>-Making alloys<br>-Painting metals to avoid rusting<br>-Recycling scrap metals | | | |
| 52 | (a) List down any two examples of urinary tract infection (UTIs).<br>-Genital warts<br>-Genital herpes<br>-Gonorrhea<br>-Candidiasis<br>-Trichomoniasis<br>-Chlamydia<br>(b) Write any two signs of UTIs.<br>-Blocked urethra<br>-Pus discharge from penis and vagina<br>-Swelling of genital parts<br>-Bleeding from the genital parts<br>Related content<br>Ways of controlling secondary infections | P6 | RESOURCES IN THE ENVIRONMENT | 2 |

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| | -Abstain from sex until marriage<br>-Be faithful to our sexual partners<br>-Use condoms to play sex with un trusted partner<br>-Avoid extra marital sex<br>-Learning more facts about HIV<br>PID in full<br>Pelvic Inflammatory Disease<br>Signs of PID<br>-Pain in the lower abdomen<br>-Fever<br>Dangers of PID (effects of uncontrolled STDs in female)<br>-Painful menstruation<br>-Sterility (barrenness)<br>-Blocked oviduct<br>-Wounds in the uterus<br>General prevention and control of STDs / STI<br>-Keep reproductive organs clean<br>-Keep latrines clean<br>-Abstain from sex until marriage<br>-Be faithful to our sexual partners<br>-Use condoms to play sex with un trusted partner | | | |
| 53 | (a) What term is used to mean the force of attraction between molecules of different kinds?<br>Adhesion<br>(b) State any two properties of gaseous state of matter<br>-They do not have definite shape<br>-Molecules in gases are furthest apart<br>-Heat travels in gases by convention<br>-Gaseous state has the smallest density<br>(c) Mention any one example of viscous liquids. | P5 | Matter and energy | 2 |

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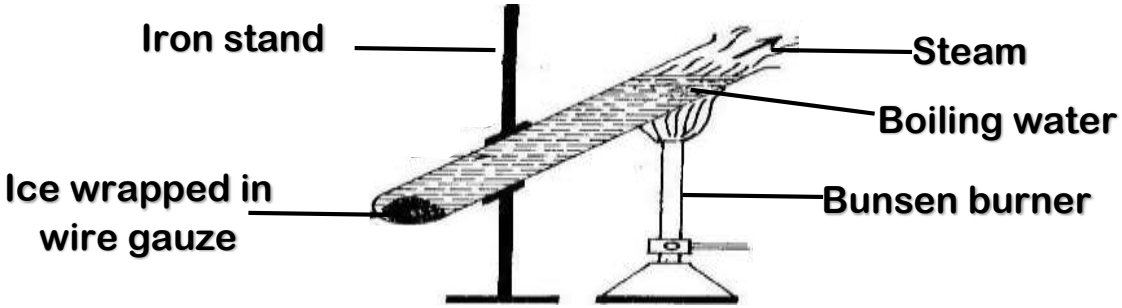
| | -Porridge<br>-Syrup<br>-Honey<br>**Related content**<br>**Sublimation:** This is the direct physical change of liquids to gases<br>Examples of sublimates (substance which can sublime)<br>-Iodine<br>-Naphthalene (mothballs)<br>-Potassium per manganite<br>-Dry ice | | | |
| 54 | Study the experiment below that confirms water being a poor conductor of heat.<br>  <br><br>(a) State the reason why ice cubes didn't melt yet the water at the top was boiling.<br>Water is poor conductor of heat<br>(b) Why does hot water remain on top of cold water as shown in the experiment above?<br>Heated molecules are less dense than cold molecules<br>(c) Suggest any two applications of conduction of heat in our daily life.<br>-It helps in ironing clothes<br>-It enables us to cook food in saucepan<br>-It helps in iron smelting<br>-It helps in melting ghee and butter<br>-It helps us to roast meat on metal rods | P5 | HEAT ENERGY | 2 |

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| | Related content<br>Reasons why the sea is cool during day time<br>-Water reflects some heat<br>-Sun rays go deep in water since it is transparent<br>-Water waves mix the warm water at the surface with cool water below it<br>Reasons why the land warms quickly during day time<br>-Land absorbs heat<br>-Heat does not go inside the land<br>How does heat from the sun reach the earth to dry wet clothes<br>By radiation | | | |
| 55 | (a) Define the term health parade.<br>This is an assembly done at school to check on children's hygiene<br>(b) Outline any one example of people who conduct health parades at school.<br>-Health prefects<br>-Sanitary prefects<br>-Science teachers<br>-Teachers on duty<br>(c) Mention any one activity carried out on health parade.<br>-Checking children with un brushed teeth<br>- Checking children with long finger nails<br>-Checking children with dirty uniforms<br>-Checking children with jiggers<br>(d) State any one reason why health parades are important in school.<br>-To promote personal hygiene among school children<br>-To promote good health among school children<br>-To promote child program<br>Related content<br>Child to child program<br>This is the health program where older children help the young ones to promote good health<br>Activities done in child to child program<br>-Older children teach young ones how to use latrines | P.5 | PRIMARY HEALTH CARE | 2 |

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| | -Older children teach young ones to wash hands before meals<br>-Older children take young ones for immunization<br>PWD in full<br>People With Disabilities<br>Types of disabilities<br>-Physical disabilities<br>-Sensory disabilities<br>Physical disabilities<br>This is when a person's limbs or arms are crippled<br>Sensory disabilities<br>This is when a person's sense do not work well | | | |

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