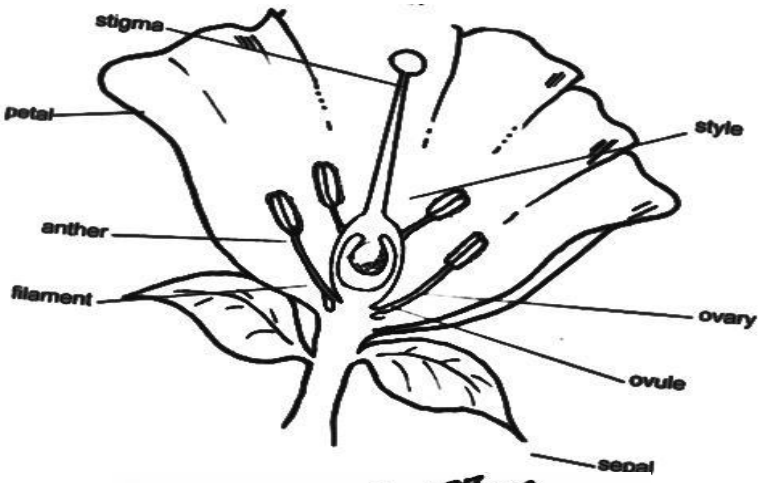
PRIMARY SCIENCES



QUESTIONS AND ANSWERS

Name: …….....

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D.M

CHAPTER 1

SCIENCE AND TECHNOLOGY

UNIT 1: MATTER

1.1.States of matter

1. What is matter?

= Matter is anything that has mass and volume.

2. Mention the three states of matter

= Solids, liquids and gas

3 State any three properties of solids

i. they have a definite shape
ii. particles are closely packed together
iii. particles are arranged in a regular pattern

4. State any four properties of gas.

i. They flow in all directions
ii. They do not have a definite shape, so they take the shape of the container in which they are put
iii. Particles are far away from each other.
iv. They can be compressed easily.

5. What makes matter to change their state?

= Change in temperature

6. Define the following terms:

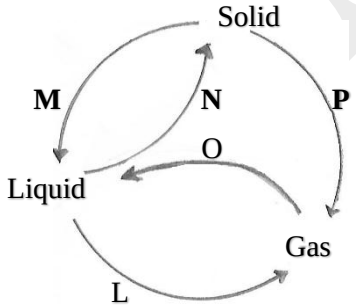
a. Evaporation

= It is the change of state of matter from liquids to gas.

b. Condensation

= It is the change of the states of matter from gas to liquids

Figure 1. Shows changes of states of matter. Use it to answer questions 7 and 8.



7. Name the processes M, N, O and P

M= melting
N= freezing
O= condensation
P= sublimation

8. Give any two use of the process marked L

i. Helps in drying of things
ii. Helps in rain formation

9. Name the process that takes place when _____

a. Water vapour is cooled

= condensation

b. Iodine crystals are heated

= sublimation

c. Candle wax is heated

= melting

10. State:

a. The boiling point of water

=100^oC

b. The freezing point of water

= 0^oC

a. **MIXTURES**

11. What is a mixture?

= It is a combination of different substances

12. How are mixtures formed?

= they are formed by putting different substances together.

13. Give any four examples of mixtures.

i. Air
ii. A mixture of maize and husks
iii. A mixture of salt and water
iv. A mixture of beans and groundnuts

14. What is a solution?

= It is a mixture whereby one substance dissolves in another

15. What name is given to a substance that dissolves in another substance?

= A solute

16. What is a solvent?

= It is a substance (liquid) in which another substance dissolves

17. When salt dissolves in water_____

a. Salt is said to be _____ in water

= Soluble

b. Which one is a

i. Solute?
= *Salt*
ii. Solvent?
= *Water*
c. The solution formed is called____
= *Salt solution*

18. What does the word **'to be soluble'** mean?
= *it means to dissolve*

19. What is a saturated solution?
= *is a solution in which no more solute can dissolve.*

20. When a substance fails to dissolve, it is said to be____
= *insoluble*

21. Mention any four substances that are soluble in water.

i. Sugar
ii. Salt
iii. Fertilizer
iv. Soap

22. Why is it easy to wash fatty plates with soap?
= because fat dissolve in soap

23. List down any four substances that are insoluble in water.

i. Fat *ii. Candle wax*
iii.paint *iv. Flour*

24. List down any four factors that affect the rate of solubility of substance in water

i. Temperature *ii. Size of particles*
iii.stirring *iv. Nature of substance*

25. How does particles size affect the rate of solubility?

= smaller particles dissolve faster than bigger particles

OR

= the smaller the particles the faster they dissolve, the bigger the particles the more slowly they dissolve

26. Explain how temperature affect the rate of solubility of substances

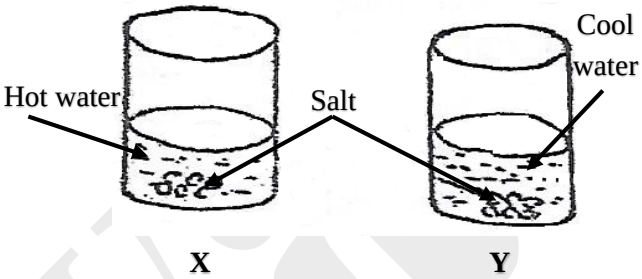
= the higher the temperature the faster substance dissolve, the lower the temperature the slower substance dissolve

OR

= substance dissolve when temperature is high and slower when temperature is low

27. When time particles of solid such as chalk dust are mixed with water, they do not dissolve. A mixture of this nature is
Called _____
= *A suspension*

Figure 1.1 shows an experimental setup by standard 8 pupil at new vision school. Use it to answer question 28.



28.
a. In which container will the salt dissolve faster?
= *Container X*
b. What is the aim of the experiment?
= *To investigate the effect of temperature on the rate of solubility of salt.*

29. List down methods of separating mixtures.

i. Winnowing *ii. Sieving*
iii.Distillation *iv. Evaporation*
v. Magnetism *vi. Filtration*
vii.Decanting *viii. Hand picking*

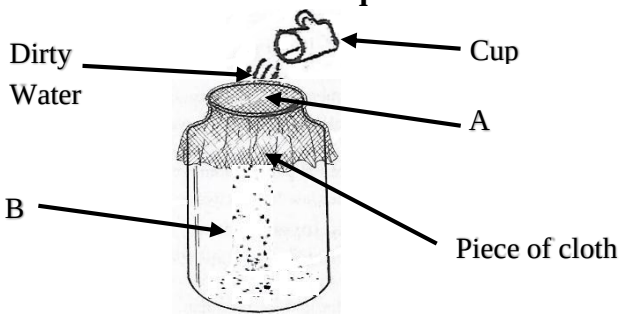
30. Name the method of separating light particles from heavy particles.
= *Winnowing*

31. List down any two mixtures that can be separated by filtration.

i. A mixture of water and sand
ii. A mixture of husks and water

32. How is the distillation method used?
= *It is used to separate a mixture of two miscible liquids (liquids dissolving in another liquid) of different boiling points.*

Figure 1.2 shows a method of separating mixtures. Use it to answer question 33.



33.

a. Name this method

= Filtration/filtering

b. Name substances A and B.

A= Residues

B= Filtrate

c. Why do materials marked A fail to pass through the cloth?

= Because their particles are too big to pass through the filter.

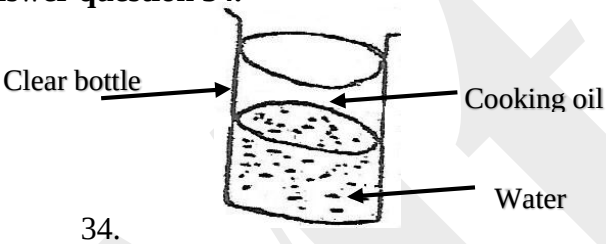
d. Why is this method not 100% perfect to make drinking water safe?

= Micro-organisms (germs) may pass through the filter.

OR

= The method does not kill germs.

Mzungu Wakuda mixed water and cooking oil, and shook the mixture and let them to settle down. Figure 1.3 shows the results. Use it to answer question 34.



34.

a. What this experiment show about water and the cooking oil?

i. Water is denser than cooking oil.

ii. Cooking oil is insoluble in water (cooking oil and water are immiscible substances)

b. Which method can be used to separate these substances?

= Decantation/decanting/distillation

35. Give two methods that can be used to separate a mixture of salt and water.

= Evaporation/distillation

36. Chifuniro accidentally mixed salt and flour. Explain how she can recover the salt.

= Firstly, put the mixture in water and stir (to dissolve the salt), use filtration to separate salt solution from the insoluble flour and finally use evaporation to recover the salt.

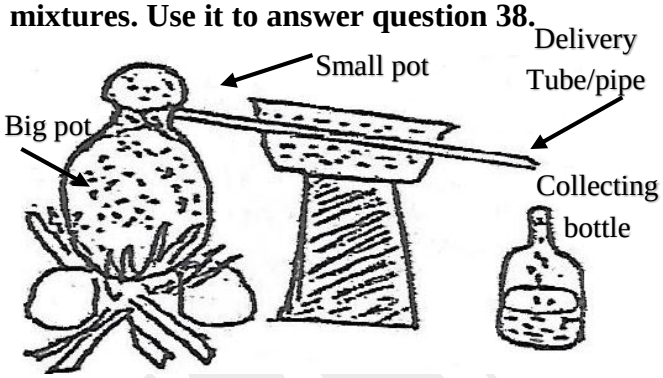
OR

Simply dissolve, filtrate and evaporate

37. When pins are mixed with sand, how can one easily find them?

= Use magnets/magnetism.

Figure 1.4 shows a method of separating mixtures. Use it to answer question 38.



38.

a. What name is given to this method of separating mixtures?

= Distillation

b. What name is given to substance labeled Y?

= Distillate

c. Name the part labeled X

=Condenser

d. Give the use of the part labeled X

= To condense (change to liquid) the vapour that comes from the pot.

UNIT 2: ENERGY

2.1. Energy meaning and types

39. What is energy?

= Is the ability to do work.

40. Give any types of energy

i. Light energy

ii. Chemical energy

iii. Kinetic energy

iv. Electrical energy

v. Solar energy

vi. Heat energy

vii. Potential energy

viii. Nuclear energy

41. Define the following:

a. Chemical energy

= Is the energy stored in food, fuels, batteries and muscles.

b. Kinetic energy

= This the energy of movement

c. Potential energy

= This is the energy of height and shape (also called strain energy)

2.2. Light Energy

42. What name is given to all objects that give out light on their own?

= *Direct sources of light*

43. List down any four direct sources of light.

i. *Sun*
ii. *Fire*
iii. *Firefly*
iv. *Neon worms*

44. Give the two classes of direct sources of light

i. *Natural*
ii. *Artificial*

45. List down any two indirect sources of light.

i. *The moon*
ii. *Reflectors*

46. State any four uses of light energy

i. *Helps us to see*
ii. *Used for photosynthesis (food making in plants.)*

47. Mention ways of producing light energy.

i. *Burning gases e.g. sun*
ii. *Heating effect of electricity e.g. bulbs*
iii. *Heating two stones together*

48. List down properties of light.

i. *Light travels in a straight line*
ii. *Light has speed*
iii. *Light can be refracted*
iv. *White light has all the colours*
v. *Light can be absorbed*
vi. *Light can be reflected*

Figure 1.5 shows an experimental setup for properties of light. Use it to answer question 49.

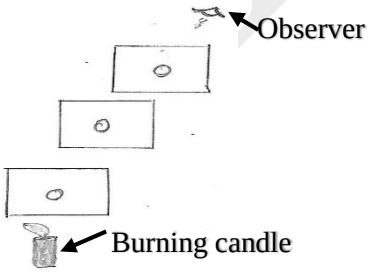


Figure 1.5

49. What property of light is being investigated?

= *Light travels in a straight line*

50. How are shadows formed?

= *They are formed when light rays are blocked*

51. What name is given to the collection of light rays?

= *Beam of light*

52. During thunder we see flash before we hear the sound because_____

= *Because light travels faster than sound*

53. What is reflection of light?

= *It is the bouncing back of light rays*

54. State the law of reflection.

= *It states that the angle between incident ray and normal is equal to the angle between normal and reflected light rays.*

OR

Angle of incidence is equal to the angle of Reflection.

Figure 1.6 shows reflection of light. Use it to answer question 55.

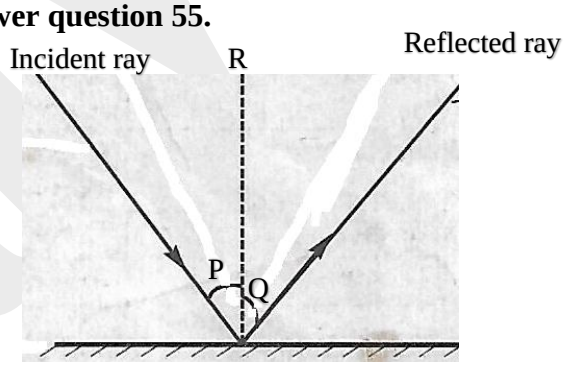


Figure 1.6

55.

a. Name the angles P and Q
   P= Angle of reflection
   Q= Angle of incidence
b. What name is given to the line marked R?
   = *Normal*

56. We cannot see things behind walls simply because_____

= *Light travels in a straight line*

57. Define refraction

= *It is the sudden change of speed and direction of light as it travels from one media to another.*

OR

It is the bending of light.

58. Explain the law of refraction

= *It state that when a light ray travels from a medium of low density e.g. air to a*

medium of high density e.g. glass, it is refracted towards normal

OR

When a light ray travels from a medium of high density to a medium of low density, it is refracted away from normal

Figure 1.7 shows refraction of light. Use it to answer question 59.

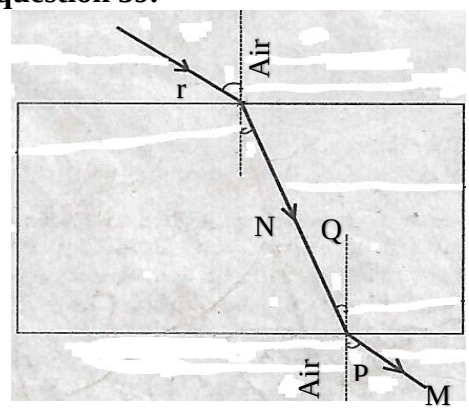


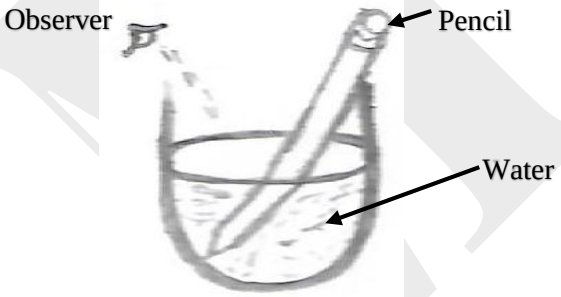
Figure 1.7

59.

a. Name the rays M, N and P.
   M= Incident ray
   N= Refracted ray
   P= Emergent ray

b. Identify angle of refraction.
   = Angle Q

Figure 1.8 shows an effect of refraction. Study it and use it to answer question 60.



60. Why is the pencil seem to be bent?

= Because of refraction

61. What name is given to the seven colours of the rainbow?

= Spectrum

62. List down any four technologies that make use of properties of light

i. Microscope *ii. Telescope*
iii.Binoculars *iv. Mirror*

63. Give the functions of technologies listed in question 62 above.

a. Microscope
   = Magnifying objects

b. Telescope
   = To make distant objects look bigger

c. Binoculars
   = To see distant objects clearly

d. Mirror
   = To see image of oneself or things behind.

Figure 1.9 shows a device that makes use of properties of light. Use it to answer question 64.

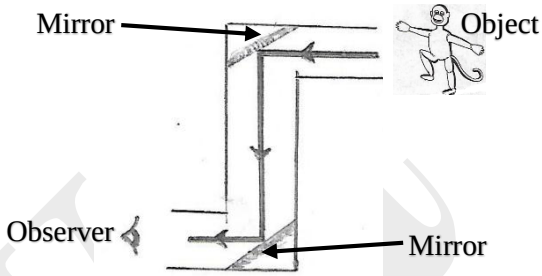


Figure 1.9

64.

a. Name the device
   = Periscope

b. Give the use of the device
   = To see things overhead

c. What property of light does the device use?
   = Reflection

65. Which property of light does each of the following technologies use?

a. Microscope
   = Refraction

b. The eye
   = Refraction

c. Camera
   = Reflection

66. Materials that allow all light rays to pass through them are called_____

= Transparent materials

67. Define opaque materials

= These are materials that do not allow light to pass through them.

68. What name is given to materials that small amount of light to pass through them?

= Translucent materials

Figure 2.0 shows a technology that uses properties of light. Use it to answer question 69.

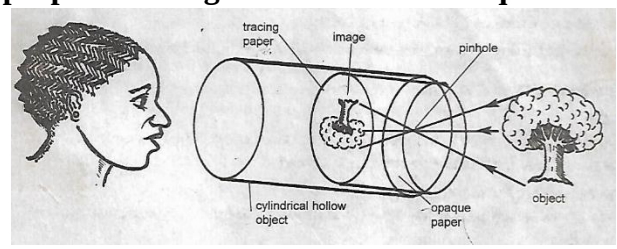


Figure 2.0

69.

a. Name the device

= *Pinhole camera*

b. State the property of light the device uses

= *Reflection*

c. Why is the image upside down (inverted)?

= *Light rays from the top of the object strike the bottom of the screen while the rays of the bottom of the object strike the top of the screen.*

70. Why is it advisable to wear shinny clothes when walking during the night?

= *Because shinny materials reflect more light hence prevent accidents as motorists can easily see you.*

2.3. SOUND ENERGY

71. How is sound produced?

= It is produced when an object vibrates

72. State any four uses of sound

i. *For entertainment*
ii. *For communication*
iii. *Mating in animals*
iv. *Giving warning signals*

73. Give any two properties of sound

i. *Sound travels in all directions*
ii. *Sound has speed*
iii. *Sound can be reflected*
iv. *Sound can be absorbed*

74. The reflected sound is called_____

= *An echo*

75. List down the three types of musical instruments

i. *Wind/blowing instruments e.g. flute*
ii. *String / plucking instruments e.g. guitar*
iii. *Percussions beating instruments e.g. drums*

76. Write down any three technological applications of sound

i. *Detecting heart beat [using stethoscope]*
ii. *Detecting minerals*
iii. *Detecting the presence of fish in a fishing ground*

2.4. HEAT ENERGY

77. Give any four sources of heat energy

i. *The sun*
ii. *Burning of substances e.g. wood*
iii. *Respiration*
iv. *Friction*
v. *Electricity (electric current)*

78. Give any four uses heat

i. *Generating electricity*
ii. *Provides warmth for seed germination*
iii. *Pressing clothes*
iv. *Cooking*

79. State any three negative effects of heat

i. *Drought due to too much sunlight*
ii. *Causes global warming*
iii. Causes burns and scalds

Figure 2.1 shows an experiment on properties of heat. Use it to answer question 80

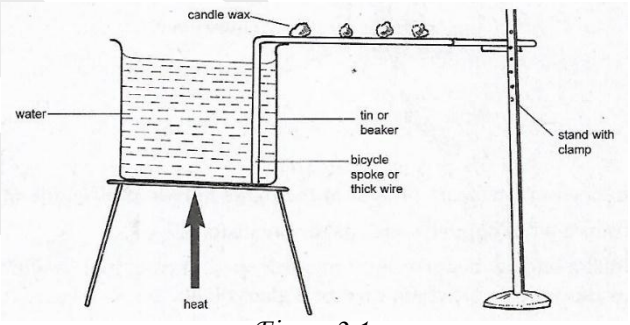


Figure 2.1

80. a. State the property of heat being investigated

= *Heat can be transmitted through solids*

b. Which candle wax will melt faster and why?

= *Candle **A**, because it is closest to the source of heat*

81. What name is given to the movement of heat in solids?

= *Conduction*

82. What name is given to the movement of heat in gases?

= *Radiation*

83. Heat is transmitted in liquids in a process called_____

= *Convection*

84. Which property of heat is applied in the construction of a thermometer?

= *Heat causes substances to expand*

Figure 2.2 shows a metal with a hole in the centre. Use it to answer question 85.

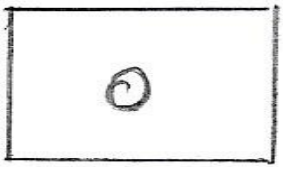


Figure 2.2

85. a. What will happen to the size of the hole when the metal is heated?

=*The hole will become bigger*

b.Give a reason for your answer to the question 85a above

= *Because the metal will expand hence increasing the size of the hole*

86. why are handles of flying pans and pots made of plastic materials?

= *Because plastics are poor conductors of heat, hence prevents burns.*

87. List down any four technologies that make use of properties of heat

i. *Thermometer*
ii. *Metal reveling*
iii. *Automatic switches in electric pressing irons*
iv. *Geysers*

Figure 2.3 shows a technology that make use of heat properties. Use it to answer question 88.

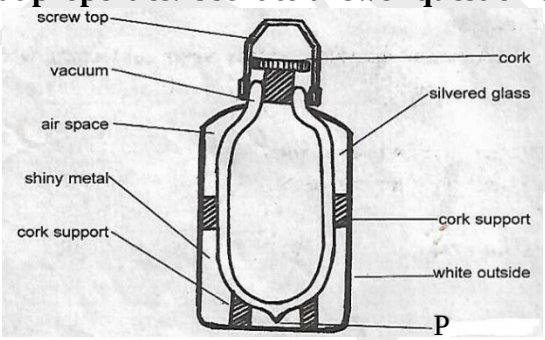


Figure 2.3

88. (a). Name the technology.

= *Vacuum flask or thermo-flask*

(b). Name the part marked P

= *Vacuum seal*

(c). What is the function of the silvered glass?

i. *To prevent heat loss due to radiation*
ii. *To prevent the device from absorbing heat from the surrounding.*

(d). What is the use of the technology?

= *To keep hot liquids hot and cold liquids cold.*

89. Why is it not good to wear black clothes on a sunny day?

= Because black materials absorb more heat energy hence you feel too hot.

UNIT 3. FORCE

90. What is force?

= *It is the pull or push on an object*

91. List down any four effects of force

i. *It causes movement*
ii. *It stops a moving object*
iii. *It changes direction of a moving object.*
iv. *It changes the shape of an object*

92. List down any four types of force

i. *Magnetic force*
ii. *Electrostatic force*
iii. *Elastic force*
iv. *Gravitational force*

93. What is gravity (gravitational force)?

= *It is the pull of the earth on objects.*

94. What type of force is produced when a plastic case of a pen is rubbed against the hair?

= *Electrostatic force*

95. The force that opposes movement is called _____

= *Fictional force*

96. What type of force is possessed by a stretched rubber band?

= *Elastic force*

Figure 2.4 shows a force in action. Use it to answer question 97

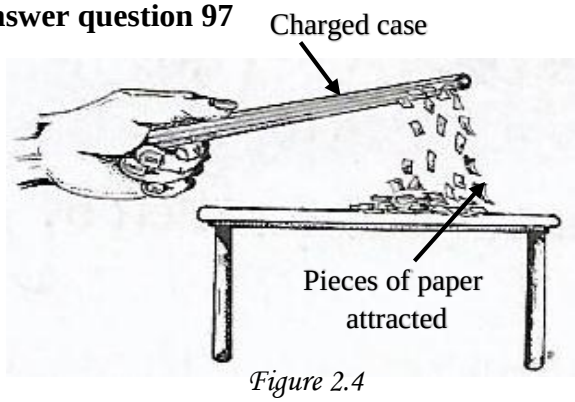


Figure 2.4

97. Name the force in action.

= *Electrostatic force*

98. When you throw a stone up it comes down. Name the force responsible for bringing the stone back.

= *Gravitational force*

99. Define magnetic force.

Effort

= It is the force exerted (produced) by magnets

100. A magnet has two poles. Name them.

i. *North pole* *ii. South pole*

101. What are magnetic fields?

= These are imaginary lines of forces around a magnet

Figure 2.4 shows a bar magnet. Use it to answer question 102

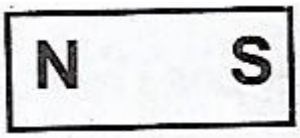
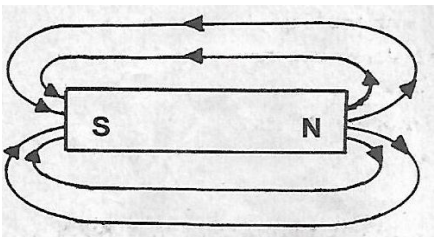


Figure 2.4

102. Draw magnetic fields around the magnet

Solution



103. State the law of magnetism

= Like terms repel while unlike terms attract

Figure 2.5 shows two magnets facing each other. Use it to answer question 104.

Figure 2.5

104.

(a). Draw magnetic fields around the magnets

(b). What happens when magnets are arranged like this?

= They attract each other

105. List down any four technologies that make use of forces.

i. Bicycle

ii. Car

iii. Sewing machine

iv. Catapult

106. What type of force is applied in each of the following:

I. Catapult

= Elastic force

II. Bicycle brakes

= Frictional force

UNIT 4. MACHINES

107. What is a machine?

= It is any device that makes work easier

OR

It is any device that reduces amount of effort needed to do work.

108. List down any three simple machines.

a) The inclined plane

b) Wedges

c) Levers

d) Pulleys

Figure 2.6 shows a simple machine. Use it to answer question 109.

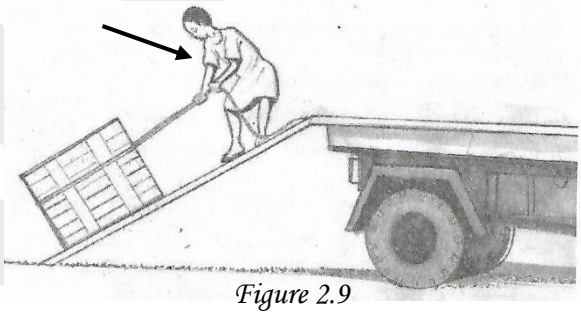


Figure 2.9

109.

a. What name is given to the machine?

= The inclined plane

b. State any three ways of increasing **Mechanical Advantage (MA)** of the machine above

i. Use Rollers

ii. Polish the surface

iii. Use of long planks

110. What is an inclined plane?

= It is a simple machine consisting of a plank inclined to the earth's surface

111. State the difference between effort and load.

= Effort is the force used to move an object while load is the weight of the object.

112. What does the word **'Mechanical Advantage'** mean?

= It is the ratio of the load to effort

OR

It is how much the effort has been reduced by the machine.

113. A boy pushed a load of 250 N using a force of 50N using a wheelbarrow. Calculate **Mechanical Advantage (MA)** of the wheelbarrow.

Solution

Mechanical Advantage $= \frac{load}{Effort}$

$= \frac{250N}{50N}$

$= 5$

114. Define lever machine

= *It is a rigid body pivoted on an axis where it turns.*

115. A turning point of a lever is called _____

= *Fulcrum/pivot*

116. List down any four types of levers

i. Bottle opener
ii. A pair of scissors
iii. A pair of pliers
iv. A wheelbarrow

117. Describe the following classes of levers

a. Class one levers/first order levers
= In this class, the fulcrum lies between the load and the effort.

b. Class two levers/second order levers
= in this class, the load is found between the fulcrum and the effort

c. Class three levers/third order levers
= In this class, the effort lies between the load and the fulcrum

118. List down three examples of class one levers

i. A pair of scissors
ii. A pair of pliers
iii. Crow bar
iv. Beam balance

119. In which class are the following lever machines?

a. Wheelbarrow
= *Second order levers*

b. A pair of scissors
= *Third order levers*

Figure 2.7 shows a simple machine. Use it to answer question 120.

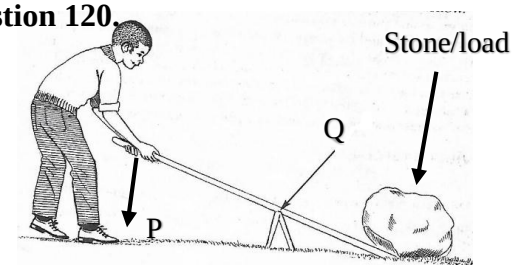


Figure 2.7

120.

a. Name the parts labeled P and Q.

P= Effort

Q= Fulcrum/pivot

b. To which type of levers does the machine belong?

= First order levers

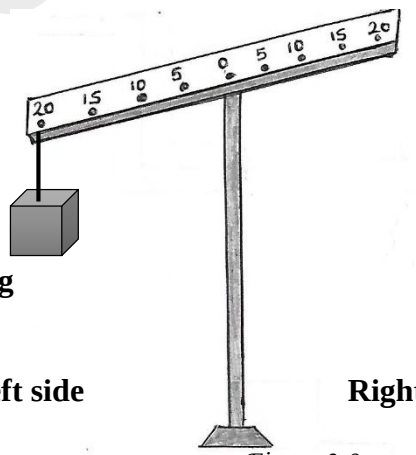
(c). Give any two ways of increasing Mechanical Advantage of the machine above

i. Use long wood
ii. Move the pivot closer to the load (Reducing the distance between the load and fulcrum)

121. State the law of levers (law of movements)

= To balance the two unequal masses, the product of mass and distance on the left side of the pivot should be equal to the product of mass and distance on the right side.

Figure 2.8 shows a simple balance. Use it to answer question 122.



40g

Left side **Right side**

Figure 2.8

122. Find the mass (in g) that must be put at position 5 on Y to balance

Solution

Let the mass be m:

$20 \times 40Kg = 5 \times m$

$\frac{800g}{5} = \frac{5m}{5}$

$M=160g$

123. Give any two types of pulleys

i. *Fixed pulley*

ii. *Movable pulley*
iii. *Combined pulley*

Figure 2.9 shows a pulley system. Use it to answer question 124.

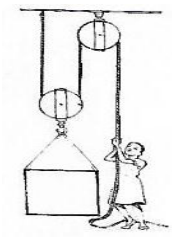
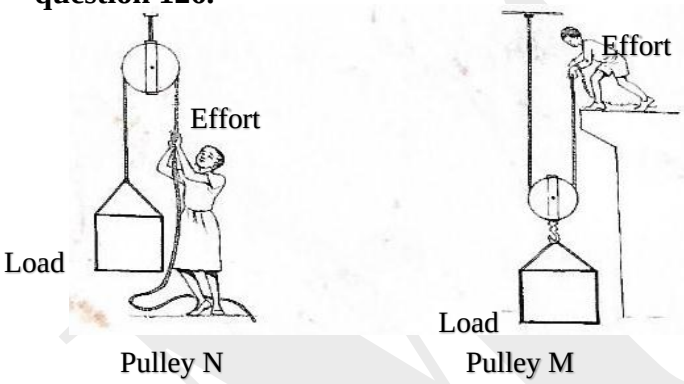


Figure 2.9

124. What type of pulley has been shown in the figure?
= Combined pulley
125. State the use of the pulley
= To lift heavy objects

Figure 3.0 shows two pulleys. Use it to answer question 126.



126.
a. Name the types of pulleys M and N
M= Movable pulley
N= Fixed (immovable) pulley
b. State advantage of using pulley system N
= The weight of the body helps in pulling since
the direction of the effort is downward.
127. List any three examples of wedges
i. *An axe*
ii. *Pick axe*
iii. *A knife*
128. How can you increase Mechanical Advantage of the wedge?
= By sharpening them.

UNIT 5: CURRENT ELECTRICITY

129. List down any four sources of electricity.
i. Wind power
ii. Hydro –power (water)
iii. Geo-thermal power
iv. Chemical energy
v. Solar energy
vi. Nuclear energy
130. What are the two groups of electricity?
i. Primary sources of electricity
ii. *Secondary sources of electricity*
131. What are direct sources of electricity?
= These are sources that produce electricity directly, that is by connecting them to the load (electrical component) e.g. battery
132. How do secondary sources produce their electricity?
= Through an intermediary e.g. generator
133. How does each of the following generate electricity?
a. Hydro-power
= Water turns turbines that rotate a coil of wire between magnets.
b. Solar energy
= Solar cells convert (change) sunlight into electricity
c. Geo-thermal power
= Hot rocks inside the earth's crust heat water which turns into steam. This steam turns turbines which, in turn rotate a coil of wire between magnets.
134. State any four uses of electricity.
i. Heating
ii. Lighting
iii. Air conditioning
iv. Refrigeration
135. What is an electric circuit?
= It is a complete path of electricity
136. Mention the two types of circuits.
i. Series circuit
ii. Parallel circuit
137. What is a series circuit?
*= It is a circuit which has only one conducting pat*h
138. Define a parallel circuit
= It is a circuit that has more than one conducting paths

Figure 3.1 shows two electric circuits. Use it to answer question 139.

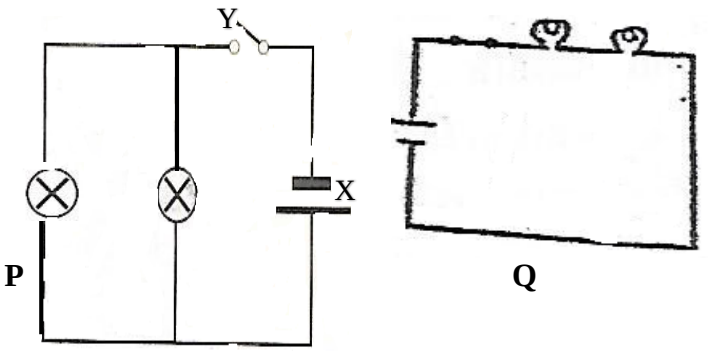


Figure 3.1

139.

a. Name the type of circuit P and Q

P= Parallel circuit

Q= Series circuit

b. Name the parts labeled X and Y

X= Cell

Y= Switch

c. State three advantages of using the type of circuit P

i. If one component has a fault, the other components cannot be affected

ii. Voltage is not shared (every component uses the same voltage supplied by the source

iii. Bulbs connected in this circuit give more light.

140. State one disadvantage of using series circuit

= A fault in one component affects the other components

141. What do the following electric circuit symbols represent?

A.

B.

C.

A= Fuse

B = Bulb

C= Connecting wire

142. What is the use of the following circuit components?

a. Fuse

= Prevent too much current that can damage electrical appliances

b. Connecting wires

= Connect all circuit components (build electrical circuit)

c. Bulb

= Producing light

d. Switch

= Opening (breaking) and closing the circuit

e. Cell

= Providing voltage

Figure 3.2 shows a cell symbol. Use it to answer question 143.

Figure 3.2

143. Name the parts X and Y

X= Positive terminal

Y= Negative terminal

Figure 3.3 shows a parallel circuit. Study it and answer question 144.

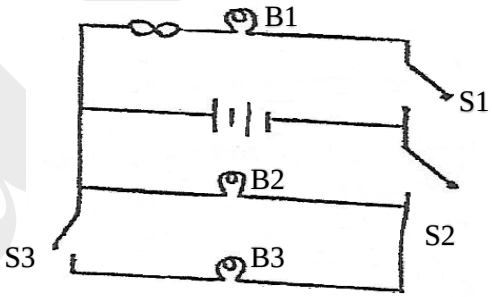


Figure 3.3

144.

a. Which bulb(s) will give light when switches S1 and S2 are closed?

= B1 and B2

b. When too much electricity comes from the cell, which bulb cannot be damaged? Give a reason for your answer.

= B1, because it is protected by the fuse

145. What are the conductors of electricity?

= These are materials that allow electricity to pass through them.

146. What name is given to materials that do not conduct electricity?

= Insulators/non-conductors of electricity

147. Mention any four conductors of electricity

i. Copper wire

ii. Lead

iii. Iron

iv. *Acid*

148. List down any three liquids that conduct electricity

i. *Salt solution*
ii. *Lemon juice*
iii. *Soapy solution*
iv. *Acid*

149. What name is given to liquids that conduct electricity?
= *Electrolytes*

150. List down any four insulators
i. *Plastics*
ii. *Wood*
iii. *Glass*
iv. *Soil*

Figure 3.4 shows an electric circuit. User it to answer question 151

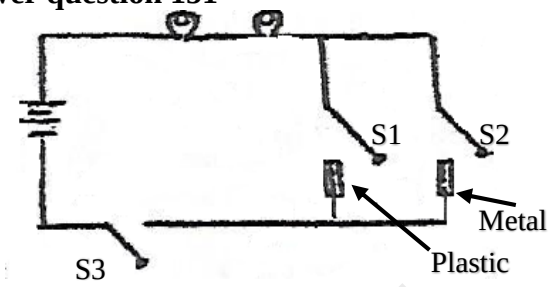


Figure 3.4

151. Which two switches must be closed in order for the two bulbs to light?
= *S1 and S3*

UNIT 6: ANIMAL KINGDOM

152. State any four characteristics of animals
i. *They feed*
ii. *They reproduce*
iii. *They grow*
iv. *They move*

153. What name is given to the natural home of animals?
= *Habitat*

154. What is the habitat of the following animals?
a. *Lion*
= *Forest*
b. Worms
= *In wet soil (mud) or water*
c. Centipedes
= *Under stones or in the soil*
d. Fish
= *Dams, rivers, lakes and oceans*

155. What name is given to animals that feed on plants only?
= *Herbivores*

156. List down four animals that feed plants only
i. *Elephant*
ii. *Goats*
iii. *Cattle*
iv. *Rabbits*

157. All animals that eat animals only are called ____
= *Carnivores*

158. Mention any four carnivorous animals
i. *Lion*
ii. *Hyena*
iii. *Leopard*
iv. *Fox*

159. What is a food chain?
= *It is the food relationship among organisms*

Figure 3.5 shows a food chain. Use it to answer question 160

Grass → grasshopper → lizard

Figure 3.5

160.
a. State the food relationship in this food chain
i. *Grasshopper feeds on grass*
ii. *Lizard feeds on grasshopper*
b. What special names can be given to the following in the food chain?
i. Grass
= *Primary food producer*
ii. Grasshopper
= *Primary consumer*
iii. Lizard
= *Secondary consumer*

161. Construct two different food chains with the following organisms: algae, people, fish, crocodile

Solution
i. *Algae → fish → crocodile*
ii. *Algae → fish → people*

162. An ant-lion makes a concave whole in the sand. What is the use of the hole?
= *To trap ants*

163. In what groups of animals is an ant-lion according to its feed habit?
= *Carnivore*

164. How do animals depend on each other? (give three ways)
i. *For food*

ii. *For shelter*
iii. *For protection*

165. What name is given to an animal that lives and feeds on another living thing?
= *A parasite*

166. An organism on which other organisms depend for food and shelter called_____
= *A host*

167. All animals that have a backbone are termed as_____
= *Vertebrates*

168. Give any four vertebrate animals
i. *Lion*
ii. *People*
iii. *Snake*
iv. *Chicken*

169. List down the four groups of vertebrates
i. *Fish*
ii. *Mammals*
iii. *Birds*
iv. *Reptiles*

170. Give any four features of mammals
i. *They give birth to live young ones*
ii. *They have mammary glands*
iii. *They have hair or fur on the skin*
iv. *They have four limbs*

171. Give any four mammalian animals
i. *Humans*
ii. *Goats*
iii. *Cattle*
iv. *Dogs*

172. Why is a bat a mammal? (give two reasons)
i. *Because it gives birth to live young ones*
ii. *Because it has mammary glands*

173. Give any four features of amphibians.
i. *They live both in water and on land*
ii. *Have soft moist skin*
iii. *They breath using gills when they are young and lungs when adult (some)*
iv. *Have four limbs*

174. Give any two examples of amphibians
i. *Frogs*
ii. *Toads*

175. State any four features of amphibians
i. *Presence of four limbs*
ii. *Have scales*
iii. *Breathe using lungs*
iv. *Lay hard-shelled eggs*

176. Give any four animals in the group of reptiles
i. *Crocodile*
ii. *Snake*
iii. *Tortoise*
iv. *Lizard*

177. Give any four features of reptiles
i. *Have feathers on their bodies*
ii. *Have beaks*
iii. *Have scales on legs*
iv. *Lay hard-shelled eggs*

178. State any four feature of fish
i. *Lay soft-shelled eggs*
ii. *Have scales on their bodies*
iii. *Live in water*
iv. *Breathe using gills*

Figure 3.6 shows a fish. Use it to answer question 179.

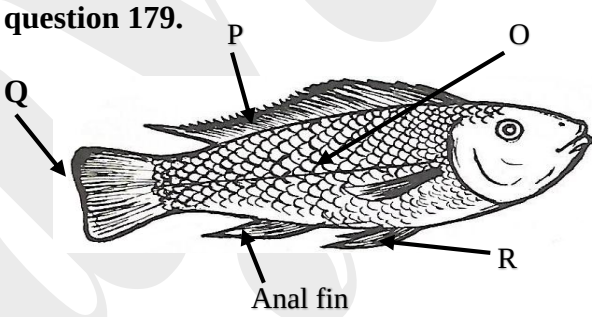


Figure 3.6

179.
a. Name the parts labeled O, P, Q and R
O= Lateral line
P= Dorsal fin
Q= Tail fin
R= Pectoral fin
b. Give the function of the following parts:
i. Lateral line
= Detecting danger
ii. Operculum (gill cover)
= Covering gills
iii. Tail fin (caudal fin)
= Fast forward movement of the fish

180. Which part(s) of the fish controls direction?
= *Pelvic fins, pectoral fins and tail fins*

181.
a. What is the shape of the fish?
= Stream-lined shape
b. What is the advantage of this shape?
= It reduces friction of water hence allowing fast movement of the fish

182. Explain any four ways how vertebrates protect themselves from enemies

i. *Producing hissing sound e.g. Snake and Chameleon*

ii. *Hiding into their shells e.g. tortoise*

iii. *Changing colour (camouflage) e.g. Chameleon*

iv. *Being slippery e.g. Mud Fish*

183. Give any four advantages of vertebrates to people

i. *Some provide food e.g. goats*

ii. *For security e.g. dogs*

iii. *Attract tourists who bring money to the country*

iv. *For power in the farm e.g. cattle*

184. *Define invertebrates*

= These are animals without back bones

185. List down the four classification of invertebrates

i. *Protozoa*

ii. *Molluscs*

iii. *Worms*

iv. *Arthropods*

186. Protozoa are also called **microscopic animals because____**

= *We cannot see them with our naked eyes (thus we can only see them using a microscope)*

187. Give any three examples of protozoa

i. *Amoeba*

ii. *Trypanosome*

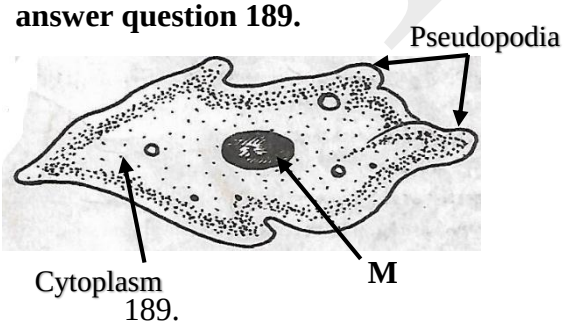
iii. *Plasmodium*

188. State the negative effects of the following organisms.

a. Plasmodium
   = *Causes malaria*

b. Trypanosome
   = *Cause sleeping sickness (Trypanosomiasis)*

Figure 3.7 shows an invertebrate. Use it to answer question 189.



189.

a. Name the organism
   = *Amoeba*

b. Name the part labeled M
   = *Nucleus*

c. Name the habitat of the organism.
   = *It is found in the mud ponds*

d. How does the organism reproduce?
   = *By dividing it-self into two parts (Binary fission)*

190. What are the three types of worms?

i. *Segmented worms*

ii. *Roundworms*

iii. *Flatworms*

191. Roundworms are also called _____

= *Nematodes*

192. State any four examples of round worms

i. *Ascaris*

ii. *Hookworms*

iii. *Pinworms*

iv. *Filarial worms*

193. What are the effects of the following parasitic roundworms to people?

a. Hookworms
   = *Cause anaemia (since they suck blood)*

b. Filarial worms
   = *Cause elephantiasis*

194. Give any two types of flatworms

i. *Tapeworms*

ii. *Planaria*

195. What are the two types of flatworms?

i. *Free-living*

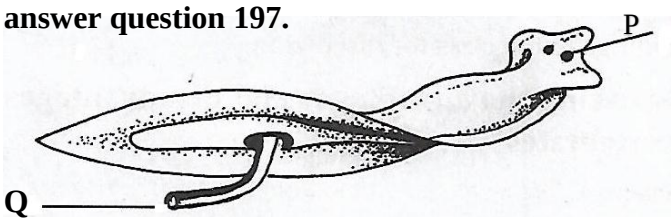
ii. *Parasitic*

196. Mention any two parasitic flat worms

i. *Liver flukes*

ii. *Tapeworms*

Figure 3.8 shows an invertebrate. Use it to answer question 197.



197. *Figure 3.8*

a. Name the organism
   = *Liver Fluke (Fluke worm)*

b. Name the parts labeled P and Q
   P= Eye
   Q= Mouth

c. To which group of worms does the organism belong?

= *Flatworms*

Figure 3.9 shows a worm. Use it to answer question 198.

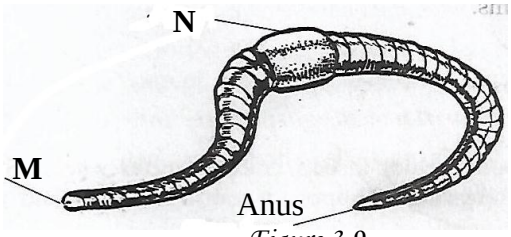


Figure 3.9

198.

a. Name the organism

= *Earthworm*

b. Why is the worm found in the group of annelids?

= *Because it has a segmented body*

c. Name the parts labeled M and N

M= Mouth

N= Clitellum

d. What are the two functions of the part N?

i. For mating

ii. For storing eggs

199. Give any three features of molluscs

i. Presence of shells (in some)

ii. Have soft bodies

iii. Have non-segmented bodies

200. List down any four examples of molluscs

i. Snails

ii. Octopuses

iii. Slugs

iv. Oysters

201. Give two observable differences between a snail and a tapeworm

i. A snail has a shell while a tapeworm has no shell.

ii. A snail's body is non-segmented while a tapeworm has a segmented body

202. List down any three features of arthropods

i. They have pairs of jointed legs

ii. They have exoskeleton

iii. They have segmented body

203. List down any five examples of arthropods

i. Grasshoppers

ii. Crabs

iii. Spiders

iv. Millipedes

v. *Centipedes*

204. What is metamorphosis?

= *It is the process of change in stages of an organism from larva to adult*

205. Give two type of metamorphosis

i. Complete metamorphosis

ii. Incomplete metamorphosis

206. What is the difference between complete metamorphosis and incomplete metamorphosis

= *A complete metamorphosis the stages involve eggs hatching to larva, which develop into pupa then adult while incomplete metamorphosis there is no pupa stage*

Figure 4.0 shows a lifecycle of a housefly. Use it to answer question 207.

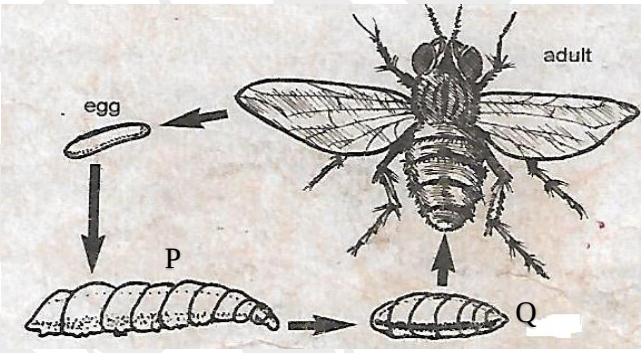


Figure 4.0

207.

a. Name the stages P and Q

P= Larva

Q= Pupa

b. What type of metamorphosis is this one?

= *Complete*

208. List down any four animals that undergo complete metamorphosis

i. Mosquito

ii. Housefly

iii. Butterfly

iv. *Tsetse-fly*

209. List down any three animals that undergo incomplete metamorphosis.

i. Cockroaches

ii. Bugs

iii. Termites

210. What name is given to a newly hatched grasshopper?

= *Nymph*

211. State any five advantages of invertebrates.

i. Help in pollination of flowers e.g. bees and butterflies

ii. *Source of food to people e.g. crabs, flying ants and grasshoppers*
iii. *Improve soil fertility and aeration e.g. termites and earthworms*
iv. *Honey bees produce honey which is used for food and medicine*
v. *Some are used for biological control of pest e.g. ladybird beetles are used to control bugs.*

212. Give any four disadvantages of invertebrates

i. *Some insects are pests and they destroy crops e.g. locusts, army worms, beetles and aphids*
ii. *Some vertebrates are vectors and they spread diseases e.g. mosquitoes, houseflies and cockroaches*
iii. *Others are parasites such as that they infect humans and livestock*
iv. *Some insects sting e.g. bees, scorpions and spiders*

UNIT 7: THE PALNT KINGDOM

213. Give the two major parts of a plant

i. *Root system*
ii. *Shoot system*

214. Mention any two parts of a plant that make up the shoot system?

= Stems and leaves

215. State any two functions of roots to plants

i. *They absorb water and soil nutrients for the plants' growth*
ii. *They hold the plant*
iii. *Some roots store food for the plant*

216. Give any six types of roots

i. *Fibrous roots*
ii. *Prop roots*
iii. *Tuberous roots*
iv. *Adventitious roots*
v. *Aerial roots*
vi. *Tap roots*

Figure 4.1 shows different types of roots. Use it to answer question 217.

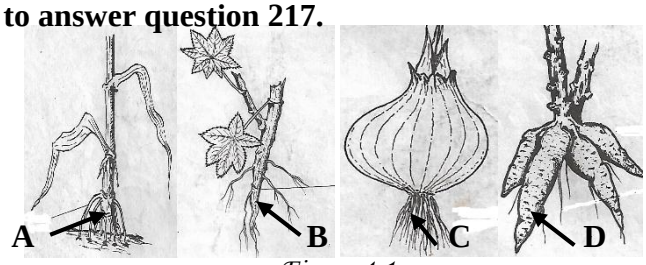


Figure 4.1

217.

a. Name the roots marked A, B,C, D and E

A= Prop roots
B= Tap roots
C= Adventitious roots
E= Tuberous roots

b. Mention any four plants with root type A.

i. *Maize*
ii. *Sugarcane*
iii. *Sorghum*
iv. *Millet*

218. Give any three plants with aerial roots

i. *Mkundi*
ii. *Kachere*
iii. *Mkuyu (fig tree)*

Figure 4.2 shows a leaf. Use it to answer question 219.

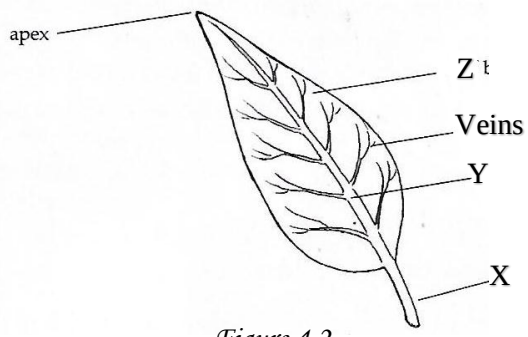


Figure 4.2

219.

a. Name the parts labeled X, Y and Z

X= Leaf stalk (petiole)
Y= Midrib (main vein)
Z= Leaf margin

b. Give two functions of the part labeled X

i. *Attaches or joins the leaf to the stem*
ii. *Transport food and water*

220. Give any two functions of leaves to a plant

i. *Make plant food in the process called photosynthesis*
ii. *Transpiration*

221. What are the two main types of leaves?

i. *Simple leaf*
ii. *Compound leaf*

222. State the difference between simple and compound leaves

= A simple leaf has only one leaf stalk and one leaflet while a compound leaf has more than leaf stalk and leaflets

223. What do you call the food making in plants?

= *Photosynthesis*

224. Give any three things needed by plants in making food

i. *Sunlight*

ii. *Water*

iii. *Chlorophyll*

225. What do you call the small openings (holes) found on the leaf?

= *Stomata*

226. State two functions of stomata

i. *Allows water vapour to get out during transpiration*

ii. *Allows air to get in and out of the leaf*

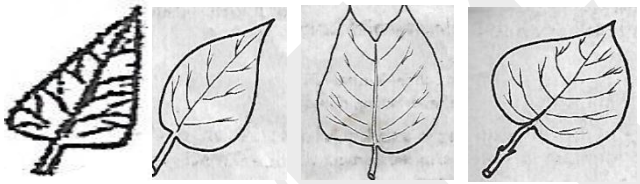
227. The green pigment (colour) found on leaves is known as _____

= *Chlorophyll*

228. What is the function of chlorophyll?

= *Helps in food making*

Figure 4.3 shows different types of leaves. Use it to answer question 229.



O **P** **Q** **R**

Figure 4.3

229.

a. Name the leaf shapes labeled O, P, Q and R

O= Triangular leaf shape

P= Pointed leaf shape

Q= Lobbed leaf shape

R= Heart-shaped

b. Which of the following leaves belong to grass?

= *Leaf P*

Study the experimental set up in the figure 4.4 below and use it to answer question 230.

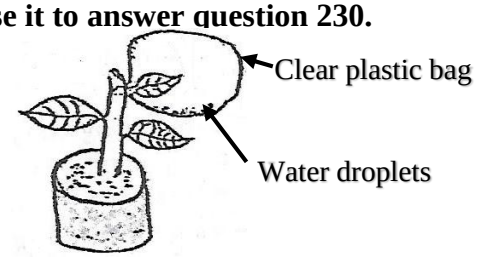


Figure 4.4

230.

a. Where do the water droplets come from?

= *From the leaf*

b. What name is given to the process where leaves lose water?

= *Transpiration*

Study the experimental set up in figure 4.5 below and use it to answer question 231.

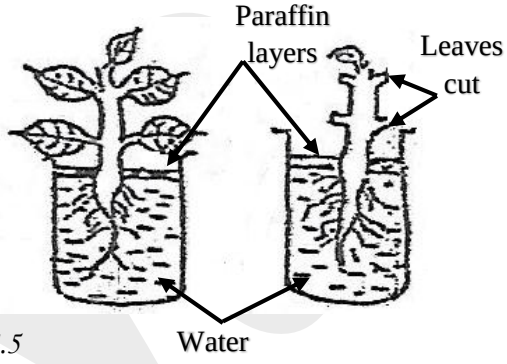


Figure 4.5

231.

a. In which container will there be low water levels after two days?

= *Container M*

b. Give a reason for your answer to question 231 a

= *The water will be lost through leaves (transpiration will occur)*

c. What is the function of the paraffin layer in both containers?

= *To prevent water loss through evaporation.*

232. Give any two ways in which leaves are attached to the stems

i. *With a leaf stalk*

ii. *Without a leaf stalk*

233. *Give any four leaf arrangements*

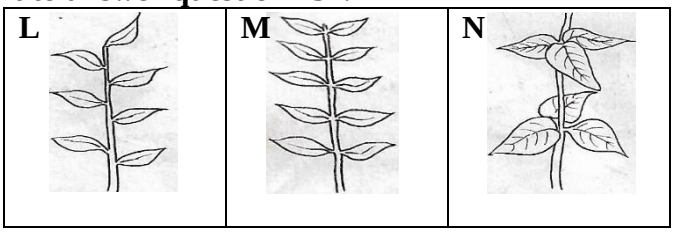
i. *Alternate leaf arrangement*

ii. *Opposite leaf arrangement*

iii. *Whorled leaf arrangement*

iv. *Spiral leaf arrangement*

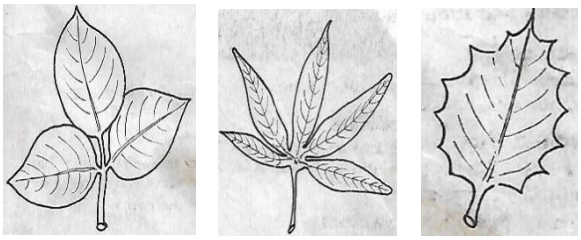
Figure 4.6 shows different leaf arrangement. Use it to answer question 234.



234. Name the leaf arrangements L, M and N

L= Alternate leaf arrangement
M= Opposite leaf arrangement
N= Whorled leaf arrangement

Figure 4.7 shows some of the leaf shapes. Use it to answer question 235.



X **Y** **Z**

235.

a. Name the leaf shapes X, Y and Z

X=Trifoliate shape
Y= Palmate shape
Z=Wavy shape

b. Which of the leaves above is a compound leaf?

= X

c. Give two types of stems

i. Erect stem
ii. Creeping stem
iii. Climbing stem
iv. Underground stem

d. Give any two functions of stems

i. Transport water and mineral salts from the roots to other parts of the plant
ii. Transport food from leaves or roots to other parts of the plant
iii. store food
iv. Hold all parts of the plant

236. Describe the following types of stem

a. Erect stem
= *This is a stem that grows upright*
b. Creeping stem
= This is a weak stem that grows along the ground
c. Climbing stem
= This is a weak stem that seeks support from other plants or any standing.

237. List down any two things that help climbing stems to be firmly attached to other objects.

i. Adhesive disks
ii. Tendrils

Figure 4.8 shows different types of stems. Use it to answer question 238.

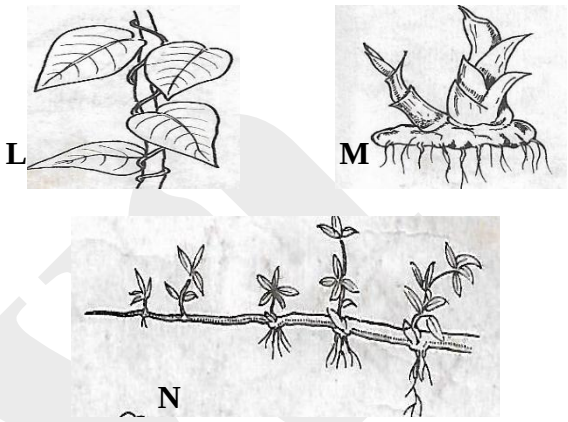


Figure 4.8

238.

a. Name the types of stems marked **L, M** and **N.**

L= *Climbing stem*

M= *Underground stem*

N= *Creeping stem*

b. What name is given to the structures marked E. on the stem L?

= Tendrils

c. Give any four plants that have stem type N

i. Bananas
ii. Ginger
iii. Irish potatoes
iv. Reeds

239. Why is an Irish potato tuber a stem not a root?

= Because it has buds (eye-like marks from where roots and leaves emerge during germination)

240. How do plants depend on animals? (give three ways)

i. Plants get manure from animals
ii. Animals help in pollination
iii. Animals help in seed/fruit dispersal.

241. Give any three ways in which animals depend on plants.

i. *Plants provide food to animals*
ii. *Plants purify air by taking in carbon dioxide (bad air) and giving out oxygen (good air)*
iii. *Plants provide shelter to animals*

242. Give the two main types of plants
i. *Flowering plants*
ii. *Non-flowering plants*

243. State the difference between flowering and no-flowering plants
= Flowering plants produce flowers while non-flowering plants do not produce flowers

244. Give any seven examples of non-flowering plants
i. *Mushroom*
ii. *Algae*
iii. *Moss*
iv. *Ferns*
v. *Liverworts*
vi. *Conifers e.g. pine*
vii. *Lichen*

Figure 4.9 shows some of the non- flowering plants. Use it to answer question 245.

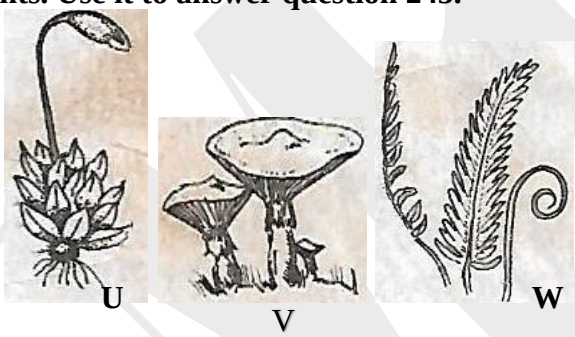


Figure 4.9

245.
a. Name the plants marked U, V and W
U= Moss
V= Mushroom
W= Ferns
b. Name the part labeled P on plant U
= Pole capsule
c. How do plants U and V reproduce?
= Using poles
d. Which of the non- flowering plants above does not manufacture its own food and why?
= Plant V, because it does not have chlorophyll

246. Give any four importance of flowering and non-flowering plants.
i. *Source of food e .g. Mushroom and beans*
ii. *Provide building materials*
iii. *Provide fibre*
iv. *Reduces soil erosion*

247. What is a flower?

= it is the reproductive part of a plant

Figure 5.0 shows a typical flower. Use it to answer question 255.

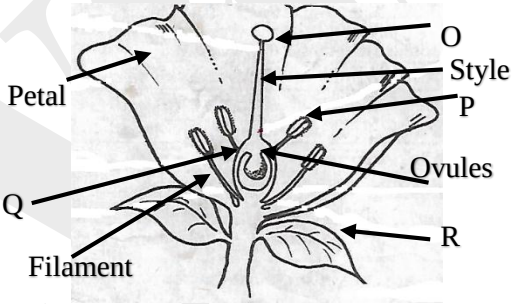


Figure 5.0

248.
a. Name the parts labeled O.
P, Q and R
O= stigma
P= anther
Q= ovary
R= sepal
b. State the function of each of parts O,P and R
O= receives pollen from the anthers during pollination
P= produces pollen grains
R= protects the flower when it is young

249. *What name is given to the female part* of a flower
= Pistil

250. Name any there parts of the flower that make up the pistil.
i. *Stigma*
ii. *Style*
iii. *Ovary*

251. The male part of the flower is called__.
= Stamen

252. The male part of the flower is made up of two part. Name them.

i. Filament
ii. Anther

253. The process whereby pollen grains are transferred from anthers to the stigma is call _____

= Pollination

254. What are the two types of pollination?

i. Self-pollination
ii. Cross pollination

255. Define the following terms

a. Self-pollination
= The transfer of pollen grains from the anther to stigma of the same flower or another flower on the same plant

b. Cross pollination
= It is the transfer of pollen grains from the anthers of one flower to the stigma of a flower on another plant but of the same kind

256. All things that help in pollination are called _____

= Agents of pollination

257. List down any three agents of pollination

i. Wind
ii. Water
iii. Animals (insects, Birds)

258. State any five characteristics of wind pollinated flowers

i. They are dull coloured
ii. They have no scent
iii. Their anthers are loosely held
iv. They do not produce nectar
v. They have light pollen

259. What is nectar?

= It is the sugary solution found in flowers

260. Why are petals of insect - pollinated brightly coloured?

= To attract insects and birds for pollination

261. Describe any five features of insect – pollinated flowers

i. They produce nectar
ii. They have brighter petals
iii. They have small quantities of sticky pollen
iv. They are large flowers that are easily seen
v. They produce scent to attract insects

262. Define fertilization

= It is the union of male and female gametes

263. The union of male and female gametes forms_____

= A zygote

264. In plants, the zygote develops into____

= A seed

Figure 5.1 shows the process of fertilization in a flower. Use it to answer question 265.

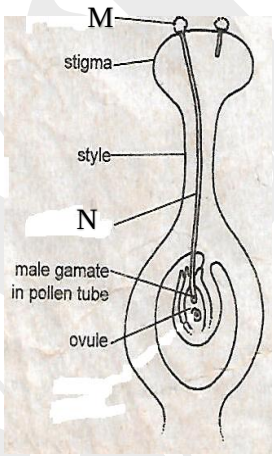


Figure 5.1

265.

a. Name the parts labeled M and N

M= Pollen grains
N= Pollen tube

b. What happens to the following parts of a flower after fertilization?

i. Ovules
= they become seeds

ii. Ovary
= Becomes a fruit

iii. Petals and anthers
= They wilt/wither away

266. The scattering of seeds away from the parent plant is called_____

= Seed dispersal

267. Give four ways how seeds or fruits are dispersed

i. Wind
ii. Water
iii. Animals
iv. Explosive mechanism

268. State any three features of seeds that are dispersed by wind

i. They are light
ii. They have wing- like structures

iii. They have hairs

269. Give any five examples of wind-dispersed seeds

i. Cotton seeds
ii. Tridax seeds
iii. Tecoma seeds
iv. Nakabwazi seeds
v. Mchewere seeds

270. Give any five features of animal-disperses seeds/fruits

i. They are edible
ii. They are succulent
iii. They have hooks
iv. They produce sticky fluids
v. They are large and brightly coloured

271. Give any four examples of seeds/fruits that are dispersed by animals

i. Blackjack seeds
ii. Mangoes
iii. Guavas
iv. Tomatoes

272. Why is coconut fruit best dispersed by water?

= Because it is less dense than water

273. How are bean seeds dispersed?

= By explosion/bursting

Figure 5.2 shows different seeds and fruits. Use it to answer question 274.

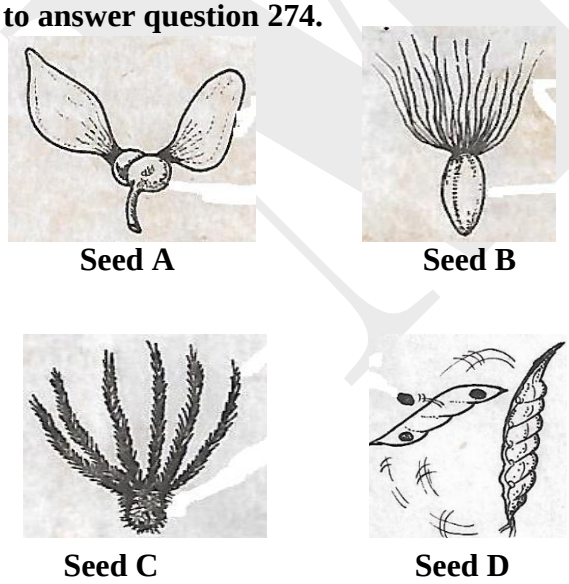


Figure 5.2

274.

a. State how each seed/ fruit is dispersed

A= By wind
B= By wind
C= By animals
D= By explosion mechanism

b. Give the feature each seed/fruit use for its dispersal

A= Wings
B= Hair-like structures
C= Hooks
D= Pods

275. State any two importance of seed/fruit dispersal

i. Prevents overcrowding of plants thereby reducing competition among plants for sunlight, air, water and soil nutrients
ii. Allows some plants to grow where they do not originate

276. Define "Germination"

= It is the process where a seed sprouts out and start to grow into a new plant

277. State any three conditions necessary for seed germination

i. Moisture
ii. Warmth
iii. Air

Figure 5.3 shows external part of a bean seed. Use it to answer question 178.

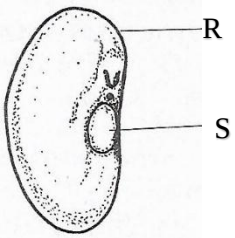


Figure 5.3

278.

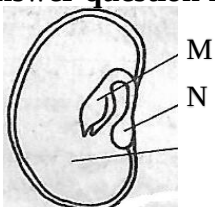
a. Name the parts labeled R, S and T

R= Micropyle
S= Hilum/scar
T= Testa/seed coat

b. Give the function of the parts R, S and T

R= Allows air and water to enter the seed
S= For attachment to the ovary
T= Protects the inner parts of the seed

Figure 5.4 shows internal parts of a bean seed. Use it to answer question 279.



O

279.

a. Name the parts labeled M, N and O

M= Plumule

N= Radical

O= Cotyledon

b. Give the function of each of the following parts

O= Stores food for the growing embryo

M= Develops into a shoot

N= Develops into root system

Figure 5.5 shows an experiment on seed germination conducted by standard 6 learners at Chibungo School. Use it to answer question 280.

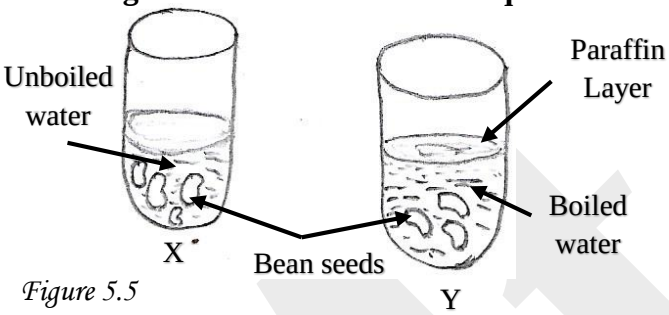


Figure 5.5

280.

a. In which container will the seeds germinate?

= Container X

b. What is the aim of the experiment?

= To investigate if air is needed for seed germination

c. Why was the water in container Y boiled?

= To remove air

d. What is the function of the oil layer?

= To prevent air from entering into the water

Chifuniro planted maize seeds in two containers. He labeled the containers P and Q. He then put container P in a refrigerator and Q in the classroom. Use this information to answer question 281.

281.

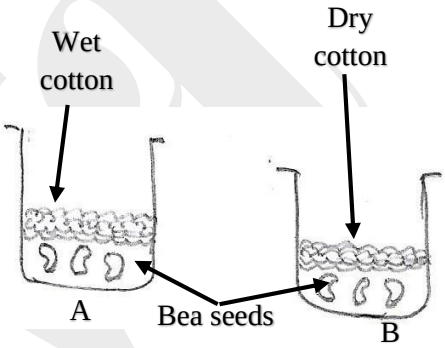
a. In which container will germination fail?

= P

b. Which condition for seed germination is being investigated?

=warmth

Figure 5.6 shows an experiment on seed germination. Use it to answer question 282.



282.

a. The aim of this experiment is _____

= To know if moisture is needed for seed germination.

b. In which container will germination take place?

= container A

UNIT 8: THE HUMAN BODY

8.1: SENSE ORGANS

283. List down five sense organs of the human body

i. The eye

ii. The nose

iii. The ear

iv. The tongue

v. The skin

284. Match the following sense with their correct sense.

Sense organ	Senses
Eye	Tasting
Tongue	Feeling/touching
Ear	Seeing
Skin	Smelling
Nose	Hearing

ANSWER

Sense organ	***Senses***
Eye	*Tasting*
Tongue	*Feeling/touching*
Ear	*Seeing*
Skin	*Smelling*
Nose	*Hearing*

285. Mention any two parts of the nose

i. Ala
ii. Nostrils
iii. Dorsum of the nose
iv. Nosal septum

286. Mention any two things that trap dust, germs and insects inside the nose.

i. Mucus
ii. Hairs

287. List down any four problems of the nose.

i. Colds and flu
ii. Nose bleeding
iii. Sores
iv. Foreign bodies e. g insects

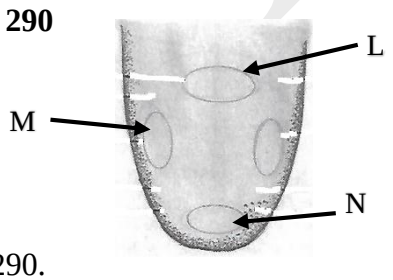
288. State any four ways of caring for the nose.

i. Avoid pushing objects into the nose
ii. Avoid poking into the nose
iii. Avoid sniffing unknown substances
iv. Clear the mucus from the nose to avoid attracting insects e.g. flies

289. Apart from tasting, give any other functions of a tongue

i. Helps in chewing and swallowing of food
ii. It is used for speaking

Figure 5.7 shows the tongue. Use it to answer question 290



290.

a. Name the parts labeled L, M and N
L= Back area
M= Side area
N= Front area

b. Give the function of each part
L= For bitter
M= For sour (acid) tasting
N= For sweet tasting

291. What name is given to the bumpy structures of the tongue?

= Taste buds

292. Give any four problems of the tongue.

i. Sores
ii. Foreign bodies e.g. fish bones
iii. Swelling
iv. Hot foods

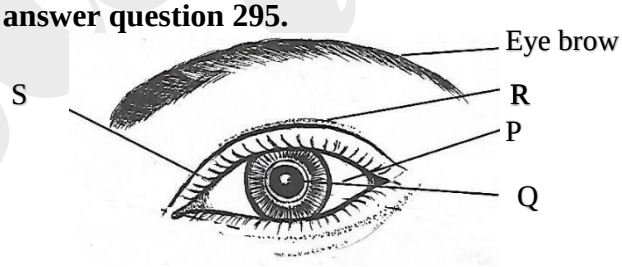
293. What is a foreign body?

= Is anything that enters the body and cause disconfort.

294. Explain any four ways of caring for the tongue

i. Avoid eating/drinking foods that are too hot
ii. Avoid eating too fast
iii. Avoid speaking while eating
iv. Do not taste unknown substances

Figure 5.8 shows the human eye. Use it to answer question 295.



295.

a. Name the parts labeled P, Q, R and S

P= Iris
Q= Pupil
R= Upper eyelid
S= Eye lashes

b. State the function of parts P and Q
P= Controls the size of the pupil
Q= Controls the amount of light entering the eye

296. What happens to the pupil in the following conditions

a. In dim light
= It becomes bigger

b. In bright light
= It becomes small

297. Mention any four foreign bodies of the eye

i. Dust
ii. Insects
iii. Smoke
iv. Pepper

298. Mention any infections (diseases) of the eye

i. Trachoma
ii. Conjunctivitis

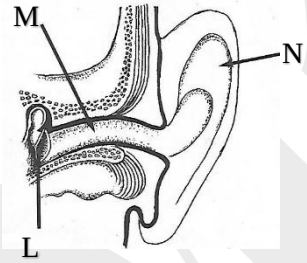
299. List down any two defects of the eye

i. Long sight
ii. Short sight

300. Give any four ways of caring for the eye

i. Avoid looking directly at the sun or any strong light.
ii. Avoid wearing glasses without medical prescription
iii. Keep the eyes clean to avoid flies
iv. *Eat foods rich in vitamin A*

Figure 5.9 shows external parts of a human ear. Use it to answer question 301.



301.

a. Name the parts labeled L, M and N
L= Ear drum
M= Ear canal/auditory canal
N= Pinna/ear lobe

b. Give the function of the part L, M and N.
L= Changes sound waves into vibration and send them to the brain via auditory nerves
M= Directs sound into the ear drum
N= Trap sound waves and send them to the ear canal

302. Name the sticky substances found in the ear

= Ear wax

303. State the function of the ear wax

= It protects the ear passage by trapping insects, dust and germs

304. Why is poking into the ear with sharp objects so dangerous?

= This may damage/break the ear drum

305. Give any three ways of caring for the ear

i. Avoid very loud sounds
ii. Avoiding poking into the ear with sharp objects
iii. Clean the outer ear with a wet cloth.

Figure 6.0 shows parts of the skin. Use it to answer question 306.

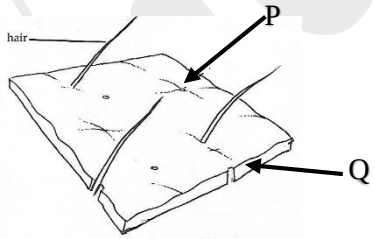


Figure 6.0

306.

a. Name the parts labeled P and Q
P=Sweat pores
Q= The cornified layer

b. Give two functions of the part labeled P
i. Allows waste products to get out of the body in the form of sweat
ii. Allows air to enter into the skin

c. What is the part Q made up of?
= Dead cells

307. Give the four functions of the skin

i. Detecting pain
ii. Detecting temperature (hotness and coldness)
iii. Prevents the entry of germs into the body
iv. Acts as a shield against water

308. Give any three problems of the ski

i. Skin infections
ii. Burns and scalds
iii. Pimples/acne

309. Give any four ways of caring for the skin

i. Bathing with soap regularly
ii. Avoid exposure to radioactive substances

iii. *Avoid sharing bathing materials e.g. sponges and face towels*
iv. *Protect the skin from harsh weather conditions*

310. Chimwemwe is blind-folded and told to find a hidden plate of chopped onions in the classroom. Which sense organ can best help him to find the plate?

= *Sense of smelling*

311. A ticking wall clock is hidden in a classroom and Chifuniro is blind-folded and told to locate the clock. Which sense organ will best help her find the clock?

= *The ear*

312. Why are sense organs important? (give three ways)

i. *They help us respond to changes in the environment in the right way*
ii. *They help us to detect when we are in danger*
iii. *They help us to prevent* accede

8.2. THE SKELETON

313. Define the term "skeleton"

= *Is the hard part of the body OR*
= *It is the framework of the body*

314. Give two types of skeleton.

i. *Endoskeleton*
ii. *Exoskeleton*

315. Give the difference between endoskeleton and exoskeleton.

i. *Endoskeleton is found inside the body while the exoskeleton is found outside of animal.*

316. What type of skeleton is found in humans?

= *Endoskeleton*

317. Give any four functions of the skeleton.

i. *It gives support to the body*
ii. *It protects delicate parts of the body*
iii. *It assists in locomotion (movement)*
iv. *It gives shape to the body*

318. Name the part of the skeleton that protects the following organs

a. Heart and lungs

= *Rib cage / chest cavity / thorax*

b. The brain

= Skull

c. Spinal

= *Vertebral column backbone*

319. Muscles are attached to bones by tissues known as _____

= *Tendons*

320. Give two ways how muscles cause movement.

i. *Contraction*
ii. *Relaxation*

321. The prance where bones meet is called

= *A joint*

322. What name is given to the tissues that join bones together?

= *Ligaments*

323. Give the two main types of joints

i. *Movable joint*
ii. *Immovable joints*

324. What is the difference between movable and immovable joints?

= *movable joint allow movement while immovable joint do not allow movement*

325. Give the three types of movable joints

i. *Hinge joints*
ii. *Ball- and- socket joint*
iii. *Gliding/sliding joint*

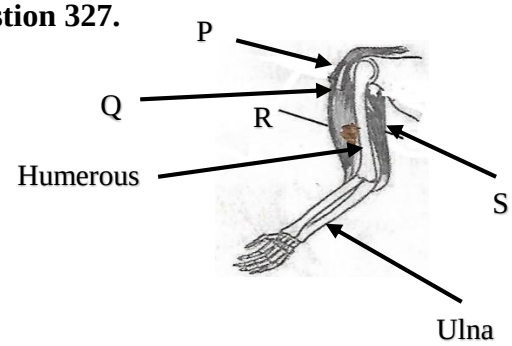
326. Describe the following types of joints

a. **Hinge joints**
= *These are joints that allow movement in one direction only e.g. elbow and knee joints*

b. **Ball and socket joint**
= *These are joints that allow movement in all directions/planes (rotational movements)*

c. **Gliding joints**
= *These are joints where bones slide over each other e.g. finger joints and neck joints*

Figure 6.1 shows the arm. Use it to answer question 327.



Figurez 6.1

327.

a. Name the parts labeled P, Q, R and S

P= Tendon

Q= Ligament

R= Biceps muscle

S= Triceps muscles

b. What types of muscles are found on positions Y and Z

Y= Ball and socket joint

Z= Hinge joint

328. What happens to the following muscles when bending the arm?

a. Biceps

= They contract

b. Triceps

=They relax

329. Describe how the arm is stretched

= When the triceps muscles contract, biceps muscles relax pulling the lower bones downwards and finally the arm is stretched

Why are triceps and biceps muscles referred to as antagonistic muscles?

= Because they work in opposition to each other, that is when one muscle contracts, the other one relaxes.

330. How do muscles, bones and joints coordinate to cause movement?

= Muscles contract and pull the bones which bend at a joint, hence movement

331. Give any three problems of the skeleton.

i. Fractures

ii. Dislocation

iii. *Infections*

332. Give any two ways of caring for the skeleton.

i. Eat food that contains calcium and vitamin D.

ii. Do regular physical exercise

iii. *Adopt good posture*

333. What is bone fracture?

= it is a condition where a bone is broken

334. Give any two cause of bone fracture.

i. Road accidents

ii. Falling from a tree

335. Give three types of fracture

i. Green stick fracture

ii. Open fracture / compound fracture

iii. Simple / closed fracture

336. Which type of fracture is common in children?

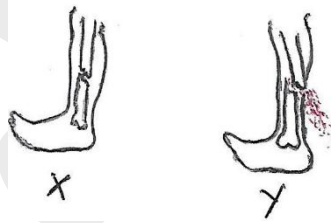
= green stick fracture

337. Explain why green stick fracture is called green stick fracture?

= because a bone bends like a green stick

Figure 6.2 shows two different types of bone fractures. Use it to question 338.

Figure 6.2



338. Name the types of fractures marked X and Y

X= closed fracture

Y= compound fracture

339. What is a dislocation?

= it is a condition whereby a bone moves out of its place at joint

8.3: THE HUMAN NERVOUS SYSTEM

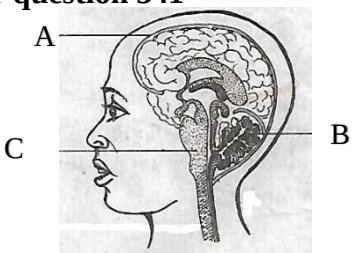
340. Give the three parts of the human nervous system

i. The brain

ii. Spinal cord

iii. Spinal nerves

Figure 6.3 shows the human nervous system. Use it to answer question 341



341.

a. **N**ame the parts labeled A, B and C.

A. = cerebrum

B. = cerebellum

C. = medulla oblongata

b. Give four functions of part A

i. For thinking

ii. Controls movement muscles

iii. Controls senses

iv. Speech control

342. Give the function of the following parts of the brain

a. Cerebellum

i. Controls balance

ii. Controls posture

b. Medulla oblongata

i. Control reflex activities such as blood pressure heart beat and digestion

343. How are sense organs connected to the brain

= Through spinal nerves via spinal cord

344. What is drug and substance abuse?

= It means taking a drug or a substance for wrong reasons

345. List down any four commonly drugs or substances that are commonly abused.

i. Indian hemp

ii. Alcohol

iii. Glue

iv. Cocaine

346. State any four effects of drug and substance abuse

i. Mental disorder

ii. Poisoning

iii. Suffocation

iv. Death

347. Mention any three things that can damage the brain

i. Blows to the head

ii. Neck injuries

iii. Infections such as meningitis, cerebral malaria, rabies and polio

348. State any four ways of caring for the brain

i. Having plenty of rest

ii. Regular physical exercises

iii. Avoiding drugs and substance abuse

iv. Wearing a crash helmet when travelling by a motor cycle.

8.4. THE HUMAN REPRODUCTIVE SYSTEM

348. Mention any two male reproductive parts

i. *Penis*

ii. Testes

349. Give the functions of each part mentioned in 348 above

a. Penis

i. Releasing sperms into the vagina during sexual intercourse

ii. *Passing out urine*

b. Testes

= Producing and store sperms

350. The tube through which sperms pass from one testes to the penis is called _____

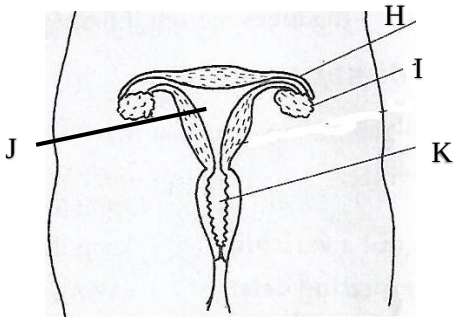
= Sperm tube/sperm duct

351. What name is given to sac that encloses the testes?

= Scrotum

Figure 6.4 shows the female reproductive organs. Use it to answer question 352.

Figure 6.4



352. Name the parts labeled H, I, J and K

H= Fallopian tube/oviduct

I= Ovary

J= Uterus/womb

K= Vagina/birth canal

353. What name is given to the following?

a. Male sex cells

= Sperms

b. Female sex organs

= Eggs/ova

354. Sperms are contained in a fluid called___

= Semen/seminal fluid

Figure 6.5 shows a process in reproduction. Use it to answer question 355.

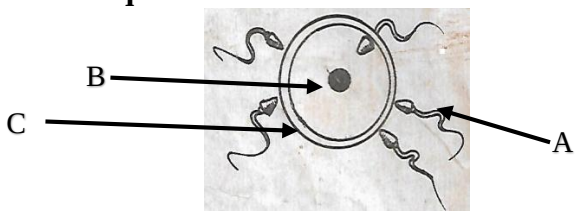


Figure 6.5

355.

a. The process shown above is called____

= Fertilization

b. Name the parts A, B and C

A= Sperm

B= Nucleus

C= Egg/ovum

c. Where does this process take place?

= In the oviduct/fallopian tube

356. Which reproductive part is common in both males and females

= Urethra

357. What name is given to the process whereby an embryo attaches itself to the uterus wall?

= Implantation

Figure 6.6 shows a stage in reproduction. Use it to answer question 358.

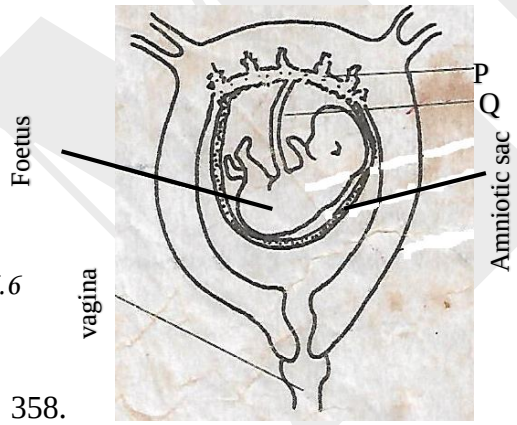


Figure 6.6

358.

a. Name the parts labeled P, Q and R

P= Placenta

Q= Umbilical cord

R= Amniotic fluid (amnion)

b. Give the functions of the parts Q and R

i. Q (Umbilical cord)

=Passage for food, nutrients antibodies and oxygen from the mother to the embryo

= Passage for waste products e.g. urea and carbon dioxide from the embryo to the mother

ii. R (Amnion)

= Protects the embryo from the external physical forces

= Lubricates the vagina during birth

359. What happens to the egg in the oviduct when fertilization does not take place?

= It dies

360. List down any four signs and symptoms of pregnancy.

i. Menstruation stops

ii. Enlargement of breasts

iii. Vomiting

iv. *Changes in the skin pigmentation*

361. Mention any three needs of a pregnant woman

i. Should have enough rest

ii. Should have a balanced diet

iii. Should visit prenatal clinic for advice

362. Pregnant women should go for VCT test. Give a reason why this is important?

= To make sure that safe measures are taken to prevent mother-to –child transmission if the mother is HIV positive.

363. Describe any four misconceptions about pregnancy

i. You cannot be pregnant if you have sexual intercourse once only

ii. Having sex while standing can prevent pregnancy

iii. Having sexual intercourse in water cannot result into pregnancy

iv. If a girl wears a medicated loop around her waist during sexual intercourse she cannot be pregnant

364. List down any four common diseases of children

i. Whooping cough

ii. Tetanus

iii. Malaria

iv. Measles

365. How are Whooping cough, Measles and Tetanus be prevented?

= Immunization

366. State any three importance of under-five clinics

i. *They provide immunization against diseases*
ii. *Monitor growth of children*
iii. *Provide advices on maternal health*

367. Give any two services provided by Banja La Mtsogolo (BLM)

i. *Reproductive health e .g. family planning*
ii. *V.C.T services*

368. What is family planning?
= This is the spacing out of child births in the family

369. List down any four family planning methods.

i. *Use of pills*
ii. *Intra-uterine device (IUD) or loop*
iii. *Norplant*
iv. *Vasectomy*
v. *Use of spermicides*
vi. *Use of condoms*
vii. *Natural /Rhythm method (any four)*

370. Give any three family planning methods special for females only

i. *Norplant*
ii. *Intra-uterine device*
iii. *Tubal legation*

Figure 6.7 shows a family planning method provided by banja la mtsogolo. Use it to answer question 367.

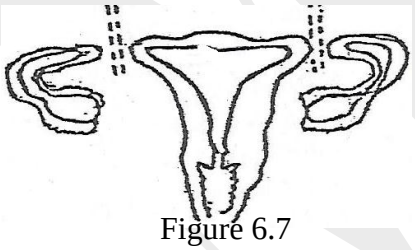


Figure 6.7

371.
i. Name the method shown above
= Tubal ligation
ii. Why are the oviducts cut?
= To prevent sperms from reaching the egg hence preventing fertilization
iii. Give one advantage of this method
= It cannot be reversed

372. Name the contraceptive measure that involves cutting and tying the sperm tubes
= Vasectomy

Figure 6.8 shows a family planning method. Use it to answer question 369.

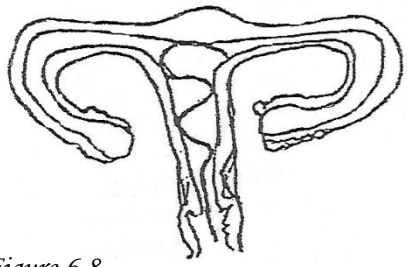


Figure 6.8

373.
a. Name the method above
= Intra-Uterine device
b. How does this method works?
= It prevents embryo implantation by blocking the uterus
c. State one side effect of this method
= There is a risk of developing uterine infections

374. State two importance of family planning
a. It controls rapid population growth
b. It ensures good maternal health

375. Give any four problems associated with reproduction in humans
a. Infections e. g. uterine cancer, HIV/AIDS and syphilis
b. Infertility
c. Narrow birth passage
d. Still births

8.5. The Human Breathing System

376. What is breathing?
= Is the process of pushing air in and out of lungs.

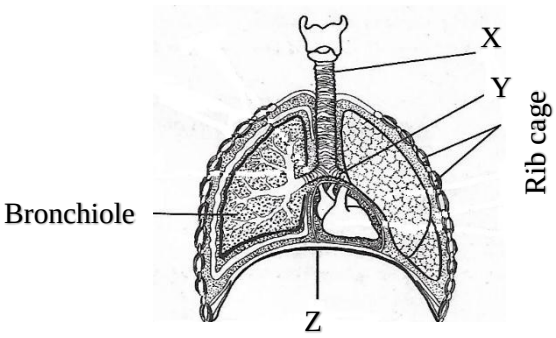
377. Mention the two phases of breathing
a. Inspiration/inhalation
b. Expiration/exhalation

378. State the difference between inspiration and expiration
= Inspiration is the pushing of air inside the lungs while expiration is the pushing of air out of the lungs.

379. Where are the lungs located?

= In the chest cavity

Figure 6.9 shows parts of the breathing system. Use it to answer question 376.



380.
a. Name the parts X, Y and Z
X= Wind pipe/Trachea
Y= Left bronchus
Z= Diaphragm
b. What is the normal shape of the part X?
= Done-shaped
d. What happens to part Z during inspiration?
= It contracts and flattens out

381. Where in the lungs does the exchange of oxygen and carbon dioxide take place?
= In the alveoli/air sacs

382. What protects lungs from friction against ribs?
= Pleural fluid

383. Mention any two problems of the human breathing system
a. Lung cancer
b. Choking

Figure 7.0 shows a lung model. Use it to answer questions 380 and 381.

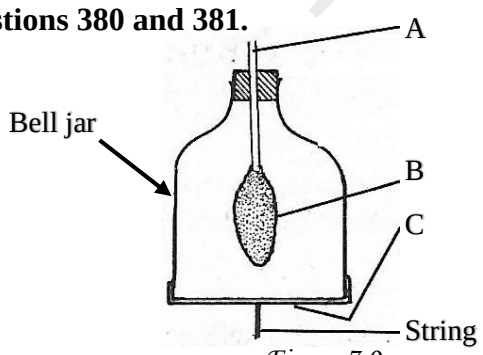


Figure 7.0

384.
a. Name the parts A, B and C.
A= Glass tubing
B= Balloon
C= Rubber sheet
b. Name the parts of the human breathing system represented by the following parts
a. Balloon
= Lung
b. Rubber sheet
=Diaphragm
c. Bell jar
= Chest cavity

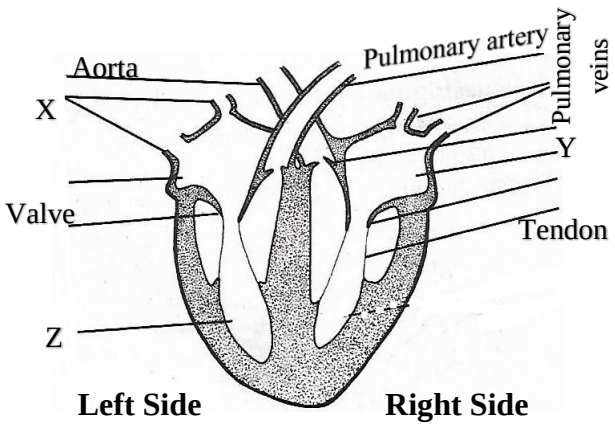
385. What will happen when you pull the string downward?
= The balloon will be inflated

8.6. The Human Circulatory System

386. Mention any three parts of the human circulatory system
a. Heart
b. Blood
c. Blood vessels

387. Give the function of the heart
= It pumps blood

Figure 7.1 shows the human heart. Use it to answer question 384.



388.
a. Name the parts X, Y and Z.
X= Vena cava
Y= Right auricle/right atrium
Z= Left ventricle
b. What is the function of the part X?

= To carry blood from all parts of the body to the heart

389. List down three types of blood vessels
   a. Veins
   b. Arteries
   c. Capillaries

390. State the function of each of the following:
   a. Veins

= Carry blood to the heart

   b. Arteries
      = Carry blood away from the heart
   c. Capillaries
      = Connect veins and arteries

391. Blood travels from the heart to the lungs through _____

= Pulmonary artery

392. What is the colour of the blood that comes from all parts of the body to the heart

= Dark red

393. Give a reason for your answer to question 388 above

= Because it has more carbon dioxide/it is deoxygenated

394. What happens to the blood when it arrives in the lungs?
   i. Carbon dioxide is removed
   ii. Oxygen is added to the blood

395. Blood moves from the lungs back to the heart through _____

= Pulmonary vein

396. Name the largest artery that carries blood from the heart to all parts of the body

= Aorta

397. Blood that travels in the aorta going to all parts is bright red. Give a reason for this statement.

= Because it has more oxygen (it is oxygenated)

398. List down four components of blood
   a. Red blood cells
   b. White blood cells
   c. Plasma
   d. Platelets

399. What do you call the liquid part of blood?

= Plasma

400. Give the function of each of the following

a. Red blood cells
   = Transport oxygen
b. White blood cells
   = Fight against germs
c. Platelets
   = For blood clotting

401. State any four functions of the blood system
   a. Transport oxygen from the lungs to all parts of the body
   b. Fight against germs
   c. Transport waste matter e. g. carbon dioxide and urea to the parts that remove them
   d. Transport food nutrients from small intestines to all parts of the body

402. Mention any four problems of the human circulatory system
   a. Bleeding
   b. High blood pressure/hypertension
   c. Heart attack/cardiac arrest
   d. Anaemia

403. What is bleeding?

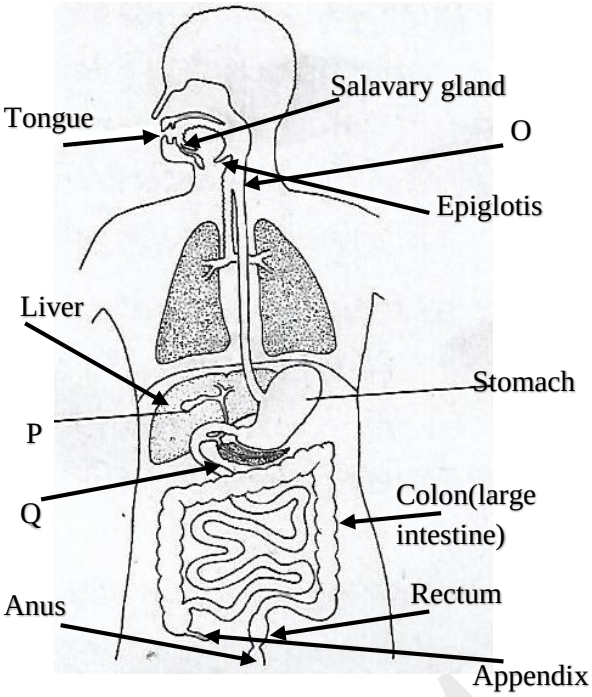
= It is the condition in which blood oozes from the body

8.7. The Human Digestive System

404. What is digestion?

= It is a process by which insoluble food is broken down into small soluble particles

Figure 7.2 shows parts of the human digestive system. Use it to answer question 401.



405.

a. Name the parts O, P, Q and R

O= Oesophagus

P= Gall bladder

Q= Pancreas

R= Small intestines

b. Give the function of the parts P and R

P= Stores bile

R=

a. Completing digestion
b. Absorb digestible materials

406.

a. Name the organ that produces bile

= The liver

b. What is the function of bile in digestion?

= It emulsifies fats

407. What name is given to the gland that secretes pancreatic juice?

= Pancreas

408. Give the function(s) of the following parts of the human digestive system

a. Epiglottis

a. Prevents food from entering the trachea
b. Directs food into the oesophagus (gullet)

b. Colon (large intestine)

= Absorbs water from the undigested food

409. Give any five problems of the digestive system

a. Constipation
b. Haemorrhoids (piles)
c. Intestinal ulcers
d. Intestinal parasites
e. Diarrhoea

410. Give any four ways of caring for the digestive system

a. Eating food rich in fibre
b. Doing physical exercises regularly
c. Chew thee food thoroughly
d. Taking enough fluids such as water

411.

a. What is constipation?

= It is a condition whereby the excreta becomes too hard to be expelled

b. What causes constipation?

= Excess absorption of water from the undigested food in the colon

UNIT 9: STAYING SAFE

9.1. Common accidents at home

408. Mention any four common accidents at home

i. Poisoning
ii. Suffocation
iii. Choking
iv. Burns/scalds
v. Drowning
vi. Nose bleeding

412. What causes each of the following accidents?

a. Poisoning

= Hazardous (toxic) chemicals

b. Burns

= Dry heat

c. Scalds

= Hot vapour or hot liquids

413. Give any four ways of preventing poisoning.

a. Keeping drugs, medicines and harmful substances away from children

b. Avoid tasting or sniffing unknown substances
c. Following proper medical prescriptions
d. Avoid using expired medicines

Figure 7.3 shows common accidents. Use it to answer question 410.

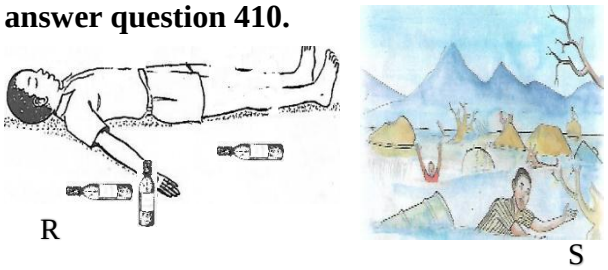


Figure 7.3

414.
a. Name the accidents R and S
R= Poisoning
S= Drowning
b. Give four ways of preventing accident S
a. Avoid pushing each other in water
b. Avoid swimming in deep rivers or pools
c. Keep babies away from buckets or basins of water
d. Avoid swimming while drunk

415. What is suffocation?
= This is an unconscious condition due to failure to breathe.

416. Give any three causes of suffocation.
a. Being buried by soil
b. Wearing plastic bag around one's head
c. Strangulation

Figure 7.4 shows a common accident. Use it to answer question 413.

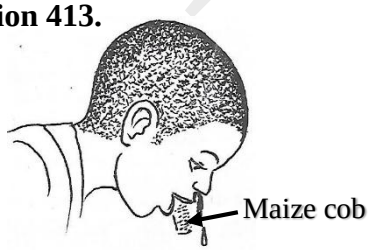


Figure 7.4

417.
a. Name the accident
= Nose bleeding.
b. What is the use of the maize cob in the mouth?
= To prevent swallowing blood
c. Give one effect of this accident
= It causes anaemia
d. State one way of avoiding this accident
= Eat foods rich in vitamin C e. g. tomatoes, paw paws and oranges

418. What is choking?
= It is when food blocks the wind pipe

419. Suggest any two ways of preventing choking
a. Avoid talking while eating
b. Chew food thoroughly before swallowing

420. What is first aid?
= This is the first help given to a victim in an accident before taking him/her to the hospital

421. Give any four things found in the First Aid Kit/box
a. Cotton wool
b. Tablets
c. Pair of scissors
d. Antiseptics

422. Why is first aid important (give three reasons)
a. Reduces pain
b. Prevents further complications
c. Saves life

9.2: Worm Infections

419. How do round worms get into the Body
= By eating food contaminated with Round worm eggs

423. Give any six signs and symptoms of round worm infections
a. Nausea
b. Vomiting
c. Presence of eggs in the faeces
d. Fever
e. Weakness of the body

424. Give any four ways of preventing round worms
a. Proper use of toilets/latrines
b. Washing hands after using the toilet/latrine
c. Keeping finger nails short and clean

d. Washing fruits and vegetables before eating them

425. What is the colour of the round worm?

= Red and white

426. How do tape worms get into the body of a person?

= When a person eats under-cooked meat (pork or beef)

427. Give any five ways signs and symptoms of tape worm infections

a. Pain in the stomach
b. Anaemia
c. Loss of body weight
d. Diarrhoea
e. Tapeworm segments in the faeces

428. Give any four ways of preventing tape worms

a. Cook meat and fish thoroughly
b. Always use toilet/latrine properly
c. Proper inspection of meat should be done
d. Seek medical treatment as soon as signs and symptoms appear

UNIT 10: NUTRITION AND HEALTH

10.1. Food Types And Nutrition

429. What is food?

=It is anything that provides us with nutrients when we eat or drink it.

430. What it food supply?

=It is the amount of food available for consumption.

431. Give any two ways households can make food available.

a. Producing it (growing crops or raising animals) on their own.
b. Buying

432. State two ways of improving food supply.

a. Growing different kinds of crops
b. Growing drought-tolerant crops.
c. Use of irrigation to produce crops throughout the year.
d. Use improved varieties of crops and breeds of animals(any two)

433. What is food security?

=Food security means every individual has adequate food all the year round.

434. State any two causes of food security.

a. Us of poor agricultural methods
b. Wastage of food during celebrations such as weddings, engagements and initiation ceremonies.
c. Overselling food crops after harvesting.

435. Define nutrition?

=It is the process by which the body takes in food nutrients for it to be healthy

436. What do you call a condition caused by lack or excess of certain essential nutrients in the body

= malnutrition

437. Lack of essential nutrients in the body is called _____

= under-nutrients

438. What is over-nutrients

= excess of certain nutrients in the body

439. Give one effect of over nutrients

= obesity causes night blinding

440. Mention any three groups of food base on functions

a. Energy giving food
b. Body building food
c. Protective food

441. Give any two examples of each of the following food groups.

a. Energy giving foods
   a. Nsima
   b. Cassava
   c. Bead
   d. Rice
b. Body building foods
   i. Fish
   ii. Beans
   iii. Meat
   iv. Milk
c. Protective foods
   i. Vegetables

ii. Fruits

442. List down all the six food nutrients
   a. Proteins
   b. Carbohydrates
   c. Vitamins
   d. Fats and oils (lipids)
   e. Minerals
   f. Water

443. Give the two main types of food nutrients
   a. Macro nutrients/minor nutrients
   b. Micro nutrients/minor nutrients

444. .a. What are macro nutrients
=these are nutrients required by the body quantities
.b. give any two examples of macronutrient
   i. Carbohydrates
   ii. Proteins

445. .a. Micronutrients are _____
= nutrients required by body in smaller amounts
   a. Mention any two micronutrients
      i. Minerals
      ii. Vitamins

446. Mention any three examples of minerals
   a. Iron
   b. Iodine
   c. Calcium

447. State the function of the following major food nutrients
a. Carbohydrates
   = provides energy
b. Proteins
   a. Repair Worm out tissues in the body
   b. For formation of new body tissues
   c. For growth of the body

448. Which mineral is responsible for the following
a. Strong bones
   = calcium
b. Formation of blood
   = iron

449. Name the nutrient responsible for good eye sight?
= vitamin A

450. What are nutritional deficiency diseases?
= these are diseases caused by lack of certain nutrients in the body

451. What caused night blindness?
= lack of vitamin A

452.
a. What causes goiter?
   = lack of iodine in the diet
b. Give on sign of goiter
   = swelling on the throat
c. How can you prevent goiter?
   = use iodized salt

453. Lack of protein causes_____
= kwashiorkor

454. What is nutritional value of food?
= it is the major nutrients the food contains

455. State any two ways of improving the nutritional value of food
   a. Combining several foods
   b. Overcooking fish to soften the bones so that you can eat together with the bones
   c. Adding enriching foods t dishes e.g. adding groundnut flour to vegetables
   d. Use one-pot meals e.g. futari

456. Why is it important to improve the nutritional value of food?
   a. Health of the people is improved
   b. There is high productivity

457. How can you improve the nutritional value of the following food
a. Mpiru (mustard)
   a. Adding groundnut flour (nsinjiro)
   b. Adding cooking oil
b. Mgaiwa porridge.
   i. Adding groundnut flour (nsinjiro)
   ii. Adding cooking oil
   iii. Adding margarine
   iv. Adding butter

10.2. Meal planning and dietary needs of different people

458. Give any three importance of meal planning

a. It saves time and money
b. It helps to avoid monotony in the diet
c. It avoids wastage of food resources

459. Give any four factors to consider when planning meals
a. Number of people involved
b. The nature of work/occupation
c. Age of the people prepared for
d. The health status of the people

460. Give any four guidelines for meal planning
a. Plan meals for the whole day or week, and not individual meals to prevent wastage of food
b. Plan meals that are available or I season
c. Avoid serving the same type of food every day to avoid monotony
d. Choose suitable methods of cooking to avoid loss of nutrients

461. What is the difference between manual workers and sedentary workers?
= Manual workers do heavy work while sedentary workers do not do heavy work

462. Why do manual workers need a lot of energy-giving foods?
= Because they lose more energy

463. State the difference between invalids and convalescents
= Invalids are people who are ill while convalescents are people recovering from illness

464. Why should meals for invalids and convalescents contain more proteins and protective (vitamins)
= For the replacement of damaged tissues and cells

465. Who are vegetarians?
= These are people who do not eat meat/animal products

466. Mention two types of vegetarians
a. Lacto-vegetarians
b. Strict vegetarians

467. Define strict vegetarians
= These are people who eat vegetables only

468. What name is given to vegetarians who eat vegetables and animal products such as milk and eggs?
= Lacto-vegetarians

469. Give any five reasons why people become vegetarians
a. Religion
b. Health
c. Animal welfare
d. Taste
e. Allergy

470. Why is it difficult to plan meals for strict vegetarians?
= There is lack of animal proteins, vitamin A and D, Calcium and Iron from animal sources

471. Give three main source of proteins for strict vegetarians
a. Beans
b. Peas
c. Groundnuts (legumes)

472. Who are the elderly?
= These are people above the age of 65 years

473. Why do the elderly need calcium and vitamins?
= Calcium for healthy bones and vitamins to prevent infections

10.3. Methods Of Cooking Food

474. Give four reasons for cooking food
a. Destroying harmful organisms which may be present in the food
b. Making food more digestible
c. Making food taste good (palatable)
d. Preserving it
e. Improving the appearance (making it appetizing)

475. Give any four methods of cooking
a. Boiling
b. Steaming
c. Baking
d. Stewing

476. Methods of cooking food are categorized into two. What are these categories?
   a. Baking
   b. Roasting

477. Give three advantages of boiling method of cooking food
   a. It requires little attention
   b. It softens the fibre
   c. Several foods can be cooked together in one pot

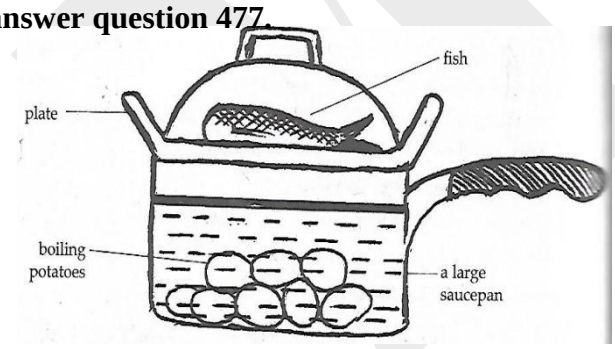
478. State any three disadvantages of boiling method of cooking food
   a. It uses a lot of fuel
   b. Some food may lose their flavour and colour
   c. Some nutrients e. g. vitamins and minerals can be lost

479. Name two ways of steaming food
   a. Direct steaming
   b. Indirect steaming

480. State the difference between direct and indirect steaming

= With direct steaming, the food gets into contact with the steam while indirect steaming, the food does not get into contact with the steam

Figure 7.5 shows a method of cooking. Use it to answer question 477.



481. Name the method of cooking shown

= Indirect steaming

482. Give any four advantages of steaming method of cooking food
   a. There is no loss of food value
   b. It requires little attention
   c. It is economical as three or four dishes can be cooked at the same time
   d. Food cooked in this way is easily digestible

483. Give any four disadvantages of steaming method of cooking food
   a. It is a slow method of cooking
   b. It is not suitable for cooking some foods such as tough meat
   c. It requires a lot of heat, therefore, more fuel consumption
   d. The food does not look appetizing

484. Cooking food in a liquid for a long time to soften it is called _____

= Stewing

485. Give any two advantages of stewing
   a. Does not need constant attention
   b. No loss of nutrients since the liquid is served with the food

486. Give any three methods of frying food
   a. Dry frying
   b. Shallow fat frying
   c. Deep fat frying

487. Describe how dry frying is used

= This is a method where no oil or fat is used, and the food cooks in its own fat

488. Give any four foods that can be cooked using dry frying
   a. Ngumbi
   b. Mafulufute
   c. Bwamnoni
   d. Oily fish

489. Explain deep fat frying method of cooking

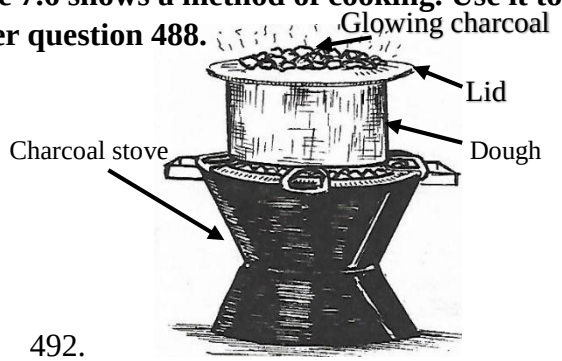
= The food is completely immersed or covered with fat or oil

490. Give any three foods that can be cooked using deep fat frying
   a. Doughnuts
   b. Chicken
   c. Fish

491. Give any four advantages of frying
   a. No loss of soluble nutrients

b. Fuel is saved
c. It is a quick method of cooking
d. The food looks attractive and has good flavour

Figure 7.6 shows a method of cooking. Use it to answer question 488.



492.
a. Name the method of cooking shown
= Baking
b. Give any four advantages of this method of cooking
   a. No soluble nutrients are lost
   b. The food looks attractive
   c. Food does not break up if cooked well
   d. Flavour is improved
c. Give any four foods that can be cooked using this method
   i. Cakes
   ii. Scones
   iii. Chigumu
   iv. Biscuits

493. Give two ways (types) of food processing
i. Primary processing
ii. *Secondary processing*

494. What is secondary processing?
= Secondary processing means turning basic processed food into new products

495. Give any four examples of secondary processing
i. *Making margarine from cooking oil*
ii. Making bread from flour
iii. Making Chambiko from milk
iv. Making butter from groundnuts

496. Give any two example of primary processing
i. Grinding grain into flour
ii. Extracting oil from nuts

497. State any four advantages of food processing
i. Improves flavor texture and appearance of food
ii. Preserver the food
iii. Improve the quality of food
iv. Prevent food wastage

498. Give any three disadvantages of food processing
i. Loss of nutrients during processing
ii. Some methods of processing food are unhygienic
iii. It leads to the increase in the cost of the food

10.5. KITCHEN

499. What is a kitchen

= It is a place where food is prepared and cooked.

500. Give two main types of kitchen.
   a. Modern kitchen
   b. *Tradition kitchen*

501. Give any four characteristics of a modern kitchen
   a. It is found inside the main house
   b. It has working surface
   c. *It has adequate lighting and ventilation*
   d. It has adequate place

502. List down four working surfaces of a modern kitchen
   a. Preparing centre
   b. Washing centre
   c. Cooking centre
   d. Storage centre

503. In a modern kitchen, which working centre is used when cutting vegetables?
= Preparation centre

504. Give any two limitations of a modern kitchen
   a. It is expensive to construct
   b. It is expensive to maintain

505. Give two types of traditional kitchen.
   a. The open-air kitchen
   b. An enclosed kitchen

Figure 6.7 shows a kitchen. Use it to answer question 382.

Figure 6.7

506.

a. What type of kitchen has been shown above?
   = An open-air kitchen
b. Give any two disadvantages of this kitchen
   a. It is not suitable in rainy and windy weather
   b. Has no working surface

507. Give any four limitations of a traditional kitchen
   a. The food cooked on a three-stone fireplace have a smoky flavour
   b. A lot of smoke is produced
   c. There is wastage of fuel energy
   d. Has limited space

508. State any four ways of improving a traditional kitchen
   a. Construct a kitchen with a window and chimney to improve ventilation and lighting
   b. Construct a mud stove with more than cooking place
   c. Making a drying rack outside the kitchen for drying pots and plates
   d. Fixing surfaces and shelves to an already existing kitchen

Figure 7.8 shows a structure for improving a traditional kitchen. Use it to answer question 385.

Figure 7.8

509.

a. Name the structure
   = A drying rack
b. Give the use of the structure
   = For drying pots and plates
c. Give any two materials used for constructing the structure
   a. Bamboos
   b. Tree poles

UNIT 11: LAUNDRY

510. What is laundry?
= It refers to all processes that are involved in making clothes and household linen clean

511. Give any five laundry agents
   a. Water
   b. Soap
   c. Breaches
   d. Starches
   e. Stain removers

512. Give any four laundry equipment
   a. Laundry sink
   b. Bathtub
   c. Basins
   d. Pressing iron
   e. Pressing sheets
   f. Hangers

513. Give any four processes in laundry
   a. Sorting
   b. Mending
   c. Soaking
   d. Washing
   e. Drying
   f. *Pressing*

514. Give the uses of the following laundry materials

a. Bleaches
   = For brightening white garments
b. Starch
   = It is used to stiffen and give a smooth finish to garments and articles.

515. What are stains?
= Stains are unwanted discolorations on garments or articles

516. Give any three types of stains
   a. Vegetable stains
   b. Animal stains
   c. *Mineral stains*

517. How can you remove the following stains

a. Ball point ink
= *sponge with methylated spirit*
b. Chewing gum
= *Rub with ice-cube*

518. Give two types of fabrics (fibre)
   a. Natural fibre
   b. Synthetic fibre

519. Give any two examples of synthetic fibre
   a. Nylon
   b. Acetate
   c. Polyester
   d. *Rayon*

520. What are synthetic fibre
= *These are fibre that are made by people*

521. Give any three types of natural fibre
   a. Plant fibre e.g. cotton and linen
   b. Animal fibre e.g. wool, silk and leather
   c. Mineral fibre e.g. fiberglass aluminium and asbestos

UNIT 12: SCIENTIFIC INVESTIGATION

522. What is Scientific Investigation
= *It is a way of getting knowledge or information*.

523. Give any two methods of obtaining data in scientific investigation
   a. Direct observation
   b. Measuring
   c. Conducting experiments
   d. Asking questions(any two)

524. Outline the six stages of a scientific investigation
   a. Identifying the problem
   b. Making a prediction
   c. Planning the investigation
   d. Carrying out the investigation
   e. Interpreting the results
   f. *Making conclusions*

525. What name is given to the predicted answer to a problem in a scientific investigation?
= *Hypothesis*

526. Give any two ways of presenting information in a scientific investigation.
   a. Using tables
   b. *Using graphs*

527. Give the three main stages of a scientific investigation.
   a. Planning stage
   b. Implementation stage
   c. *Concluding stage*

528. Experiment is carried out in _____stage.
= *implementation*

529. Which stage of scientific investigation provides the answer to the question of the investigation?
=*Conclusion stage*

UNIT 13: COMMUNICATION AND INFORMATION TECNOLOGY

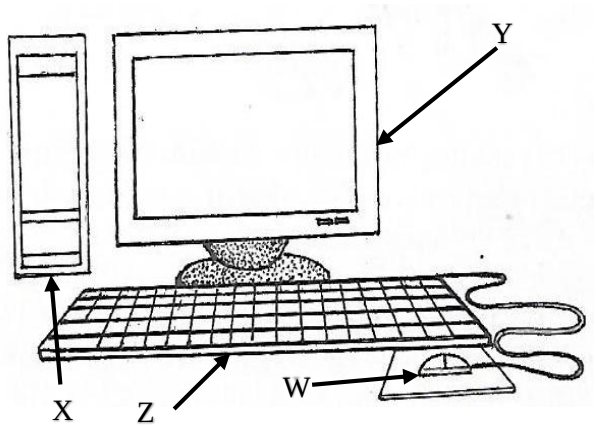
530. Give any six modern technologies for communication
   a. Television
   b. Fax
   c. Computer
   d. Radio
   e. Cellphone

531. Give the two main parts of a computer
   a. Hardware
   b. *Software*

532. The hardware part of a computer is divided into components. What are these components?
   a. Input devices
   b. Output devices
   c. Central Processing Unit (CPU)

533. Give any four input devices of a computer
   a. Mouse
   b. Keyboard
   c. Touchpad
   d. Track ball

Figure 6.9 shows a computer. Use it to answer question 406.



534.
a. Name the parts labeled W, X, Y and Z.
W= Mouse
X= Base unit
Y= Monitor
Z= Keyboard
b. Give the function of parts W, Y and Z
W=
    a. *Selecting items*
    b. *Dragging (moving) objects*
    c. *Playing games*

Y= Displaying pictures
Z=
    d. *Typing*
    e. *Playing games*

535. Give any three output devices of a computer
    a. *Monitor*
    b. *Printer*
    c. *Speaker*

CHAPTER TWO

AGRICULTURE

UNIT 1: INTRODUCTION TO AGRICULTURE

1. Mention the two main branches of agriculture
    i. *Crop production*
    ii. *Animal production*
2. Give any fie sub-branches of agriculture under crop production
    i. *Agronomy*
    ii. *Horticulture*
    iii. *Pomoculture*
    iv. *Olericulture*
    v. *Floriculture*
3. What do you call the production of ornamental plants e.g. Shrubs?
    = Arboriculture
4. Under what sub-branch of agriculture is fruit production?
    = Pomoculture
5. The practice of keeping domesticated birds is called _____
    = *Poultry*
6. _____ is the keeping of bees for honey.
    = *Apiculture*
7. The growing of fruits, flowers and vegetables is called _____
    = Horticulture
8. Define **"Agronomy"**
    = *It is the growing of field (arable) crops*
9. A farmer grows cabbage, rape, bonongwe and eggplants. What sub-branch of agriculture is this?
    = *Olericulture*
10. The growing of trees only is called_____
    = *Silviculutre*
11. State any two importance of agriculture to Malawi as a nation
    i. *Source of food for the growing population*
    ii. *Source of foreign exchange (currency)*
12. Give the two main types of farming
    i. *Commercial farming*
    ii. *Subsistence farming*
13. State the difference between commercial and subsistence farming
    = Commercial farming is the production of crops and rearing of animals mainly for sale while subsistence farming is the production of crops and rearing of animals mainly for food
14. What are farm records?
    = Farm records are written information that farmers keep on different activities that are carried out on a farm
15. State any five reasons why farmers keep farm records
    i. *They help farmers to calculate profit or loss*

ii. *They help farmers to make important decisions on the farm*
iii. *They help farmers to know whether they are making progress or not*
iv. *They help farmers to select livestock*
v. *They help farmers in budgeting*

16. Mention the two main types of farm records.
    i. *Physical farm records*
    ii. *Financial farm records*
17. State the difference between physical farm records and financial farm records
    = Physical farm records are those that deal with production while financial farm records deal with money
18. List down any five examples of physical farm records
    i. *Vegetable production records*
    ii. *Layers records*
    iii. *Milk production records*
    iv. *Yield records*
    v. *Field operation records*
19. A record of daily activities done by a farmer from land preparation to harvesting is called ____
    = Field operation record
20. Describe a yield record
    = It is a record shows amount of yield harvested for each crop grown on the farm
21. A farmer bought layers feed at K800. In which type of record should she keep this information?
    = Financial record
22. What are the two main parts of financial farm records?
    i. *Income*
    ii. *Expenditure*
23. What is a farming calendar?
    = It is a list of activities to be done in each month of the year for a given crop
24. Give any three uses of a farming calendar
    i. *Helps a farmer to know when to do farm operations*
    ii. *It helps a farmer to plan farm activities*
    iii. *It is a source of farm records*

UNIT 2: CROP PRODUCTION

25. Give two classes of crops
    i. *Cash crops*
    ii. *Food crops*
26. List down any four examples of food crops grown in Malawi
    i. *Maize*
    ii. *Rice*
    iii. *Sorghum*
    iv. *Cassava*
27. Name the staple food of Malawi
    = Maize
28. List down any four examples of cash crops grown in Malawi
    i. *Tobacco*
    ii. *Tea*
    iii. *Cotton*
    iv. *Sunflower*
29. What is the main cash crop in Malawi?
    = Tobacco

2.1. Maize production

30. What are crop husbandry practices?
    = These are all activities involved when producing the crop in the farm
31. List down any four husbandry practices for maize production
    i. *Seed selection*
    ii. *Planting*
    iii. *Weeding*
    iv. *Fertilizer application*
32. Give any four methods of applying fertilizer to crops
    i. *Broadcasting method*
    ii. *Dollop method*
    iii. *Foliar method*
    iv. *Banding method*
33.
    i. Describe what happens in the banding method
    = Fertilizer is applied to a groove that s made around the plant
34. In which crop is banding method
    = Trees
35. Which method is used to apply fertilizer to rice?
    =Broadcasting
36. Fertilizer is dissolved and sprayed to the crop leaves.
    a. Name this method of applying fertilizer.
       =Folia method.
    b. In which crop is this method commonly used?
       =Tee
37. Give three steps in dollop method.

i. *Making holes at the base of the plant*
ii. *Apply fertilizer in the holes*
iii. *Cover the holes with soil*

38. List down any four common maize varieties in Malawi.
    i. *MH 12*
    ii. *MH 18*
    iii. *DK 80 71*
    iv. *Kanyani*
39. List down any four qualities of a good seed.
    i. *Large and plump*
    ii. *Viable(able to germinate)*
    iii. *Pure(not mixed)*
    iv. *Disease-free)*
    v. *Whole(unbroken)*
40. When should maize be planted?
    = Maize should be planted with the first rains.
41. List down three activities involved in land preparation for maize.
    i. *Clearing the land*
    ii. *Making ridges*
    iii. *Making box ridges*

Figure 1.0 shows a structure in the maize garden. Use it to answer question 41.

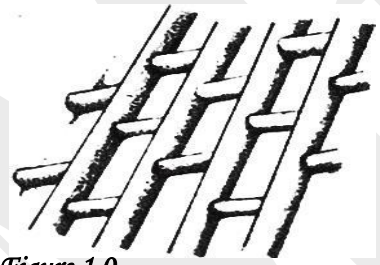


Figure 1.0

42.
    a. Name the structure shown
    =Box ridges
    b. Give two importance of the structure above.
        i. *It reduces run-off of water*
        ii. *Allows water to sink in the soil thereby conserving moisture*
43. Give any three importance of land preparation.
    i. *It exposes some pests and disease-causing organisms to the sun, hence killing them*
    ii. *It breaks hard soil and loosen it, hence improving aeration*
    iii. *It loosens the soil so that roots penetrate in the soil easily*
44. Why is it important to prepare land early? (Give three reasons)
    i. *It is easy to work, as the soil is still moist*
    ii. *It allows buried organic matter to decay (rot)*
    iii. *It leads to early planting*
45. Give two importance of early planting
    i. *The plants make full use of soil nutrients before they (the nutrients) are washed down*
    ii. *It leads to early maturity, and the crop escapes late pests such as army worms.*
46. What do you call the replanting seeds where they did not germinate?
    = Supplying
47. State the importance of supplying
    = It ensures correct plant population, hence increasing crop yield
48. What does the term **"thinning"** mean?
    = It is the removal of extra (excess) plants from the planting stations in the garden
49. Give the reason for thinning
    = To reduce competition for air, soil nutrients, space and sunlight among plants.
50. When should thinning and supplying be done?
    = As soon as seeds germinate
51. Define weeding
    = It is the removal of unwanted plants in the garden
52. State the importance of weeding
    = It reduces competition for air, soil nutrients, space and sunlight between plants and weeds
53. What name is given to unwanted plants in the garden?
    = Weeds
54. List down any four common weeds of maize
    i. *Khovani*
    ii. *Witch weed (kaufiti)*
    iii. *Blackjack (bidens pilosa/chisoso)*
    iv. *Bonongwe*
55. When should weeding be done?
    = As soon as the weeds appear

56. Why is early weeding important? (give three reasons)
    i. *Weeds are easy to remove when they are still young*
    ii. *Weeds are removed before they cause a lot of damage to the roots*
    iii. *Weeds are removed before they use up a lot of soil nutrients*
57. Mention any four methods of weeding in a maize garden
    i. *Light hoeing*
    ii. *Uprooting*
    iii. *Banking*
    iv. *Using herbicides*
58. When should the following methods of weeding be used?
    a. Uprooting
       = When the weeds grow close to the crop seedlings.
    b. Banking
       = When maize seedlings are about a knee high
59. List down any four examples of fertilizers that are applied to maize
    i. *Calcium Ammonium Nitrate (CAN)*
    ii. *UREA*
    iii. *NPK (23:21:0+4s*
    iv. *Manure*
60. Name the method used for applying fertilizer to maize
    = Dollop method
61. Give any two reasons for applying fertilizer to maize
    i. *To promote fast growth*
    ii. *To increase maize yields*
62. What is a pest?
    = It is any organism (animal) that destroys crops
63. Give any four common pests of maize
    i. *Army worms*
    ii. *Locusts*
    iii. *Stalk borers*
    iv. *Maize weevils*
    v. *Cutworms*
64. State any two effects of pests of maize
    i. *They spread diseases*
    ii. *They reduce crop yields*
65. How are the following maize pests controlled?
    a. Maize weevil
       = Applying chemicals such as Actellic and Super Guard dust and Shumba Super
    b. Locusts
       = Applying chemicals such as Carbaryl

Figure 1.1 shows some of the maize pests. Use it to answer question 65.

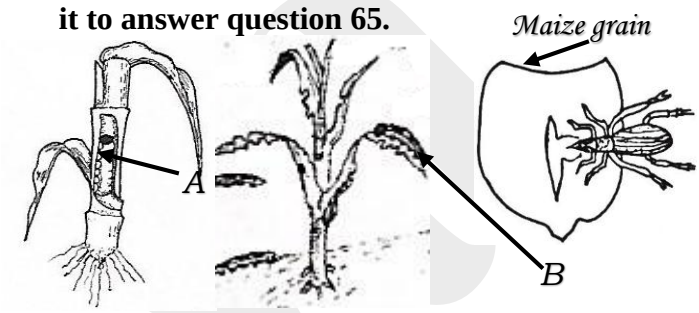


Figure 1.1

66.
    a. Name the pests A, B and C
    A= Stalk borer
    B= Army worm
    C= Maize weevil
    b. What damage does each of the pests cause to maize?
       A= Making holes in the stem
       B= Chewing the leaves
       C= Making holes in the maize grains
67. Group the following maize pests into storage pests and field pests, cutworms, rats, armyworms maize weevil.
    a. *Storage pests= rats and maize weevil*
    b. *Field pests = cutworms and armyworms.*
68. Maize plant have black powder on cobs, tassels and leaves.
    a. Name the disease that has attacked the maize plants.
       = Head smut
    b. What causes the disease?
       = Fungus
    c. How can the disease be prevented?
       = uprooting and bury the diseased plants?
69. Describe the sign to show that maize is ready for harvesting.

= *Maize cobs become brown and drop downwards*.

70. Explain two ways of harvesting maize.
    i. *Direct striping- removing the cobs directly from standing stalks.*
    ii. *Stoking- maize stalks are cut and heaped (stoked) and cobs are removed from stalks.*
71. What is the advantage of stoking method.
    = *The garden is left clean, hence easy to prepare*.
72. State the disadvantage of stoking method of harvesting maize.
    = *It is labour- intensive*.

2.2. Groundnuts and cassava growing

73. List down any six varieties of groundnuts
    i. *Chalimbana*
    ii. *Chitembana*
    iii. *Nsinjiro*
    iv. *Mawanga*
    v. *Manipintar*
    vi. *CG7*
74. After seed germination, which two husbandry practices are done to maintain correct plant population?
    i. *Supplying*
    ii. *Thinning*
75. State four methods of weeding in cassava and groundnuts gardens
    i. *Using hoes*
    ii. *Using hands*
    iii. *Ploughing*
    iv. *Using herbicides*
76. State any three effects of weeds to cassava and groundnuts gardens.
    i. *Competition for water, nutrients, sunlight and space*
    ii. *Transmit diseases*
    iii. *Harbor pests and diseases*
77. List down any five common pests of groundnuts
    i. *Aphids*
    ii. *Birds*
    iii. *Termites*
    iv. *Monkeys*
    v. *Mice*
78. How are the following pests of groundnuts controlled?
    a. Birds
        i. *Scare them away*
        ii. *Trapping them*
    b. Monkeys
        i. *Scaring them*
        ii. *Fencing*
    c. Mice
        = *Trapping*

Figure 1.2 shows two pests of groundnuts. Use it to answer question 78.

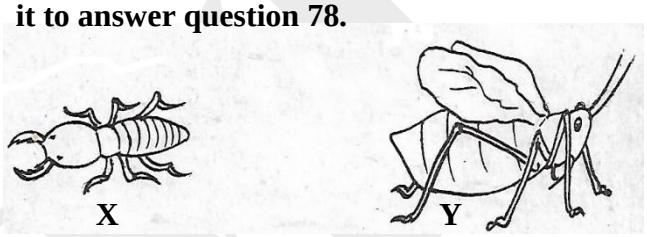


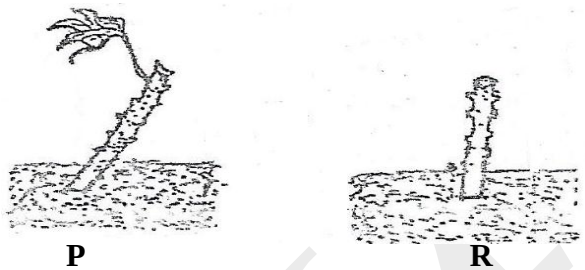
Figure 1.2

79.
    a. Name the pests X and Y.
    X= Aphid
    B= Termite
    b. State the damage caused by each of the pests
    X=
    i. *Sucks juice from the plant*
    ii. *Transmits rosette virus*
    Y=
        i. *Cuts the plant stems*
        ii. *Eats the soft parts of the groundnut pods*
    c. How is the pest marked X controlled? (Give four ways)
        i. *Early planting*
        ii. *Correct spacing*
        iii. *Crop rotation*
        iv. *Spraying chemicals*
80.
    a. Mention the two common diseases of groundnuts
    i. *Rosette*
    ii. *Leaf spot*
    b. State the cause of each disease mentioned in 79a above.
        i. *Rosette = Virus*
        ii. *Leaf spot = Fungus*
81. Mention any three signs of rosette disease
    i. *Poor pod formation*

ii. *Stunted growth*
iii. *Wrinkled leaves*

82. State four ways of controlling rosette
    i. *Early planting*
    ii. *Planting resistant varieties e.g. RG1 and Nsinjiro*
    iii. *Uprooting and burn all diseased plants*
    iv. *Control aphids*
83. Describe the sign of maturity in groundnuts
    = The inside of the pod is spotted pale brown.

Figure 1.3 shows two cassava cuttings planted differently. Use it to answer question 83.



P **R**

Figure 1.3

84.
    a. Which one is the recommended way of planting cassava cuttings?
    = P
    b. Why is it important to plant cassava in the manner mentioned in 83a above?
    = It prevents cassava cuttings from rotting
85. List down any three common pests of cassava
    i. *Green spider mites*
    ii. *White flies*
    iii. *Animals (e.g. mice, hares, wild pigs, monkeys and porcupines)*
86. State the damages caused by the following pests of cassava
    a. Green spider mites
    = They attack fresh leaves and shoots especially in dry season
    b. White flies
    = They suck juice from the plant
87. Mention the two diseases of cassava
    i. *Cassava mosaic*
    ii. *Bacterial bright*
88. What causes each of the diseases mentioned in 86 above?
    a. *Cassava mosaic = Virus*
    b. *Bacterial bright = Bacteria*
89. Give two ways of controlling diseases of cassava
    i. *Uproot and burn diseased plants*
    ii. *Use disease-free cuttings.*
90. Describe the sign of maturity in cassava
    = The soil at the base of the plant cracks
91. Mention two ways of fermenting cassava
    i. *Heap fermentation*
    ii. *Soaking fermentation*
92. Outline the five steps involved in soaking fermentation
    i. *Peeling*
    ii. *Soaking*
    iii. *Cleaning*
    iv. *Pounding*
    v. *Drying*
93. Give two reasons for fermentation in cassava processing
    i. *It removes toxic substances from bitter varieties*
    ii. *Improves taste*
94. State two importance of processing cassava and groundnuts
    i. *To preserve them*
    ii. *To increase quality in order to sell them at a higher price*

2.3. Vegetable production (Olericulture)

95. What are vegetables?
    = These are plants harvested fresh for consumption
96. Mention the two types of vegetables
    i. *Indigenous vegetables*
    ii. *Exotic vegetables*
97. State the difference between indigenous and exotic vegetables
    = Indigenous vegetables are those that grow naturally in a country while exotic are those imported from other countries
98. Mention any four examples of indigenous vegetables
    i. *Luni*
    ii. *Denje*

iii. *Bonongwe*
iv. *Mwamnaligone*

99. List down any four examples of exotic vegetables to Malawi
    i. *Rape*
    ii. *Carrot*
    iii. *Chinese cabbage*
    iv. *Turnips*

100. State any three importance of vegetables
    i. *They provide food*
    ii. *They are a source of income*
    iii. *They are a source of raw materials*

101. Outline the five classes of vegetables
    i. *Root, bulb and tuber vegetables*
    ii. *Leafy vegetables*
    iii. *Legume vegetables*
    iv. *Fruit vegetables*
    v. *Flower vegetables*

102. Which factor is used to classify vegetables?
    = Edible part

Figure 1.4 shows different vegetables. Use it to answer question102

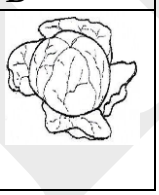
A	B	C	D
			

Figure 1.4

103.
    a. Name the class to which each of the following vegetables belong
    A= Fruit vegetables
    B= Root vegetables
    C= Legume vegetables
    D= Leafy vegetables
    b. Why is vegetable C important in a crop rotation?
    = It fixes nitrogen in the soil

104. List down four vegetable nursery management activities
    i. *Watering*
    ii. *Thinning*
    iii. *Pests and disease control*
    iv. *Hardening off*

105. What is the best time to water the nursery bed?
    = In the morning or late in the afternoon

106. What are the effects of the following activities in a nursery seedlings?
    a. Over-watering
    = It encourages damping off diseases
    b. Under-watering
    = Leads to wilting of seedlings

107. How are the following pests controlled in vegetable seedlings?
    a. Aphids
    = Spraying with Marathion or Tephrosia
    b. Grasshoppers and caterpillars
    = Spray with Carbaryl

108.
    a. What is the commonest diseases in a vegetable nursery bed?
    = damping off disease
    b. What causes the disease
    = fungus
    c. How is the disease controlled? (give two ways)
    i. *Correct spacing*
    ii. *Sterilizing the soil*
    iii. *Dusting the soil with fungicides e.g. Captain or Thram*
    iv. *Avoid overwatering*

109.
    a. What does hardening off mean in a vegetable nursery?
    = This is the gradual reduction of the frequency of watering to seedling
    b. Explain the reason for hardening off
    = to prepare seedling for dry condition of the field beds

110. Define mulching.
    = This means putting grass or leaves on top of seedling

111. Give four importance of mulching
    i. *Suppress the growth of weeds*
    iii. *Adds nutrients to the soil when the mulch decomposes*
    iv. *Conserves soil moisture*
    v. *Controls soil erosion*
    vi. *Controls soil temperature*

112. Give three factors to consider when choosing a site for a vegetable garden
   i. *Nearness to a water supply*
   ii. *Type of soil.*
   iii. *Nearness to home, school or market*
113. Name the best soil for growing vegetables.
   = Well drained sandy soil
114. Why should a vegetable garden be near the following places?
   a. Home
      i. *For easy caring*
      ii. *For protection against thieves and animals*
   b. Market
      = For easy transportation, so that the vegetables can be sold while they are still fresh
115. State any four activities in land preparation for vegetable
   i. *Clearing the site field beds*
   ii. *Making a fence to protect the vegetables from animals*
   iii. *Tilling the land to the depth of 20cm*
   iv. *Breaking the large lamps of soil*

Figure 1.5 shows an activity in a vegetable nursery. Use it to answer question 115.

Figure 1.5

116.
   a. Name the activity
   = Transplanting
   b. Name the farm tool labeled A
      = Hand trowel
   c. Give six steps involve in the activity shown
      i. *Water the nursery beds thoroughly*
      ii. *Water the field beds thoroughly*
      iii. *Mark out planting stations at right spaces*
      iv. *Dig holes in the marked positions*
      v. *Lift the vegetables (seedlings) with enough soil in the roots using a hand trowel*
      vi. *Place the seedlings into the planting holes*
117. List down any six field management practices for leafy vegetables.
   i. *Mulching*
   ii. *Watering*
   iii. *Weeding*
   iv. *Fertilizer application*
   v. *Supplying*
   vi. *Pests and disease control*
118. State the importance of each of the following field management activities
   a. Watering
      i. *Dissolve plant food*
      ii. *Help the roots to absorb soil nutrients*
      iii. *Help in food making in plants*
      iv. *It cools down plats during transpiration*
   b. Pests and disease control
      i. *Promotes fast growth*
      ii. *Prevents transmission of diseases*
      iii. *Prevents destruction of leaves*
      iv. *Improves the quality of yields*
119. Give two ways of preventing leaf spot, leaf bright and black rot diseases in vegetables
   i. *Use clean seeds*
   ii. *Practice crop rotation*
120. How can you control heart rot? (give two ways)
   i. *Spray recommended chemicals*
   ii. *Soil sterilization*
121. What is the disadvantage of harvesting leafy vegetables too late?
   = They tend to be tough due to too much fibre
122. State any two importance of fruits
   i. *They are a source of food*
   ii. *They are a source of raw materials*

123. Give the two types of fruits and give two examples in each type
   a. *Indigenous fruits e. g. mpoza, masawu, mateme e.t.c*
   b. *Exotic fruits e. g. peaches, pine apples, paw paws*
124. What is fruit propagation?
   = It is the process of producing new shoots to be used as planting materials
125. List down any four methods of propagating fruits
   i. Use of seeds
   ii. Use of suckers
   iii. Stem cutting
   iv. Budding

Figure 1.6 shows a method of propagating fruits. Use it to answer question 125.

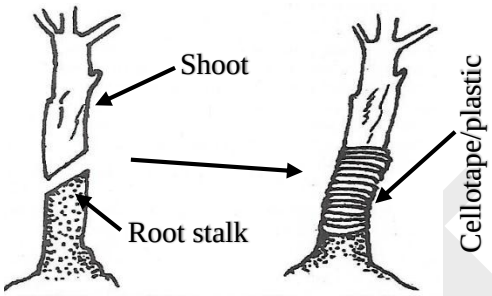


Figure 1.6

126.
   a. Name the method shown
   = Grafting
   b. Give any two factors to consider when using this method
      i. Use plants that are related
      ii. *The stems should be of the same size to march the vascular bundles*
   c. Give any three fruits that can be propagated using this method
      i. Citrus fruits (oranges, lemons, tangerines, lime)
      ii. Mangoes
      iii. Avocado pears
127. What is vegetative propagation?
   = It is the production of new plants using stems, roots and leaves

Figure 1.7 shows a growing fruit plant. Use it to answer question 127.

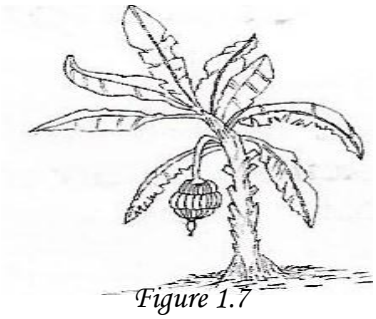


Figure 1.7

128.
   a. How is the plant propagated?
   = Use of suckers
   b. State the disadvantage of using this method
   = It promotes transmission of pests and diseases to the new plant.
129. What is the disadvantage of using seeds
   = It takes time for the plants to start bearing fruits
130. What is the advantage of using seeds over vegetative propagation in fruit propagation
   = It is cheap and easy
131. State the advantage of vegetative propagation when producing fruits
   = It takes a short period for the plants to start bearing fruits.

Figure 1.8 shows a method of propagating fruits. Use it to answer question 131.

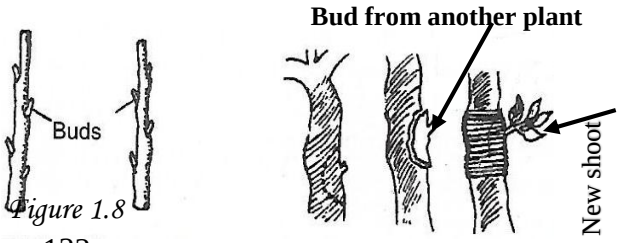


Figure 1.8

132.
   a. Name the method
   = Budding
   b. Give any two fruits that can be propagated using this method
      i. Oranges
      ii. Lemons
133. Give any two environmental factors to consider when selecting a site for fruit production
   i. Climate of the area
   ii. Type of soil
134. Name the method of weeding to be used when fruit trees are fully established
   = Slashing

135. Mention any four types of fertilizers that are applied to fruit trees
   i. CAN
   ii. DAP
   iii. S. Compound
   iv. Manure
136. What is the recommended method of applying fertilizer to fruit trees?
   = Banding method
137. Define **"pruning"** in fruit trees
   = It is the removal of unwanted/unproductive branches of fruit trees.
138. Give any two reasons for pruning fruit trees
   i. To improve quality of fruits
   ii. *To increase fruit yields*
139. How does pruning improve fruit yields?
   = By reducing the loss of nutrients by the unwanted branches.
140. List any three common pests of fruits
   i. Aphids
   ii. Fruit flies
   iii. White flies
141. Give one way of controlling each of the following fruit pests
   a. Aphids
      = spraying the trees with carbaryl or marathion
   b. Fruit flies
      = spraying with labaycid
   c. White flies
      = introduce parasitic wasps that destroys the larva of white flies
142. List down any three diseases of fruits
   i. Anthracnose
   ii. Rusts
   iii. Bacterial
143. Give ways of controlling the following diseases
   a. Anthracnose
      = spraying with dithane m45
      = spraying benomy 50% wp
   b. Bacterial spot
      = spraying copper oxychlolide
144. A garden of fruits is called ____
   = an orchard

2.4.Flower production (floriculture)

145. Give three types of flowers
   i. Tree flower
   ii. Climbers
   iii. Creepers
146. List down three ways of tending flowers
   i. Thinning
   ii. Trimming
   iii. Pruning
147. Give the importance of each of the following activities in flower production
   a. Trimming
      i. Make a desirable shape
      ii. Restrict growth
      iii. Prevents the flowers from becoming bushy
   b. Pruning
      i. Improve quality of flowers
      ii. Restrict growth
      iii. Maintain plants health
148. Give four factors to consider when selecting a site for flower growing.
   i. Type o flower
   ii. Height of flower
   iii. Colour of flower
   iv. Colour of surrounding
149. Mention any three ways of propagating flower
   i. Use of seeds
   ii. Use of cuttings
   iii. Use of suckers
150. How should we sow _____
   a. Large seeds of flower
      = sow them in post
   b. Small seeds of flower
      = sow them in trays

Figure 1.9 show a pest of flower. Use it to answer question 150.

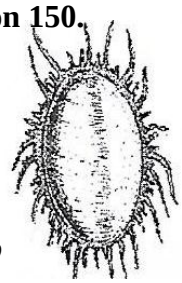


Figure 1.9

151.
   a. Name the pest
   = mealy bug

b. State one damage caused by the pest in flowers
= sucks plants juice
c. Give one way how the pest is controlled
= use health planting materials

152.
a. Mention three diseases that attack flowers
i. Grey mould
ii. Beech bark disease
iii. *Giant polypore fungus.*
b. What causes each of the diseases of flowers mentioned in 151a above?
= All of them are caused by fungus.
c. How can these diseases be controlled?
= spraying the plants with fungicides

153. Give any four ways of preserving flowers.
i. Air drying
ii. Pressing
iii. Dipping them in the mixture of water and glycerine
iv. *Drying in silica gel*.

2.5. Forestry and agroforestry

154. What is forest?
= it is a large area of land covered by trees

155. Give two type of forests
i. Natural forest
ii. Planted forest

156. Give any two characteristics of planted forest
i. Tree are called for
ii. Tree are properly spaced and they form a pattern
iii. Usually tree of one type are grown

157. Give two types of trees
i. Indigenous tree
ii. Exotic tree

158. List any two indigenous trees in Malawi
i. Mbawa
ii. Nsangu
iii. Ntondo
iv. Muwanga

159. Give any two importance of trees.
i. Reduce soil erosion
ii. Trees may act as a wind break
iii. They also improve soil fertility
iv. Thy conserve water

160. Give any two characteristics of indigenous
i. They are head and tough
ii. They withstand drought
iii. Grow slowly and takes a long time to mature
iv. Resist pests and diseases

161. Give any two importance of forest.
i. They provide trees for building animal houses
ii. They are a home for wild animals

162. List down any two woodlot management activities.
i. Mulching
ii. Watering
iii. Weeding
iv. Fertilizer application
v. Pruning
vi. Pests and disease control
vii. Making a firebreak (any two)

163.
a. What is a firebreak?
=It is a cleared path around a woodlot.
b. Give the importance of a firebreak.
=It protects trees from bush fires.

164. Name any two pests of trees.
i. Termites
ii. Livestock

165. How can you control the following pests of trees?
a. Termites
=Apply marshal suscon at the base of trees.
b. Livestock
=Fencing the woodlot

166. What is agroforestry?
=It is the growing of arable crops together with selected trees.

167. Give any two tree species suitable for agroforestry.
i. Leucaena
ii. Nsangu

168. Give any two characteristics of tree species suitable for agroforestry.
i. Should not shade the crops

ii. *The leaves should have high nutritive value.*
iii. *Should accommodate other crops.*
iv. *Should have ability to regenerate(any two)*

169. Give the three types of agroforestry.
i. *Silvo-arable*
ii. *Silvopasture*
iii. *Forest farming*

170. Define silvo pasture.
=Mixing trees with pasture/grass for grazing livestock.

171. A farmer grows trees together with arable crops. What type of agroforestry is this?
=Silvoarable

172. List down any three systems of agroforestry.
i. *Folder banks*
ii. *Alley cropping*
iii. *Dispersed tree planning*.

UNIT 3: ANIMAL PRODUCTION

173. What are animal husbandry practices?
= These are all activities involved in keeping or raising of farm animals

174. State four animal husbandry practices for improving animal production
i. *Proper housing*
ii. *Proper feeding*
iii. *Proper breeding*
iv. *Parasite and disease control*

175. State any four importance of farm animals
i. *Source of income*
ii. *Source of raw materials*
iii. *Source of animal power*
iv. *Source of food*

176. Give any four animal houses
i. *Barbed wire khola*
ii. *Deep litter house*
iii. *Pole-and-thatch house*
iv. *Battery cage*

Figure 2.0 shows an animal house. Use it to answer question 176.

Figure 2.0

177.
a. Name the type of house shown.
= *Traditional raised chicken house*
b. What is the main advantage of this type of house?
= It is cheap to construct

178. State any two importance of proper housing in animal production
i. *Animals are well protected from harsh weather conditions*
ii. *Animals are well protected from predators, parasites and diseases.*

Figure 2.1 shows an animal husbandry practice. Use it to answer question 178.

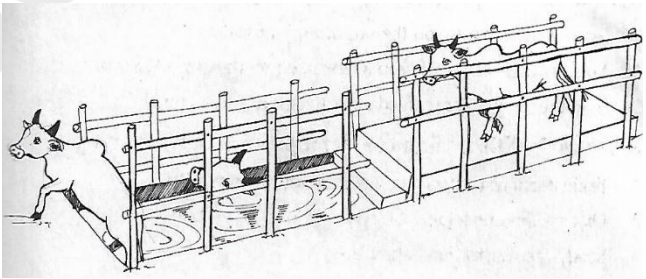


Figure 2.1

179.
a. Name the activity shown above
= Dipping animals
b. Give the importance of this activity
= It controls the external parasites of animals

3.1. Poultry farming

180. What is poultry farming?
= It is the keeping of domesticated/tamed birds on the farm

181. What are the two types of chickens based on function?

i. *Layers (lighter)*
ii. *Broilers (heavy)*

182. Explain the difference between layers and broilers
= Layers are kept for eggs while broilers are kept solely for meat.

183. Give any three breeds of layers chickens
i. *Hyline*
ii. *White Leghorn*
iii. *Shavers*

184. Mention any three breeds of chicken for improved meat production
i. *Stabro*
ii. *Indian River*
iii. *Ross*

185. Mention three systems of raising chickens
i. *Free-range system/traditional system*
ii. *Intensive system*
iii. *Semi-intensive system*

186. A system where chickens are left free all day looking for their own food and water is called _____
= Free-range system

187. Give three advantages of free-range system of raising chickens
i. *Cheap to feed since the birds look for their own food*
ii. *The birds are able to get sunshine which help in manufacturing of vitamin D*
iii. *It is cheap to house, since the house does not need expensive materials*

188. Give two disadvantages of free-range system.
i. *Chicken are not well protected from predators, parasites, diseases and bad weather.*
ii. *It is difficult to collect eggs.*
iii. *Culling is difficult.*
iv. *Difficult to control breeding(any two)*

Figure 2.2 shows a system of raising chickens. Use it to answer question 188

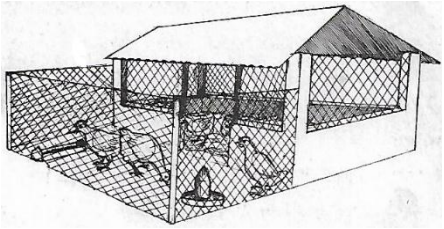


Figure 2.2

189.
1. Name the system
=Semi- intensive
2. Give any two disadvantages of this system.
i. *It is easier to collect eggs.*
ii. *Easy to control diseases.*
iii. *Chickens are fed on local feeds*
iv. *It is easy to collect manure(any two)*

190. Describe two characteristics of an intensive system of raising chickens.
i. *It is a system whereby chickens are confined in the khola all the time.*
ii. *The birds are fed on commercial feed.*

191. Give two types of chicken house for intensive system.
i. *Deep litter*
ii. *Battery cage*

192. Give any three advantages of deep litter chicken house.
i. *Many birds can be kept in a small area.*
ii. *Higher egg and meal production.*
iii. *Chickens are well protected from predators.*

193. Give any two limitations of deep litter chicken house.
i. *There is a problem of cannibalism and egg-eating.*
ii. *It is difficult to identify non-laying chickens.*

194. Give two reasons why it is good to use battery cage house when raising layers.
i. *It is easy to collect eggs*
ii. *It is easy to identify non-laying chickens*

195. Which feed must be given to layers at the following ages

a. Day old to 8 weeks
= Chick starter mash
b. 9 to 16 weeks
= Growers mash/pellet
c. 17 weeks onwards
= Layers mash/pellet

196. Why should locally fed layers be provided with green vegetables?
= To provide them with vitamins for dark yellow York.

197. A farmer observed that her layers were laying eggs with soft shells.
a. What nutrient is lacking in the chicken?
= Calcium
b. How can this deficiency be corrected?
= Provide the birds with burnt or crushed bones or lime to provide calcium.

198. What type of feeds should be given to broilers at the following ages?
a. A day old to 4 weeks
= Broiler starter marsh
b. 4 to 8 weeks
= Broiler finisher marsh

Figure 2.3 shows two chicken house equipment. Use it to answer question 198.

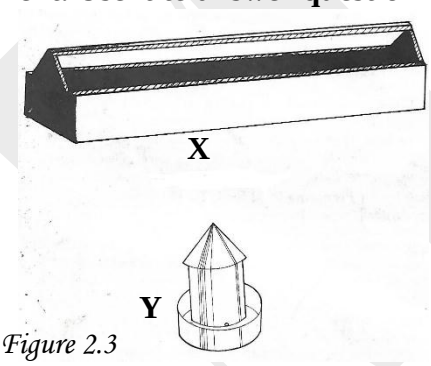


Figure 2.3

199.
a. Name the equipment X and Y
Z= Feeding trough/feeder
Y= Water trough
b. What is the use of each equipment?
X= For putting feeds for the chickens
Y= For putting water for the chickens to drink

200. Give any four characteristics of a good hen for breeding
i. Bright eyes
ii. Large smooth comb
iii. Strong legs
iv. A wide moist vent

201. Give any two ways of how a farmer can improve egg and meat production in local chickens
i. Mating the local hens with Black Australop (Mikolongwe) cocks
ii. Selective breeding

202. What causes each of the following diseases of chickens
a. Fowl cholera = Bacteria
b. Coughs and sneezing =Virus

203. How can fowl cholera be prevented?
= Vaccination

204. Some birds in a certain khola have spots/sores and patches on the face.
a. Name the disease that has attacked the birds
= Fowl pox
b. What causes the disease
= Virus
c. How is the disease prevented?
i. Vaccination
ii. Isolate infected birds
iii. Apply iodine on the sores

205.
a. What causes New Castle disease?
= Virus
b. Give any four signs of Newcastle disease in chickens
i. Loss of balance
ii. Head shaking
iii. Twisting of the neck
iv. Paralysis
c. How is Newcastle controlled?
i. Vaccination
ii. Killing and burn infected birds

206.
a. What causes coccidiosis in chickens?
= Protozoa
b. Give two signs of coccidiosis
i. Loss of balance
ii. Ruffled/rough feathers
c. List down any three ways of controlling coccidiosis
i. Add suitable drugs to feeds or water
ii. Disinfection

iii. *Cleanliness in the chicken house*

Figure 2.4 shows infected chickens. Use it to answer question 206.

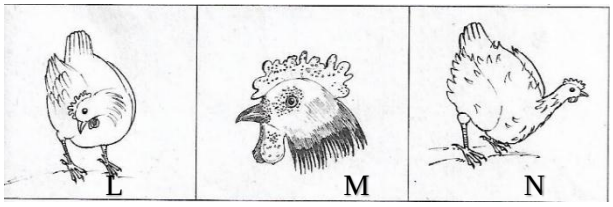


Figure 2.4

207.
a. State the signs shown
L= Twisting of the neck
M= Sores on the comb and face
N= Ruffle feathers and loss of balance
b. Name the disease that has attacked each chicken
L= Newcastle
M= Fowl pox
N= Coccidiosis

208. List down any three external parasites of chicken
i. *Fleas*
ii. *Mites*
iii. *Lice*

209. Give any two damages caused by the external parasites of chickens
i. *Suck blood*
ii. *Cause skin irritation*
iii. *Breaks the skin, which allows bacteria to enter the body of the chickens*

Figure 2.5 shows two external parasites of chickens. Use it to answer question 209.

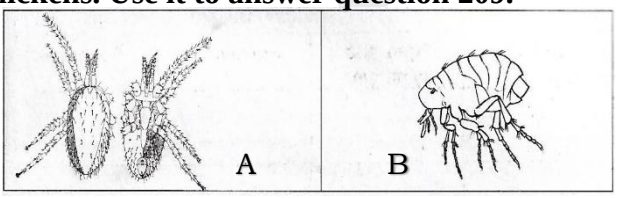


Figure 2.5

210.
a. Name the parasites A and B
A= Mite
B= Flea
b. How is each of the parasites controlled?
A=
i. *Cleanliness in the house*
ii. *Wash legs with paraffin or Gamatox solution*
iii. Apply petroleum jelly/grease on the legs
B=
i. *Cleanliness in the house*
ii. *Dust pesticides into feathers*

Figure 2.6 shows two internal parasites of chickens. Use it to answer question 210.

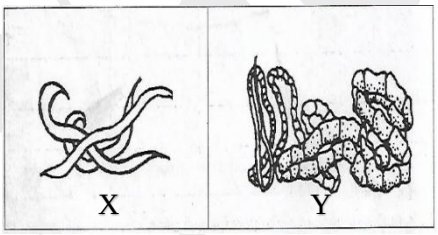


Figure 2.6

211.
a. Name the parasites shown
X= Tapeworm
Y= Roundworm
b. Give any two damages caused by the parasites
i. *Suck digested food*
ii. *Birds lose weight*

212. Give two ways of controlling roundworms
i. *Cleanliness in the chicken house*
ii. *Deworming*

3.2: Rabbit Production (Rabbitry)

213. What is rabbitry?
= It is the keeping of rabbits

214. State any three importance of rabbits.
i. *They provide meat for the growing population*
ii. *They provide manure*
iii. *They provide raw materials*

215. State any four advantages of raising rabbits over other animals

i. *They produce more young ones per parturition/birth than other animals do*
ii. *They are easy to feed, since they can feed on chicken wastes and other vegetables*
iii. *They grow faster than other animals*
iv. *They are easy to house, as they require small space.*

216. List down any four breeds of rabbits kept in Malawi
i. *Chinchira*
ii. *New Zealand White*
iii. *Flemish Giant*
iv. *Califonia Black*

217.
a. Which two breeds of rabbits are recommended for breeding in Malawi?
i. *New Zealand White*
ii. *Califonia Black*
b. Give two reasons why the breeds mentioned in question 216(a) are recommended
i. *They are well adapted to different conditions*
ii. *They produce more young ones per birth*

218. List down three ways of housing rabbits
i. *Pole-and-thatch khola*
ii. *Deep litter house*
iii. *Hutches/cages*

Figure 2.7 shows a housing structure for rabbits. Use it to answer question 218

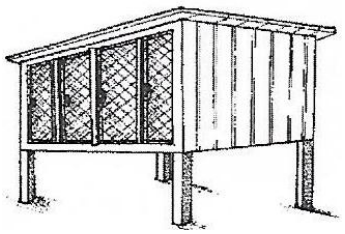


Figure 2.7

219.
a. Name the rabbit house shown
= Hutch/cage
b. Why should a hutch for a buck (male rabbit) be larger than a doe's (male rabbit)?
= To accommodate both the buck and the doe (female rabbit) during mating.

220. Rabbits in a certain khola show the following signs: lack of appetite, severe diarrhea and dullness.
a. Which disease has attacked the rabbits?
= coccidiosis
b. What causes the diseases?
= protozoa
c. Give two ways of preventing the diseases
i. *Keep the house clean and dry all the time*
ii. *Put coccidiostats in feed or water*

221. Give ways of controlling the following rabbits diseases.
a. Colds (snuffles disease)
i. *Isolate sick rabbits*
ii. *Avoid overcrowding*
iii. *General hygiene*
iv. *Good ventilation*
b. Rabbits pox
i. *Vaccinate young rabbits*
ii. *Treat the sores with appropriate drugs*

222. List down any three external parasites of rabbits.
i. *Fleas*
ii. *Mites*
iii. *Lice*

223. Give any three effects/ damage caused by the external parasite of rabbits
i. *Skin irritation*
ii. *Skin blood*
iii. *Rabbits lose hair*

224. Name any three internal parasites of rabbits that suck digested food
i. *Tape worm*
ii. *Round worm*

225. What damage does coccidian cause to rabbits
= damages the liver tissues ant intestines.

226. State two importance of hygiene in animal house.

i. *It helps to prevent animals from disease*
ii. *Prevents animals from parasites*.

3.3: goat farming

227. List down the three breeds of goals based on function
i. Dairy goals
ii. Mohair goals
iii. Meat goals

228. List down any three breeds of goals kept for the following reasons
a. Milk
i. Toggenburg
ii. Anglo-nubian
iii. Saanen
b. Meat
i. Somali goat
ii. Malawi goat
iii. Boer goat
c. Mohair
i. Angola goat
ii. Gaddi goat
iii. Kamori goat

229. State any two characteristics of goats suitable for breeding.
i. High meat production
ii. High milk production
iii. High mohair production
iv. Adapted to local conditions

230. Mention any two types of goats houses.
i. Raised pole-and –thatch
ii. Unraised pole-and –thatch

231. *State one disadvantage of unraised* pole-and-thatch goat house.
= It becomes muddy during rainy season

232. Give any two qualities of a good goat house.
i. It should be strong
ii. It should be easy to clean
iii. It should have enough space

233. What are a two feeding habits of goats.
i. Grazing
ii. Browsing

234. What is browsing?
= this is the feeding of animals on shrubs and tender leaves of trees.

235. Define grazing?
= feeding of animals on pastureland/grassland.

Figure 2.8 shows a goat feeding. Use it to answer question 235.

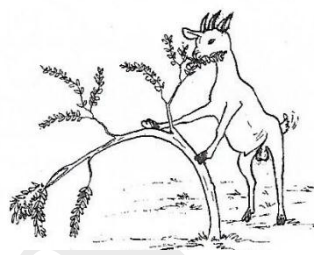


Figure 2.8

236. Name the feeding habit shown.
= browsing

237. Give any three diseases of goats.
i. Anthrax
ii. Foot-and-mouth disease
iii. *Pneumonia*

238.
a. What causes pneumonia diseases in goats?
= bacteria or virus
b. Give two signs and symptoms of pneumonia.
i. Fever
ii. Coughing
c. Give two ways of controlling pneumonia
i. Keep the house warm and dry
ii. The house should be well ventilated

239. Some goats in a herd show the following signs: high fever, salivation, lameness and severe loss of body weight.
a. Name the disease that has attacked the animal.
= foot-and-mouth disease
b. Give three ways of controlling the disease
i. Treat with antibiotics
ii. Vaccinate the animals annually
iii. Bury the dead animals deep in the soil.

240.
a. give any two internal parasites of goats mentioned in question 238(a)
1. roundworm

i. *keep the house clean*
ii. *use piperazine or phenothiazine (deworming)*

2. liver fluke
   i. *kill the snails with copper sulphate*
   ii. *Avoid grazing in dambos during rainy season.*

241. Give two damages caused by the following parasites in goats.
   a. Tapeworms
      i. *Stunted growth*
      ii. *Suck digested food*
      iii. *Cause diarrhea*
   b. Liver flukes
      i. *Suck blood*
      ii. *Cause anaemia*
      iii. *Block the bile duct*

242. What term refers to the tendency of holding animals in isolation for a certain period to ensure they are free from parasites and disease?
   = quarantine

243. What is drenching?
   = drenching means giving drugs to animals through the mouth

3.4: fish farming (aquaculture)

244. State any two importance of fish farming in Malawi
   i. *Fish is a source of food, as it provides vitamins, minerals and proteins.*
   ii. *Fish farming makes good use of land which is otherwise not good for cultivation*
   iii. *Fish farming supplement fish in the lakes and rivers thereby reducing overfishing*

245. List down any four fish species suitable for fish farming in Malawi.
   i. Makumba
   ii. Makakana
   iii. Mphende
   iv. Chambo

246. State any two characteristics of fish species suitable for fish farming
   i. *Should grow fast to reach a harvestable size in a short period*
   ii. *Should feed on locally available feeds*
   iii. *Should survive under pond condition (confinement)*
   iv. *Should be easy to handle when harvesting*
   v. *Should be resistant to parasites*

247. *Mention any two factors to* consider when constructing a fish pond.
   i. *Water supply*
   ii. *Slop of the land*
   iii. *Type of soil*
   iv. *Nearness to home, school or market*

248. The slope of the land for constructing fish pond should be gentle. Give a reason for this statement.
   = for natural filling and draining the pond

249. Describe any two principles to consider when planning a fish pond.
   i. *The pond should be medium*
   ii. *The pond should not be too deep or too shallow to allow sunlight to reach the bottom of the pond, for the growth of algae and planktons*
   iii. *The pond should have inlet and outlet pipes in addition to an overflow pipe*
   iv. *The pond should be sited considering the direction of prevailing wind*

250. Give the function of each of the following pipes of a fish pond
   a. Inlet pipe
      = for filling water in the pond
   b. Outlet pipe
      = for draining the pond
   c. Overflow pipe
      = controlling water levels in the pond

251. How deep should the deepest part of the pond be?
   =1.5 metre

Figure 2.9 show a design of a fish pond. Use it answer question 251.

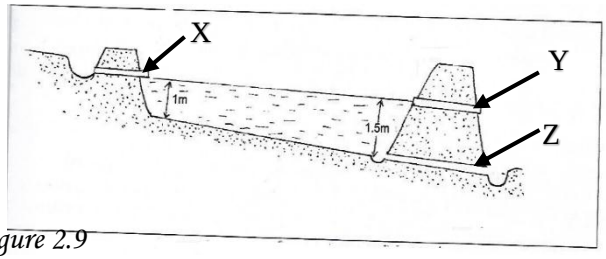


Figure 2.9

252.
a. Name the parts labelled **x, y** and **z**
X= *Inlet Pipe*
Y= *Outlet pipe*
Z= *overflow pipe*
b. What is wrong with the design?
= the deepest part of the pond is too deep (2m instead of 1.5)

253. Why do inlet and outlet pipes covered with a screen at their ends?
i. To prevent entry of foreign fish which may bring parasites into the pond
ii. To prevent fish from getting out of the pond

254. Why do farmers apply lime at the bottom of the pond after pond construction or restocking?
= To control parasites

255. What does the term **"stocking"** means in fish farming?
= Stocking means putting live fish in a pond

256. Give any three factors to consider when stocking the fish pond
i. Temperature of water in the pond
ii. Salinity of water in the pond
iii. Size of the pond

257. What is the difference between fries and fingerlings?
= Fries are newly hatched fish while fingerlings are young fish about 5-10 cm

258. Mention the two natural feeds of fish
i. Algae
ii. Planktons

259. Give any four supplementary feeds of fish
i. Maize bran
ii. Rice bran
iii. Chopped vegetables
iv. Molasses

260. Why should fish farmers apply some manure or fertilizer to the fish pond?
= For the growth of algae and planktons which are feeds for the fish

261. Why should fish be fed at the same time and place every day?
= So that they get used to where and when to find the food

262. State the recommended feeding rate of fish
= 5% of their body weight

263. Calculate the amount of feed that must be given to fish in the pond at a time, if the mass of all the fish is 60kg

<u>Solution</u>
Amount = 5% of 60kg
= (5×60kg) ÷ 100
= 300kg ÷ 100
= 3kg

264. Describe any three signs of overfeeding fish in the pond
i. Large amount of uneaten food floating
ii. Foul-looking black or green water
iii. Fish come to the surface gasping for air

265. State two effects of overfeeding the fish
i. Roundworms
ii. Tapeworms

Figure 3.0 shows a parasite of fish. Use it to answer question 265.

Figure 3.0

266.
a. Name the parasite
= Liver fluke
b. Where (on the fish) is the parasite found?
= In the gills, under the scales and on the fins

267. State the two effects of parasites of fish in farming

i. *Reduce the growth rate of fish by absorbing digested food*
ii. *Result in losses in fish farming enterprise*

268. Describe any three steps to be taken in controlling the parasites of fish if parasites have been identified
i. *Remove the fish from the pond and drain the pond*
ii. *Apply lime to the pond to kill the parasites*
iii. *Expose the pond to the sun to kill resistant parasites.*

269. What is a predator?
= It is any animal that kills and eats another animal

270. List any four predators of fish
i. *King fisher*
ii. *Monitor lizard*
iii. *Otter*
iv. *Grey heron*

Figure 3.1 shows predators of fish. Use it to answer question 270.

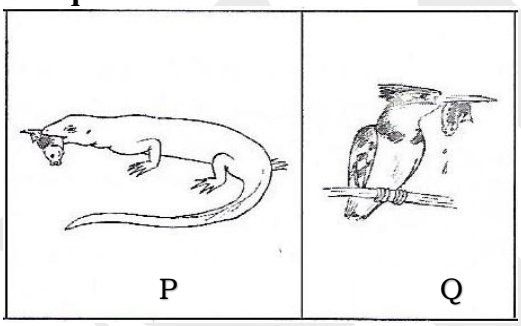


Figure 3.1

271.
a. Name the predators marked P and Q
P= Monitor
Q= Grey heron
b. Give any two ways of controlling predator **P**
i. *Fencing the pond*
ii. *Setting traps*

272. Give any two ways of controlling birds that destroy fish in the pond
i. *Destroying their nests*
ii. *Scaring them away*

273. When should a fish pond be maintained?
= Before stocking and after harvesting

274. Give any four ways of maintaining a fish pond
i. *Fill the crack if any*
ii. *Repair damaged drains*
iii. *Repair the fence where necessary*
iv. *Plant new grass on the pond walls*

275. What is the importance of grass around the fish pond and pond walls?
= It controls soil erosion

276. Give any two ways of keeping the grass short around a fish pond
i. *Slashing*
ii. *Keeping ducks*

277. State two importance of keeping ducks around the fish pond apart from keeping grass short
iii. *Their droppings provide manure for the of algae and planktons*
iv. *The ducks reduce parasites by eating up snails, which are hosts of liver flukes*

278. Give three ways of harvesting fish
i. *Using seine nets*
ii. *Using hook and line*
iii. *Drain the pond and pick the fish with hands*

279. Mention any four ways of preserving fish
i. *Sun-drying*
ii. *Smoking*
iii. *Salting*
iv. *Freezing*

280. Why is it important to cut big fish open and remove intestines before sun-drying?
i. *To preventing them from rotting*
ii. *For easy drying*

3.5: Cattle Farming

281. List down any four raw materials from cattle
i. *Hides*
ii. *Milk*
iii. *Blood*
iv. *Hoofs and horns*

282. Give the products made from the following raw materials
a. Milk

= *Yoghurt, cheese, butter*

b. Hoofs and horns

= *Glue*

283. Give the two types of cattle based on function

i. *Dairy cattle*

ii. *Beef cattle*

284. Give any four characteristics of cattle suitable for beef production

i. *Grow fast and mature early*

ii. *Rectangular shaped-body*

iii. *Have short legs which are well spaced apart*

iv. *Have well-rounded bodies*

285. List down any four breeds of beef cattle

i. *Charolais*

ii. *Brahman*

iii. *Malawi zebu*

iv. *Africander*

286. Give any four characteristics of dairy cattle

i. *Triangular or wedge-shaped body*

ii. *Large udder*

iii. *Thin large body*

iv. *Large belly*

287. Give any four breeds of dairy cattle

i. *Fresian*

ii. *Guernsey*

iii. *Jersey*

iv. *Jamaica Hope*

288. *Give any three good* characteristics of the Malawi Zebu

i. *Ability to walk long distances*

ii. *Withstand hot weather conditions*

iii. *High resistant to diseases*

289. Give any two poor qualities of the Malawi Zebu

i. *Low meat and milk production*

ii. *Grow slowly*

290. Give any four ways of improving cattle production

i. *Cross breeding*

ii. *Selective breeding*

iii. *Introduction*

iv. *Out breeding*

291. What is cross breeding?

= *It is the mating of animals of different breeds*

292. How can you improve milk production of Malawi Zebu?

= *Cross-breed it with Fresian*

293. The mating of animals that are not closely related but of the same breed is called _____

= *Out-breeding*

294. What is the principle used in cattle production improvement?

= *Animals used for breeding should have desirable characteristics*

295. What does introduction means in cattle production improvement?

= *It means bringing good breeds of cattle from other countries for breeding purposes*

296. Give the two classes of cattle feeds

i. *Roughages*

ii. *Concentrates*

297. Describe roughages

= *These are feeds with high fibre content and low protein content e.g. grass, banana leaves e. t. c.*

298. State any three characteristics of concentrates

i. *High protein content*

ii. *Less fibre content*

iii. *Easy to digest*

UNIT 4: FARM BUSINESS I

299. What is a farm business?

= It is any agricultural activity aimed at making profits

300. List down any four agricultural activities that can be taken as a business

i. Growing vegetables for sale

ii. Keeping bees for honey for sale

iii. Keeping chickens for eggs for sale

iv. Growing tobacco for sale

301. Give any four farm business activities

i. *Decision making*

ii. *Financing*

iii. *Record keeping*

iv. *Marketing*

302. What are the problems of farm business?
= These are questions a farmer asks him or herself before engaging in a farm business.

303. List down any six problems of farm business
   i. What to produce
   ii. How to produce
   iii. How much to produce
   iv. Where to produce
   v. When to produce
   vi. When to sell

304. What does each of the following problems of farm business mean?
   a. What to produce
      = type of enterprise to engage in crops or animals
   b. How much to produce
      = method of production
   c. Where to produce
      = site/place/land for produce
   d. How much to produce
      = quantity/amount of commodity to be produced

305. How can the following problems of farm business be solved?
   a. What to produce
      i. produce a commodity that has high market prince
      ii. Produce a commodity that has high demand
      iii. Produce a commodity that you can adequately manage to produce with high quality
   b. How to produce
      = use a method that is cheap yet profitable

306. List down an y four principles of farm business
   i. Demand
   ii. Supply
   iii. Comparative advantage
   iv. Substitution of inputs

307. What is demand?
= demand is the amount of commodity required by buyers

308. Farmers should increase production of commodities that do well in their areas. This principle of farm business is called _____
= comparative advantage

309. Supply is _____
= the quantity of commodity available for sale

310. Explain how demand and supply affect the price of commodity
   i. When demand is greater than supply the price of commodity becomes high
   ii. When demand is lower than supply the price commodity becomes low

311. At Chibungo market, buyers need 500kg of tomatoes. However, only 300kg is available on the market
   a. Identify demand and supply
      i. Demand =500kg of tomatoes
      ii. Supply =300kg of tomatoes
   b. What will happen to the price of tomatoes at Chibungo?
      = the price will be high

Figure 3.2. Shows a graph of demand and supply of groundnuts at Nsundwe market. Use it to answer question 311

DEMAND VS SUPPLY OF GROUNDNUTS AT NSUNDWE MARKET

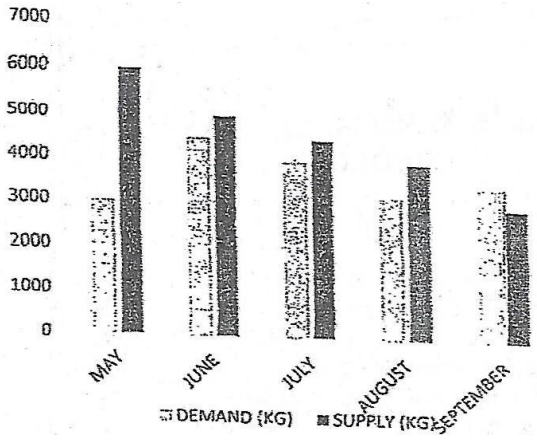


Figure 3.2

312.
   a. In which month will groundnuts be cheapest
   = May
   b. In which month can the farmers sell their groundnuts at maximum profit?
   = September

313. Why do farmers in **Dedza** grow more lrish potatoes
*= because there is a favourable climate for lrish potatoes in **dedza***

314. The price of commercial fertilizer is very high in Malawi
   a. What must farmers do in order to continue producing enough maize for the growing population?
      = start using manure
   b. What term is given to this principle of farm business used
      = substitution of inputs

315. Which principle(s) can be used to solve the following problems of farm business?
   a. What to produce
      i. Comparative advantage
      ii. Demand and supply
   b. How much to produce
      = Demand and supply
   c. how to produce
      =Substitution of inputs
   d. where to produce
      =Demand and supply

UNIT 5 FARM MACHINERY AND TECHNOLOGIES

5.1: Farm Tools

316. List down any four common farm tools.
   i. Hoe
   ii. Sickle
   iii. Hand trowel
   iv. Rake
   v. Watering can
   vi. Hand fork(any four)

317. Give the use of each of the following farm tools.
   a. Hoe
      i. Clearing the land
      ii. Making ridges
      iii. Digging holes
   b. Hand trowel
      = transplanting seedlings
   c. Hand fork
      i. Weeding on vegetable beds
      ii. Tilling on vegetable beds

318. Name the farm tool used for chopping wood and cutting down trees.
   =An axe.

Figure 3.3 shows farm tools. Use it to answer question 318.

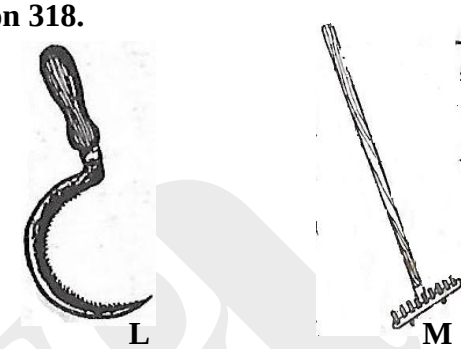


Figure 3.3

319.
   a. . Name the farm tools L and M.
      L=sickle.
      M= rake
   b. .Give the use of each of the farm tools
      = L
      i. Harvesting rice
      ii. Cutting thatching grass and animal feeds
      M =
      i. Levering the seed beds
      ii. Mixing mature and soil on the seed beds

320. Name the two main parts of a farm tool.
   i. Metal blade
   ii. Wooden handle

321. State any three ways of maintaining farm tools.
   i. Sharpening blunt metal blades
   ii. Painting the blades to prevent rusts
   iii. Replace broken handles

322. Give any two safe ways of using farm tools.
   i. Use each farm tool for its intended purpose
   ii. Ensure that form tools are in good working condition before use
   iii. There should be using the farm tools to avoid accidents
   iv. Handle the farm tools with care

323. Why is it important to maintain farm tools?

i. For the farm tools to last long

ii. For them to work efficiently (to ensure that they are in good a working condition)

Figure 3.4 shows a farm tool. Use it to answer question 323.

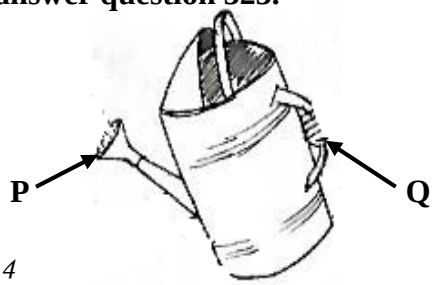


Figure 3.4

324.

a. Name the farm tool

= A watering can

b. Name the parts labeled P and Q

P= Rose

Q= Handle

c. Give two uses of the farm tool

i. Watering crops

ii. Applying pesticides to crops

iii.

5.2: Farm Technologies

325. Give any five indigenous farm machineries/technologies

i. Planting frame

ii. Querns (mphero)

iii. Leaf bag (chikwatu)

iv. Gourd (chipanda)

v. Ash

Figure 3.5 shows some of the indigenous technologies. Use it to answer question 325.

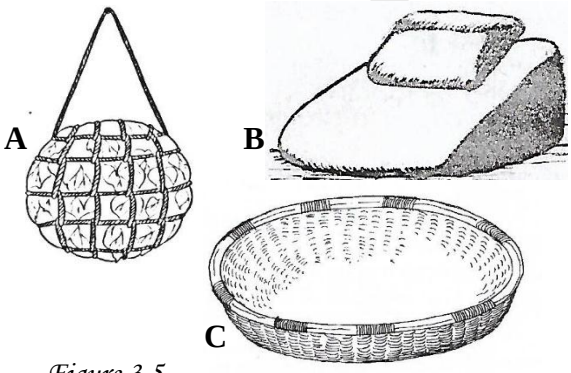


Figure 3.5

326.

a. Name the farm technologies marked A, B and C

A= Leaf bag

B= Querns

C= Winnower

b. Give the use of each farm technology

A= for storing leafy vegetables

B= for grinding grains

C= for winnowing

c. What special names are given to the stones X and Y

X= daughter stone

Y= mother stone

327. Give any three uses of ash in agriculture

i. Used as pesticide for storing sweet potatoes

ii. Used for controlling beetles in pumpkins

iii. Used for controlling red ants (nthumbu)

Figure 3.6 shows an indigenous farm technology. Use it to answer question 327.

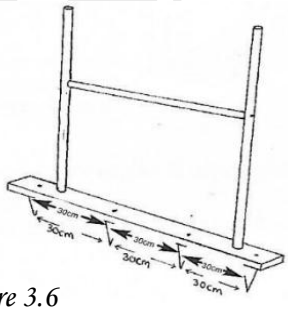


Figure 3.6

328.

a. Name the technology?

= planting flame

b. State the use of the technology

= for accurate measurement and marking of planting stations

329. Mention any four modem farm technologies.

i. Irrigation

ii. Composting toilets

iii. Permaculture

iv. *Herbicides*

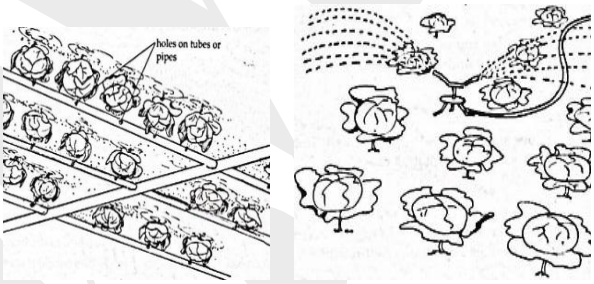
330. Give two types of composting toilets

i. sky-loo

ii. Arbor-loo

331. Give two disadvantages of arbor-loo toilet
   i. *It requires a lot of land*
   ii. *It is labour- intensive to dig pit latrines frequently*
332. Why is ash added in the sky-loo toilets after each use/
   = to prevent the faeces from producing bad smell
333. What is permaculture?
   = it is a technology that allows plants or animals to grow together and support each other
334. Give any three activities encouraged by permaculture.
   i. *Using natural enemies to control pests (do not use chemicals)*
   ii. *Use of organic fertilizers instead of (inorganic) chemical fertilizer*
   iii. *Use of mulching to control weeds*
335. What do you call a combination of different species that support each other on a plot?
   = A guild
336. A plot has chickens, onions, climbing beans and sweet potatoes. Explain any two ways in which these elements support each other.
   i. *Beans fix nitrogen in the soil the growth of the other plants*
   ii. *Chickens droppings will provide manure that improve soil fertility for the growth of the plants*
   iii. *Sweet potatoes will provide ground cover that controls soil erosion*
   iv. *Onions will scare away some harmful pests*
337. What is irrigation?
   = it is the supplying of water into the field (garden) to enable crops to grow
338. Give any three importance of irrigation
   i. *It avoids the risk of hunger*
   ii. *Enables the farmer to grow crops throughout the year*
   iii. *Provide raw materials to industries throughout the year*
339. Give any two types of irrigation
   i. *Basin irrigation*
   ii. *Sprinkler/overhead irrigation*
   iii. *Flooding irrigation*
340. Which type of irrigation is suitable for the following
   a. Rice growing
      = flooding irrigation
   b. Fruit trees
      = basin irrigation
   c. Vegetable growing
      = sprinkler irrigation
341. Describe how sprinkler irrigation is used?
   = water is applied to the levers of the crop in form of sprays or showers

Figure 3.7 shows two method of irrigation. Use it to answer question 341.



A B

Figure 3.7

342.
   a. . Name the types of irrigation marked **A** and **B**.
      A= drip irrigation
      B= sprinkler irrigation
   b. Which of the two methods is affected by wind and evaporation
      =B (sprinkler irrigation)

UNIT 6: AGRICULTURE AND THE ENVERONMENT

343. List down any two environmental elements of agriculture.
   i. *Water*
   ii. *Wind*
   iii. *Sunlight*
   iv. *Soil*
344. Give two uses of water in agriculture.
   i. *For dissolving pesticides*
   ii. *For watering crops*

iii. *For cleaning farm equipment*
iv. *Helps in the formation of plants food*

345. Give any two harmful effects of water
i. *Floods*
ii. *Too much water leads to leaching of soil nutrients.*

346. Give any two beneficial actions of wind.
i. *It brings about rainfall*
ii. *It helps in pollination*

347. State any three harmful effects of wind
i. *It causes lodging of plants*
ii. *It spreads pests and disease*
iii. *It destroys farm building*

348. Why is the sun important in agriculture/ (give two reasons)
i. *It help in food making in plants*
ii. *For drying of crop yields e.g. maize groundnuts e t c.*
iii. *It help in egg-laying*
iv. *For manufacturing of vitamin D in animals*

349. Give one negative effect of the sun.
= too much suns heat leads to drought

6.1: The soil

Figure 3.8 shows soil composition. Use it to answer question 349.

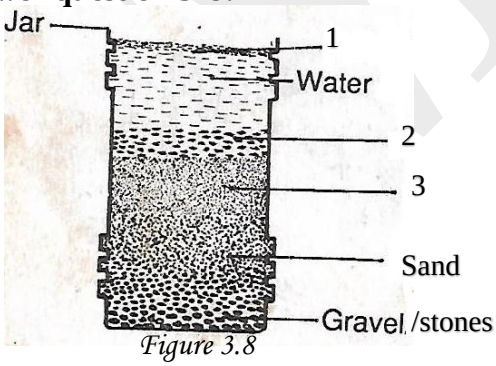


Figure 3.8

350.
a. Name the parts marked 1,2 and 3
1. *Organic matter*
2. *Clay*
3. *Silt*
b. What is the importance of component 1?
= It improves soil structure

351. What is soil?
= It is the top loose material covering the earth's surface

352. Give any four components of soil
i. *Soil air*
ii. *Soil water*
iii. *Animals (microbes)*
iv. *Organic matter*

Figure 3.9 shows an experimental set up on soil composition. Use it to answer question 352.

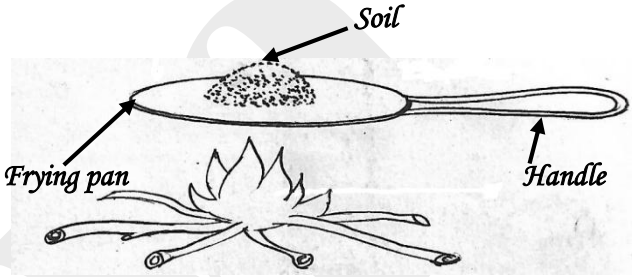


Figure 3.9

353.
a. This experiment is done to show if soil contains _____
= Water
b. Why is the soil being heated?
= To evaporate the water
c. What will happen to the mass of the soil after heating it?
= The mass will decrease

354. *When a lamp of* soil is immersed in water, bubbles appear. This shows that the soil contains _____
= Air

355. Materials that float on top of water when soil sample is put in water is called___
= Organic matter

356. Give the two classes of soil nutrients
i. *Major nutrients*
ii. *Minor nutrients (trace elements*)

357. What are major soil nutrients?
= These are nutrients that are required by plants in large amounts

358. Give any four major soil nutrients
i. *Nitrogen*
ii. *Potassium*
iii. *Magnesium*
iv. *Phosphorus*
v. *Calcium*

359. Define **"trace elements"**
= Theses are nutrients that are required by plants in small quantities

360. Give any four minor soil nutrients
i. Boron
ii. Molybdenum
iii. Iron
iv. Manganese

361. Give the functions of the following major soil nutrients
a. Nitrogen
i. For vegetative growth of plants
ii. For formation of dark green leaves
b. Potassium
i. For strong stems
ii. For quality fruits

362. Which major soil nutrient is for strong root development?
= Phosphorus

363. What are deficiency signs?
= These are signs that appear in plants when a certain nutrients is lacking

364. Give any four deficiency signs for potassium
i. Weak stems
ii. Poor quality of fruits
iii. Immature fruits fall
iv. *Brown leaf margin*

365. Maize plants show purple leaves and have poor roots.
a. Name the nutrient that is lacking
= Phosphorus
b. How can these signs be corrected?
= Apply fertilizer that contains phosphorus e. g. 23:21:0+4s

366. Give any two deficiency signs for nitrogen
i. Stunted growth (thin and short plants)
ii. Yellowing of leaves

367. What is soil fertility?
= Is the capacity of soil supply adequate water, air and nutrients in proper balance.

368. Give any three characteristics of infertile soil.
i. It is poorly aerated
ii. Has low nutrient content
iii. Does not support plant growth

369. Give any five ways of improving soil fertility
i. Practicing mixed cropping
ii. Application of manure
iii. Practicing crop rotation
iv. Agroforestry
v. Fallowing

370. What is fallowing?
= this means leaving the land uncultivated for some time so that it regains fertility

371. What is crop rotation?
= It is the growing of different crops one after another on one plot, following a defined pattern

372. Give any two importance of crop rotation apart from improving soil fertility
i. Controls pests and diseases
ii. Allows plants to make full use of nutrients found in different layers of soil

373. Give any three principles to follow in crop rotation
i. Deep-rooted crops should be followed by shallow-rooted crops
ii. Crops that fix nitrogen (legumes) should be followed by crops that use nitrogen
iii. Crops of the same family should not follow each other

374. How does fallowing improve soil fertility?
= It allows the bush to grow which later decompose and add organic matter to the soil

375. State four importance of improving soil fertility
i. It improves soil aeration
ii. It improves water holding capacity of soil
iii. It increases nutrient content of soil
iv. It increases crop yield

376. Give two types of fertilizer
i. Organic fertilizer
ii. Inorganic fertilizer (chemical fertilizer)

377. Mention three examples of organic fertilizer
   i. *Compost manure*
   ii. *Farm-yard manure*
   iii. *Green manure*

378. State any three advantages of using organic fertilizer over chemical fertilizer
   i. *Soil aeration is improved*
   ii. *Soil structure is improved*
   iii. *Organic fertilizer is cheap*

379. Give any two limitations of organic fertilizer
   i. *Does not supply nutrients instantly*
   ii. *The preparation and application is labour- intensive*

380. Give two disadvantages of chemical fertilizer
   i. *It leads to water and soil pollution*
   ii. *Does not improve soil structure*

381. What is soil erosion
   = it is the loss of fertile top soil due to the action of wind, water and animals

382. Give any two human activities that lead to soil erosion
   i. *Cultivating on sleep slopes*
   ii. *Overgrazing and overstocking*
   iii. *Setting bush fires*
   iv. *Cultivating on river the banks*
   v. *Making ridges along the slopes*

383. Give any two ways of controlling soil erosion
   i. *Strip cropping*
   ii. *Afforestation*
   iii. *Avoid overgrazing and overstocking*
   iv. *Making terraces on steep slopes*

Figure 4.0 shows two structures for controlling soil erosion. Use it to answer question 383.

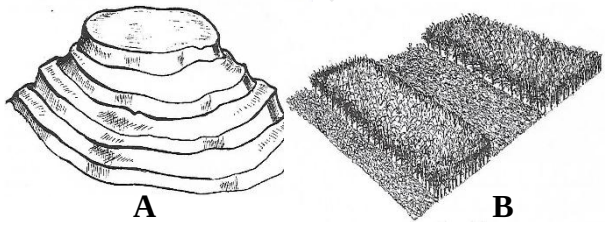


Figure 4.0

384.
   a. Name the structure marked A and B
      A= terraces.
      B= strip cropping
   b. How do these structure control soil erosion
      =reducing run-off

385. Define soil texture
   = this is the fineness or coarseness of soil
   OR
   = it is how fine or coarse the soil it.

386. List the three textural classes of soil
   i. *Sand soil*
   ii. *Clay soil*
   iii. *Loam soil*

387. Describe any three characteristic of loam soil
   i. *Has medium particle size*
   ii. *Has equal amount of sand and clay particles*
   iii. *It is well aerated*

388. Mention any two crops that do well in clay soil
   i. *Sugarcane*
   ii. *rice*

389. State any two differences between sand soil and clay soil
   i. *Sand soil is coarse/gritty while clay soil is fine*
   ii. *Sand large particles while clay has small particles*
   iii. *Sand has large air spaces while clay has small air spaces*
   iv. *Clay soil holds more water while sand soil does not*

390. What name is given to the vertical arrangement of different layers of soil
   = soil profile

Figure 4.1 shows soil profile. Use it to answer question 390.

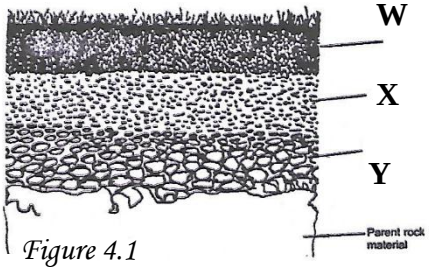


Figure 4.1

391.
   a. Name the soil layers W,X and Y
      W= top soil
      X= sub soil
      YH= weathered rock

b. Which layer is suitable for cultivation =*W*

c. What is the typical colour of soil layer X?
= reddish or yellowing

392. What term refers to the process by which soil is formed from rock
= weathering

393. Mention any two agents of weathering
i. Wind
ii. Water
iii. Plants
iv. *Animals*

394. Give any three factors that influence soil formation (weathering)
i. Temperature
ii. Age of the rock
iii. Chemicals the rock contains

395. Give any three types of weathering
i. Physical
ii. Chemical weathering
iii. Biological weathering

396. What is biological weathering
= it is weathering that is caused by plants or animals

397. Define soil structure
= it is the way soil particles are held together

398. Mention three types of soil structure
i. Loose structure
ii. Compact structure
iii. Crumb structure

Figure 4.2 shows different soil structure. Use it to answer question 398.

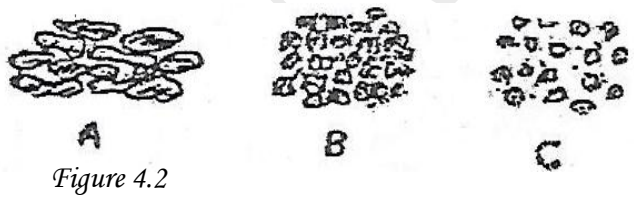


Figure 4.2

399.
a. name the soil structure A,B and C
A= compact structure
B= crumb structure
C= loose structure

b. Which soil structure has the least amount of organic matter
= C

400. State two importance of soil structure
i. It influences the movement of water and air in the soil (influences soil aeration and water-holding capacity of soil)
ii. It influences the amount of water, soil nutrients and air in the soil

6.2: water and the water cycle

401. What is a water cycle?
= it is the continuous movement of water from the earth surface to the atmosphere and back to the earth surface in different forms

402. Dive tree ways how water gets to the earth surface form the atmosphere
i. Rainfall
ii. Snowfall
iii. *Dew*

Figure 4.3 shows the water cycle. Use it to answer question 402.

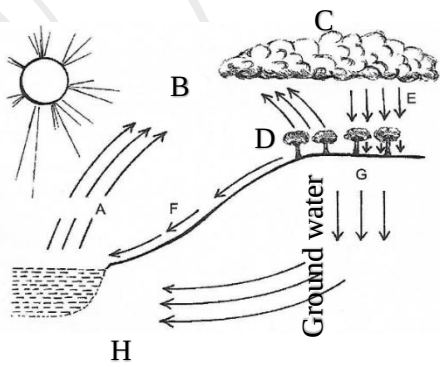


Figure 4.3

403.
a. Name the processes A to H.
A= Evaporation
B= Condensation
C= Cloud formation
D= Transpiration
E= Precipitation (rainfall)
F= Run-off
G= Infiltration
H= Percolation

b. What term is given to the combination of process A and D?
= Evapotranspiration

c. What is the disadvantage of process F
= It causes soil erosion

404. What is the importance of the sun in the water cycle?
= It gives energy for evapotranspiration

405. Give any three ways of conserving water
i. Plant tree in water catchment
ii. Water harvesting
iii. Construct dams

406. What is water pollution?
= It is the contamination of water by harmful substances that make it unsafe for use

407. Mention any three pollutants of water
i. Human wastes
ii. Industrial wastes
iii. Oils from tankers
iv. Agricultural chemicals e.g. pesticides and fertilizers

408. Give two ways of preventing water pollution
i. Avoid disposing human wastes in water sources
ii. Do not site a pit latrine near a water source

409. Give any two ways of making water safe for consumption
i. Adding water guard or chlorine
ii. Boiling

410. Give any two effects of water pollution on the farm
i. Death of livestock
ii. Sickness of the farmers which reduces labour force on the farm
iii.

Figure 4.4 shows a harmful human activity. Use it to answer question 410.

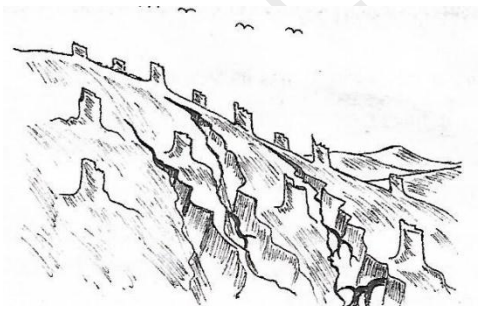


Figure 4.4

411.
a. Name this activity
= deforestation
b. Give any four effects of this activity to the environment
i. Desertification
ii. Insufficient rains
iii. Soil erosion
iv. *Siltation of rivers*

UNIT 7: FARM BUSINESS II

412. What is **"a risk"** in farm business?
= It is an unpredictable occurrence that negatively affects agricultural profit

413. List down any five risks of farm business
i. Weather changes
ii. Policy changes
iii. Price changes
iv. Fire
v. Pests and diseases

414. How can farmers cope up with risks of farm business? (give four ways)
i. Enterprise diversification
ii. Contract production
iii. Market research
iv. Insurance

415. What is contract production?
= This means finding agreeing with buyers on prices before producing a commodity

416. How can farmers prevent the following farm risks?
a. Price changes
i. Contract production
ii. Market research
b. Fire
= Insurance

417. What is a market?
= It is a place where people buy and sell goods

418. Give any two importance of a market in agriculture
i. It enables farmers to buy farm inputs e. g. fertilizer and seeds
ii. It enables farmers to sell their farm produce

419. Define marketing
= I t is the transfer of ownership of goods from producers (sellers) to consumers (buyers)

OR
= It is the process of selling the right goods to the customers at the right price, place and time

420. What are marketing functions?
= These are activities conducted by producers and intermediate buyers in order to meet customers' demand or to increase profit

421. Mention any six marketing functions
   i. Buying
   ii. Selling
   iii. Grading
   iv. Packaging
   v. Assembling
   vi. transportation

422. give any four steps involved in buying
   i. Determining the needed goods
   ii. Identifying where to buy the items
   iii. Choosing what you want
   iv. Bargaining

423. Which marketing function ensures the availability of the produce where it is needed?
= Transportation

424. Give one importance of grading
=It promotes quality of produce, hence increases profits.

425. Give any two factors use for grading.
   i. Colour
   ii. Size
   iii. Tenderness
   iv. Weight(any two)

426. Tomatoes easily go bad. Which marketing function can be used to solve this problem?
=Process it to tomato sauce.

427. Give one importance of processing.
=It adds value to agricultural produce.

428. Finding out the prices of different commodities in different markets is called_____
= Market Research

429. Give three importance of market research
   i. Helps a farmer to decide what to produce
   ii. Helps a farmer to decide where to sell his/her produce
   iii. Helps middlemen decide when to buy and sell farm produce

430. Mention any four problems of marketing farm produce
   i. Perishability of farm produce
   ii. Seasonality of farm produce
   iii. Bulkiness of farm produce
   iv. Transportation

431. How can farmers solve the following problems of marketing?
   a. Seasonality of farm produce
      i. Processing
      ii. Use of irrigation
   b. Bulkiness of farm produce
      i. Proper packaging
      ii. Processing
   c. Perishability of farm produce
      i. Processing
      ii. Use of fast mode of transport
      iii. Produce perishable commodity near markets
      iv. Proper storage
   d. Transportation
      i. Form cooperatives to hire vehicles easily and cheaply
      ii. *Produce commodities near passable roads*

432. List down any four agro-based industries in Malawi
   i. Chibuku Brewery
   ii. Farmers World
   iii. Dairy Board Malawi
   iv. Cold Storage
   v. Illovo Sugar Group

433. Which raw materials are needed by the following agro-based industries?
   a. Rab Processors Limited
      = Tea
   b. Dairy Board Malawi
      = Milk
   c. Chibuku Brewery
      = Maize, sorghum and millet
   d. Cold Storage
      = Cattle, goats, chickens and other animals

434. Resources that are required to produce crops or raise animals are called _____
= Factors of production

435. Give any four factors of production
   i. *Land*
   ii. *Labour*
   iii. *Capital*
   iv. *Management*
436. Give any three factors that affect labour
   i. *Health of the farmer*
   ii. *Number of people*
   iii. *Capital available*
437. Give any three land characteristics for increased crop production
   i. *Fertility of the land*
   ii. *Size of the land*
   iii. *Slope of the land*
438. How does each of the following land characteristics affect crop production?
   a. Fertility of the land
      = The more fertile the land is, the higher the yields (the converse is also true)
   b. Size of the land
      = The bigger the land, the higher the crop yield (other factors considered)
439. Give any four capital items
   i. *Cash*
   ii. *Livestock*
   iii. *Farm implements*
   iv. *Farm buildings*
440. Give any three uses of capital on the farm
   i. Paying for labour
   ii. Buying farm inputs
   iii. Buying farm equipment
441. What is farm management?
   = It refers to farmer's knowledge and skills in performing farm operations
442. Give any four management activities
   i. *Planning*
   ii. *Controlling land, labour and capital*
   iii. *Making farm decisions*
   iv. *Budgeting*

May God's Name Be Glorified

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