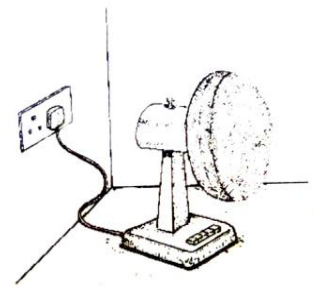
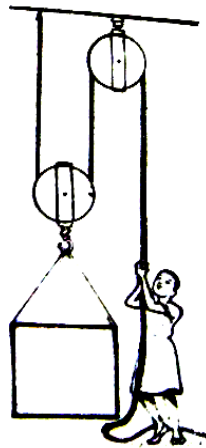
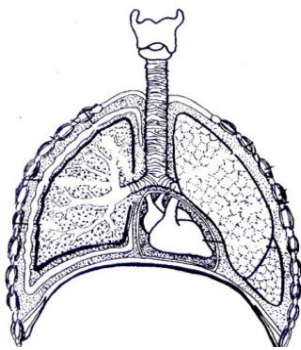
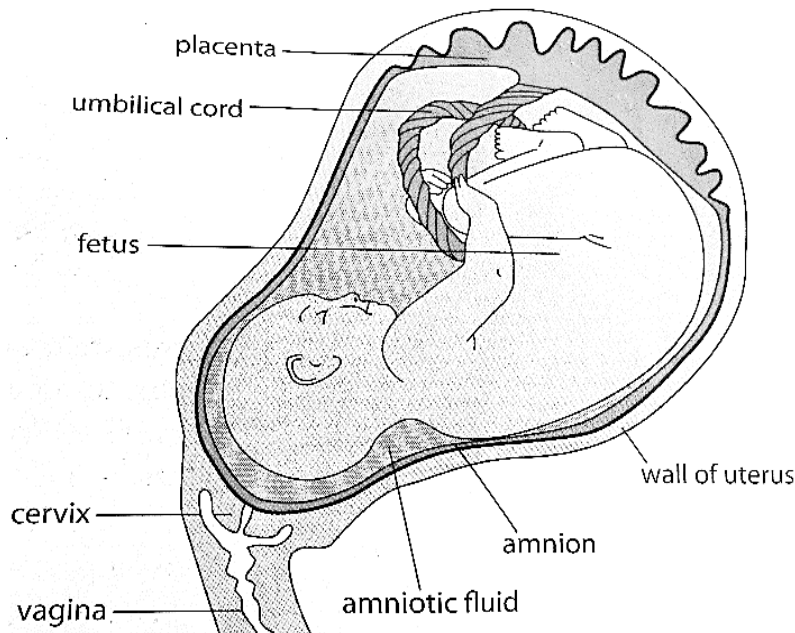


STANDARD 8

SCIENCE AND TECHNOLOGY

QUESTIONS AND MODEL ANSWERS



Revealing the examiners mind

**A COMPLETE GUIDE TO
STUDYING STD 8 SCIENCE**

By : Aaron Kanyerere



TABLE OF CONTENTS

	Page
Acknowledgments	2
UNIT 1 Scientific investigation	3
UNIT 2 The human circulatory system	5
UNIT 3 The human breathing system	11
UNIT 4 Improving nutritional value of food	16
UNIT 5 Meals for invalids, convalescents, vegetarians and elderly people ..	19
UNIT 6 Improving a traditional kitchen	23
UNIT 7 Improving the quality of products.....	29
UNIT 8 Food processing	31
UNIT 9 Reproduction in human beings	33
UNIT 10 Solutions and mixtures	43
UNIT 11 Methods of cooking	48
UNIT 12 Technologies for conserving the environment	51
UNIT 13 Electricity and electric circuits	53
UNIT 14 Family size, income and food supply	60
UNIT 15 Laundering clothes and bed linen	61
UNIT 16 HIV and AIDS	63



UNIT 1: SCIENTIFIC INVESTIGATION

1. What is the first step when planning a scientific investigation? (1 Mark)
 - *Identifying the problem to be investigated.*
2. What should / must be done to the problem identified before carrying out a scientific investigation? (1 Mark)
 - *State it in form of a question.*
3. State three problems in form of questions in an area of science and technology that can be investigated. (3 Marks)
 - *Why does a fresh egg sink and a rotten one float on water?*
 - *What is the speed of sound in air?*
 - *What are the factors that affect the speed of sound in air?*
 - *How different is the life cycle of grasshopper from that of a housefly?*
 - *How can a particular variety of maize be improved in terms of yield?*
 - *How is the pitch of sound affected by different sizes of bottles?*
 - *Which is the most effective biological control of aphid?*
 - *How can components of a given mixture be separated?*
4. What is a "Hypothesis" ? (1 Mark)
 - *Is the predicted / guessed answer to the question.*
5. What is a variable? (1 Mark)
 - *Is anything that can change.*
6. State three main stages of scientific investigations. (3 Marks)
 - *Planning*
 - *Implementation*
 - *Conclusion*
7. State three steps followed when planning out experiments / scientific investigations. (3 Marks)
 - *Identifying the problem*
 - *Stating the problem in form of a question*
 - *Testing for the hypothesis*
 - *Controlling variables*
 - *Collecting materials used in a scientific investigation*
8. Explain what is involved in the following stages of a scientific investigation.
 - i. Implementing / conducting investigation: (6 Marks)
 - *Hypothesis is tested by conducting / carrying out the experiment.*
 - *Variables to be investigated are changed while keeping some constants.*
 - *Variables that are changed are observed and recorded during the experiment*
 - ii. Analyzing data: (6 Marks)
 - *Determining the relationship between variables through / by :*

- *Looking at the pattern of data in a table*
- *Interpreting shapes of graph lines*

iii. Conclusion : (2 Marks)

- *Determining the relationship between the results and the hypothesis. When the two are the same, then hypothesis become the conclusion*

9. State two ways of presenting data. (2 Marks)

- *Use of table*
- *Use of graphs*
- *Use of charts*

10. State any three components of a report for a scientific investigation. (2 Marks))

- *Topic*
- *Introduction*
- *Methodology*
- *Results / findings*
- *Conclusion*

11. Why do people conduct / carryout scientific investigation? (1 Mark)

- *To find out the truth about something*

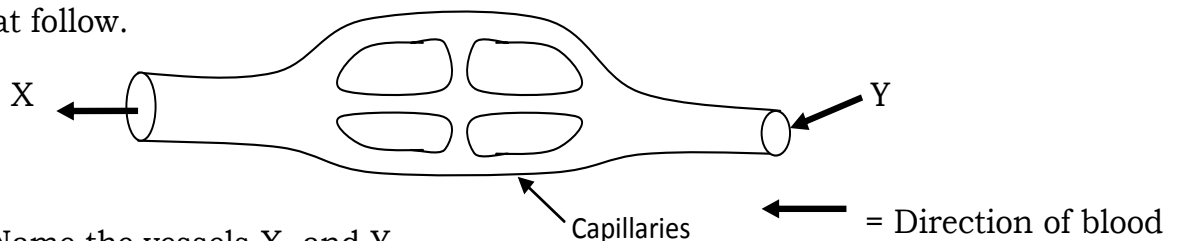
12. State three reasons why reporting results / findings of a scientific investigation is important. (3 Marks)

- *To communicate to people who do not take part*
- *Act as a record of what was done*
- *Gives opportunity to people to learn the findings, ask questions and comment on the findings.*
- *Enable people make use of the findings.*

UNIT 2 : THE HUMAN CIRCULATORY SYSTEM

13. State any two functions of the human circulatory system. (2 Marks)
- *Transport food substances to all parts of the body.*
 - *Transport oxygen to all parts of the body*
 - *Transport waste products from all parts of the body to where they are excreted.*
14. State any three parts of the human circulatory system. (3 Marks)
- *The heart*
 - *The arteries*
 - *The veins*
 - *The capillaries*
15. State functions of each of the following parts of the circulatory system.
- The heart : (1 Mark)
 - *Pumps blood around the body.*
 - The arteries: (1 Mark)
 - *Carries blood away from the heart.*
 - The veins : (1 Mark)
 - *Carries blood to the heart.*
 - Capillaries : (1 Mark)
 - *Connect the arteries to the veins.*
16. What name is given / referred to the muscle of the heart? (1Mark)
- *Cardiac muscle.*
17. Name the blood vessel that :
- Pumps blood around the body. (1 Mark)
 - *Heart*
 - Carries blood away from the heart. (1 Mark)
 - *Arteries*
 - Carries blood to the heart. (1 Mark)
 - *Veins*
 - Connects the arteries to the veins. (1 Mark)
 - *Capillaries*

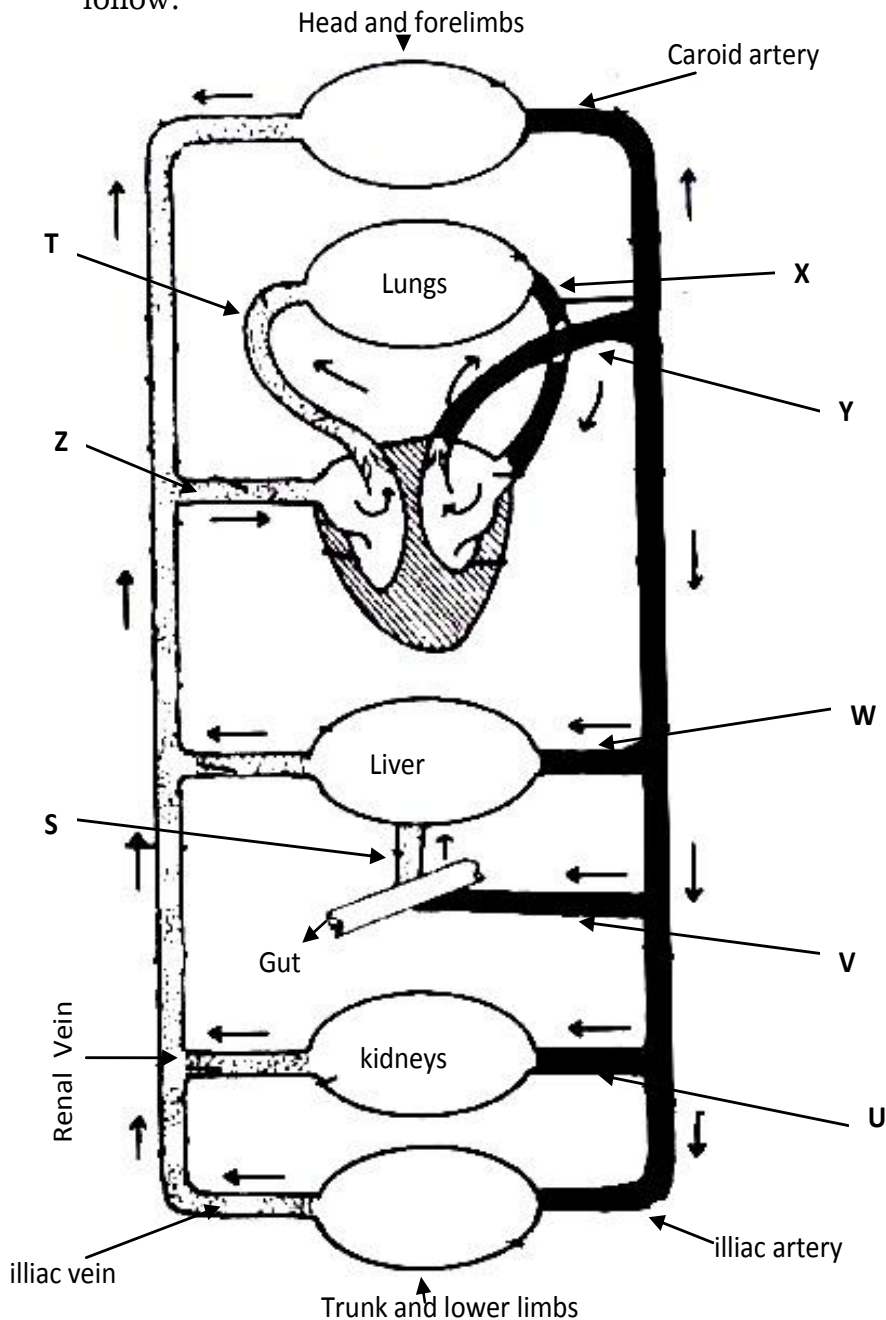
Figure 1, below shows blood vessels of the human circulatory system. Use it to answer questions that follow.



18. Name the vessels X and Y
- *X : Artery*
 - *Y : Veins*
19. Explain any reason for your answer in 18 above.

- X takes blood from the heart while Y takes blood to the heart.

Figure 2, below shows parts of the circulatory system. Use it to answer questions that follow.



20. Name the parts marked S, T, U, V, W, X, Y and Z.

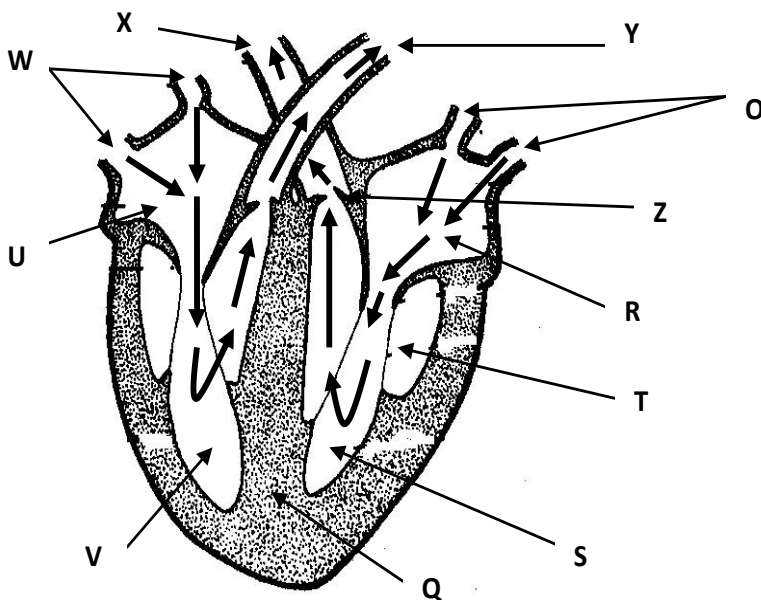
(8 Marks)

- S : *Hepatic portal vein*
- T: *Pulmonary artery*
- U : *Renal artery*
- V : *Mesentric artery*
- W : *Hepatic artery*
- X : *Pulmonary artery*
- Y : *Aorta*
- Z : *Vena cava*

21. Name the blood vessels that carries blood:

- a. From all parts of the body into the heart. (2 Marks)
 - *Posterior and anterior vena cava*
 - b. From the lungs into the heart. (1 Mark)
 - *Pulmonary vein*
 - c. From the heart to all parts of the body. (1 Mark)
 - *Aorta*
 - d. From the heart to the lungs. (1 Mark)
 - *Pulmonary artery*
22. What name is given to the largest;
- a. X : Vein (1 Mark)
 - *Vena cava*
 - b. Y : Artery (1 Mark)
 - *Aorta*

Figure 3 below shows the longitudinal section of the human heart. Use it to answer questions that follow.

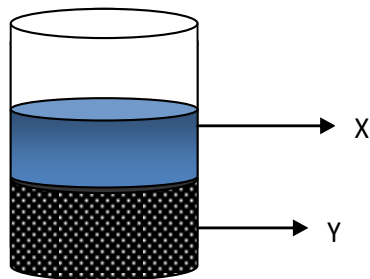


23. Name the parts marked O, Q, R, S, T, U, V, W, X, Y, Z . (10 Marks)
- Q : *Septum*
 - R : *Left atrium*
 - S : *Left ventricle*
 - T : *Flap of bicuspid valve*
 - U : *Right atrium*
 - O : *Pulmonary veins*
 - V : *Right ventricle*
 - W : *Vena cava*
 - X : *Aorta*
 - Y : *Pulmonary artery*
 - Z : *Semi lunar / pocket valves*

24. State four compartments of the heart. (4 Marks)
- *Right atrium*
 - *Left atrium*
 - *Left ventricle*
 - *Right ventricle*
25. Which part transport blood to the lungs? (1 Mark)
- *Y : Pulmonary artery*
26. Which part transport blood from the lungs into the heart. (1 Mark)
- *O : Pulmonary vein*
27. Explain function of
- a. X : Aorta (2 Marks)
- *Transplants blood from the heart to all parts of the body.*
- b. W : Vena cava (2 Marks)
- *Transports blood from all parts of the body to the heart.*
28. What is the colour of blood as it comes from different parts of the body to the heart? (1 Mark)
- *Dark red*
29. Explain your answer. (2 Marks)
- *Because it contains less oxygen and more waste products such as carbon dioxide and urea.*
30. Explain what happens to blood in the lungs. (2 Marks)
- *Carbon dioxide is excreted / removed and oxygen is added.*
31. What is the colour of blood in the lungs? (1 Mark)
- *Bright red*
32. Explain your answer. (2 Marks)
- *Because oxygen is added*
33. What name is given to the blood to which oxygen has been added? (1 Mark)
- *Oxygenated blood*
34. What name is given to the blood from which oxygen has been removed?
- *Deoxygenated blood*
35. Write the chemical name for the following gases. (2 Marks)
- *Oxygen = O_2*
 - *Carbon dioxide = CO_2*
36. State two things that happens as blood circulates throughout/ around the body. (2 Marks)
- *Excretion of waste products such as urea from the kidneys.*
 - *Diffusion of digested food particles around the intestines from where they are transported to the liver*
37. State any two functions of the liver. (2 Marks)
- *Regulates amount of food to be transported by blood*
 - *Store excess food*

38. State any three components of blood. (3 Marks)
- Plasma
 - White blood cells
 - Red blood cells
 - Platelets
39. Explain function of each of the following components of blood.
- Red blood cells: (2 Marks)
 - Transport oxygen
 - White blood cells: (2 Marks)
 - Defend the body against diseases causing organisms
 - Platelets: (2 Marks)
 - Help in the process of blood clotting
 - Plasma: (2 Marks)
 - Help the/ enable blood to flow
 - Store nutrients and hormones

Figure below shows an experiment to find out components of blood conducted by std 8 learners at/ of Chamwazi primary school. Use it to answer questions that follow.



Blood was put in a container and sodium citrate was added and allow contents to settle.

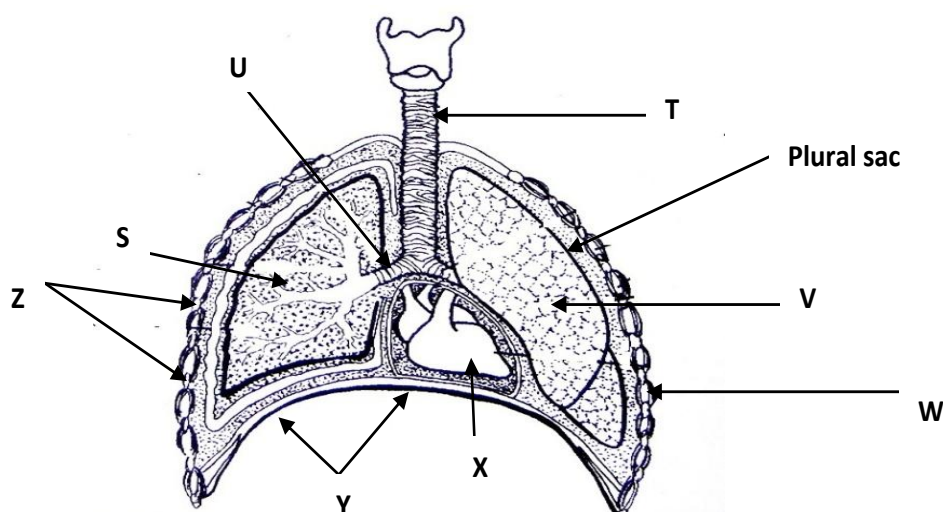
40. Name the part marked X. (1 mark)
- Plasma
41. State two types of blood cells available in Y. (2 Marks)
- Red blood cells
 - White blood cells
42. Why was _____ added? (1 Mark)
- To avoid / prevent blood clotting
43. Which component of blood is responsible for transporting oxygen ? (2 Marks)
- Red blood cells
44. Explain your answer. (2 Marks)
- It has haemoglobin which attracts oxygen.
45. What is bleeding? (1 Mark)
- Is the process whereby blood oozes from the body

46. State two possible causes of bleeding. (2 Marks)
- High blood pressure which breaks/rapture blood vessel
 - Tissue damage/injury
 - Diseases
47. State two effects of bleeding. (2 Marks)
- Anemia
 - Death
48. Explain any two ways of controlling bleeding. (2 Marks)
- Applying direct pressure on the injured part.
 - Raising the injured part to reduce amount of blood flowing to it.
49. How can a person suffering from bleeding be saved from death. (1 Mark)
- Through blood transfusion
50. Explain how the body is capable of preventing bleeding. (2 Marks)
- It is through blood clotting
51. Explain why blood transfusion is important. (2 Marks)
- It saves life

UNIT 3 : THE HUMAN BREATHING SYSTEM

52. Define “breathing” (1 Mark)
- Is the process through which air is pushed in and out of the lungs
53. Explain the difference between air breathed in and air breathed out in terms of the following:
- Amount of oxygen. (2 Marks)
 - Air breathed in contains more oxygen than the air breathed out.
 - Amount of carbon dioxide. (2 Marks)
 - Air breathed out contains more carbon dioxide than air breathed in.
54. Write the chemical symbols for the following.
- Oxygen: (1 Mark)
 - O_2
 - Carbon dioxide: (1 Mark)
 - CO_2
55. State any four parts of the human breathing system. (4 Marks)
- Nostrils
 - Windpipe
 - Lungs
 - Ribs
 - Diaphragm
56. What is the other name for wind pipe? (1 Mark)
- Trachea

Figure below shows the structure of human breathing system. Use it to answer questions that follow.



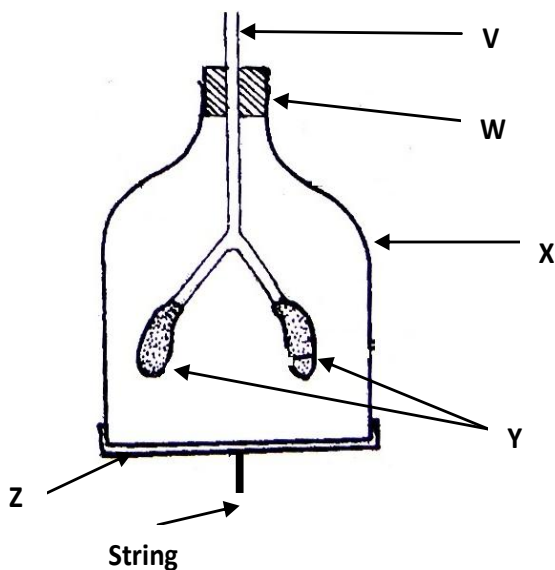
57. Name the parts labeled S, T, U, V, W, X, Y, Z. (8 Marks)
- S : Bronchioles
 - T : Trachea / Wind pipe

- U : Bronchus
 - V : Left lung
 - W : Ribs
 - X : Heart
 - Y : Diaphragm
 - Z : Inter coastal muscles
58. What happens when food enters part T? (1 Mark)
- Chocking
59. Name the disease which is caused by damage or attack of part U and S.
- Bronchitis
60. What is the function of part W? (1 Mark)
- To protect lungs from external forces.
61. Explain function of the pleural sac? (2 Marks)
- Contains pleural fluid which reduces friction and absorbs shock
62. State two functions of a fluid found in the pleural sac. (2 Marks)
- Prevent / reduces friction
 - Absorbs shock
63. What is the shape of the part marked Y? (1 Mark)
- Dome shape
64. Explain functions of part X. (2 Marks)
- To pump blood around the body.
65. State any two phases in which the breathing mechanism works. (2 Marks)
- Inspiration
 - Expiration
66. Define "Inspiration". (1 Mark)
- Is the process of breathing in air.
67. Define "Expiration". (1 Mark)
- Is the process of breathing out air.
68. What are the other names of the following:
- i. Inspiration? (1 Mark)
 - Inhalation
 - ii. Expiration? (1 Mark)
 - Exhalation
69. State three things that take place during inspiration. (3 Marks)
- Diaphragm contracts and becomes flat
 - Ribs move up and out
 - External inter coastal muscles contract
 - Volume of thorax (chest cavity) increases.
70. What makes air to rush into the lungs during inspiration? (1 Mark)
- Volume of chest cavity increases and decreases air pressure in the cavity than in the atmosphere making air to rush into the lungs.

71. State tree things that take place during expiration. (3 marks)
- Diaphragm relaxes and moves upwards
 - Ribs move down and inwards
 - External inter coastal muscles relaxes
 - Volume of thorax decreases.
72. What pushes air out of the lungs during expiration? (1 Marks)
- Volumes of the chest cavity decrease and increase the pressure inside the cavity than atmospheric pressure, as such that pushes air out of the lungs.
73. Where exactly does the exchange of gases take place in the body. (1 Mark)
- In the air sacs of the alveolus
74. State two gases that are exchanged in the lungs. (2 Marks)
- Oxygen
 - Carbon dioxide
75. State any three problems of the human breathing system. (3 Marks)
- Smoking
 - Air pollution
 - Diseases
 - Suffocation
 - Smothering
76. State one disease of the breathing system which is caused by smoking. (1 Mark)
- Lung cancer
77. Name the chemical found in Tobacco which is hazardous to one's health. (1 Mark)
- Nicotine
78. State any three diseases that affect the breathing system. (3marks)
- Cancer
 - Asthma
 - Bronchitis
 - Tuberculosis (TB)
79. Define the following terms:
- i. Suffocation. (1 Mark)
- Is a situation whereby air cannot pass in and out of the lungs either through choking or strangulation.
80. State the common cause of smothering among children. (1 Mark)
- Covering oneself with air proof materials e.g. Plastic paper
81. Explain ways of preventing the following problems of the human breathing system.
- i. Smoking: (2 Marks)
- Avoid smoking for example Indian Hemp
- ii. Air pollution: (2 Marks)

- Avoid areas where air is polluted
- iii. Diseases : (2 Marks)
 - Avoid smoking
 - Eat balanced diet
 - Regular medical check ups
- 82. Define smothering? (1 Mark)
 - Is the situation whereby air cannot get into the mouth or nose.
- 83. Explain one way of preventing suffocation. (2 Marks)
 - Live in well ventilated places

Figure below shows a lung model. Use it to answer questions that follow.



84. Name the part marked V, W, X, Y, Z (5 Marks)
 - V : Glass tubing
 - W : Cork
 - X : Bottle whose bottom is cut / Bell jar
 - Y : Balloons
 - Z : Rubber sheet
85. What do the parts marked V, W, X, Y, Z represent in the human breathing system? (5 Marks)
 - V : Trachea (wind pipe)
 - W : Rings of cartilage
 - X : Ribs
 - Y : Lungs
 - Z : Diaphragm
86. How does the lung model work? (1 Mark)

- When a string is pulled down, air goes in and the balloons inflate and when the string is left, air goes out of the balloons and they deflate as breathing in and out.
87. Explain how the lung model fails to demonstrate breathing in and out.
(2 Marks)
- The bottle / bell jar fails to go in and out to show breathing in and out



UNIT 4 : IMPROVING NUTRITIONAL VALUE OF FOOD

88. Define the following terms:

- i. Nutritional value of food. (1 Mark)
 - Is the major nutrients the food contains.
- ii. Improving the nutritional value of food. (1 Mark)
 - Is the enriching of food with other nutrients by preparing the foods together.

89. State any three ways of improving the nutritional value of food. (3 marks)

- Combining several foods when cooking
- Adding enriching food to dishes
- Overcooking fish to soften the bones so that they can be eaten together with the flesh.
- Cooking some food in their skins or together with their skins.
- Using one pot meal.

90. Give one example of the following ways of improving the nutritional value of food.

- i. Combining several foods when cooking. (1 Mark)
 - Cooking different vegetables together.
 - Cooking meat together with beans.
 - Cooking meat together with green vegetables.
 - Cooking groundnuts together with beans.
- ii. Adding enriching foods to dishes. (1 Mark)
 - Groundnuts flour to sweet potatoes as “Futali”
 - Eggs or milk to mgaiwa porridge.
 - Cooking oil to salad.
 - Roasted nuts to salad.
 - Boiled eggs to vegetable salad.
 - Butter or margarine to nsima.
- iii. Using one pot meal. (1 Mark)
 - Sweet potatoes with fresh fish and vegetables.
 - Green bananas with meat or beans.
 - Beans with dried or pounded maize.
 - Dry cassava (makaka) with peas.

91. State two examples of enriching foods. (2 Marks)

- Groundnuts flour
- Cooking oil
- Ream
- Roasted nuts
- Boiled eggs
- Butter or margarine



92. How can the nutritional value of fish be improved? (1 Mark)
- By overcooking them to soften the bones so that they can be eaten together with the flesh.
93. State two examples of foods whose nutritional value can be improved by cooking them in or with their skins. (2 Marks)
- Potatoes
 - Pumpkins
 - Fruits e.g Apples.
94. State any three factors considered when planning, cooking and serving dishes with improved nutrient value. (3 Marks)
- The method of cooking
 - Colour, texture and flavor of food
 - Seasons of the year.
 - Ensure that meals are nutritionally balanced.
95. Why should seasons be considered when planning dishes with improved nutritional value? (1 Mark)
- Because using food in seasons is cheap since is plentiful.
96. Write a sample of a meal with improved nutritional value for breakfast. (1 Mark)
- Mixed fruit salad.
 - Mgaiwa porridge with groundnut flour.
 - Tea with milk
 - Scrambled eggs on toast.
97. Write a sample meal with improved nutritional value for lunch. (1 Mark)
- Mixed vegetable soup.
 - Beans and meat stew.
 - Nsima or boiled rice.
 - Mixed fruit salad.
98. Write a sample meal with improved nutritional value for supper. (1 Mark)
- One pot meal.
 - Mbalagha (Green bananas, meat or fish and vegetable)
99. Define "Recipe". (1 mark)
- Is a list of ingredients used when cooking a meal.
100. Write down a recipe used when coking mbalagha. (4 Marks)
- 4 green bananas
 - 250g of beef
 - Salt
 - Tomatoes
101. Write down a recipe used when cooking Futali. (4 Marks)
- 3 – 4 medium sweet potatoes / cassava
 - 1 cup groundnuts flour

- Salt
 - Water
102. Describe the process of cooking “Futali” (10 Marks)
- Wash and peel the sweet potatoes
 - Cut them into small pieces
 - Boil them in a pot with water
 - Add salt to taste
 - Add groundnut flour when tender
 - Simmer for a few minutes
103. Explain any three effects of poor nutritional on the family, community and the nation. (6 Marks)
- Malnutrition resulting in disease like kwashiorkor, marasmus, obesity etc
 - Stunted growth among children
 - Poor mental capacity
 - Increased risk of chronic illnesses
 - High mortality rate among children
 - Low productivity in everyday activities leading to low national development.
 - Low standard living
 - Strain on the economy because the government deals with malnutrition problems.
104. Explain any three positive effects of good nutrition. (6 Marks)
- Healthy population
 - Proper growth in children
 - High productivity in everyday activities
 - Good nutritional status of the population
 - High standards of living
105. Define the following term.
- i. Dish: (1 Mark)
 - Food served at a meal
 - ii. Nutrient : (1 Mark)
 - Essential chemical substance found in food.
 - iii. Obesity :
 - Is the state of being excessively fat.

UNIT 5 : MEALS FOR INVALIDS, CONVALESCENTS, VEGETARIANS AND ELDERLY PEOPLE

106. Define the following:
- Invalids? (1 Mark)
 - People who are ill.
 - Convalescents? (1 Mark)
 - People who are recovering from an illness.
 - Vegetarians? (1 Mark)
 - People who do not eat meat or animal products.
 - The elderly? (1 Mark)
 - People above the age of 65.
107. Why do the invalids require the following:
- Fewer carbohydrates and fats? (1 Mark)
 - Because they use less energy.
 - Proteins and protective foods. (1 Mark)
 - For the replacement of damaged tissues and cells.
108. State any three guidelines considered when planning meals for invalids. (3 Marks)
- The meal should be easy to digest.
 - Food should be a liquid diet.
 - Follow doctors instructions on meals.
 - Take into account likes and dislikes.
 - Do not serve leftover food to avoid contamination.
 - Prepare food away from the patient to prevent smell from affecting the patient negatively.
 - Meals should be served in a tray and small portions.
109. Why should invalids be given liquid diet? (1 Mark)
- For easy digestion because the digestive system is still weak.
 - To encourage appetite and bring back the water loss.
110. Why should food be prepared away from the patient? (1 Mark)
- To prevent the smell of cooking because it may negatively affect the appetite of the patient.
111. State two cooking methods suitable for preparation of food for invalids. (2 Marks)
- Poaching
 - Boiling
 - Steaming
 - Grilling
112. Write down a sample breakfast for an invalid. (1 Mark)
- Fresh fruit salad.



- Boiled egg
 - Toasted bread
 - Fruit juice
 - Tea with milk
113. Write down a sample lunch / supper for an invalid. (1 Mark)
- Grilled chicken with salad
 - Soft nsima
 - Boiled pumpkin leaves (mnkhwani)
 - Fruit juice
114. State two types categories of vegetarians. (2 Marks)
- i. Lacto vegetarian
 - ii. Strict vegetarian
115. Explain the difference between Lacto and strict vegetarian. (2 Marks)
- Lacto vegetarians are those who eat vegetables and animal products such as eggs, milk, cheese, yoghurt, ghee and sour milk whereas strict vegetarians are people who eat vegetables only.
116. State any three reasons for becoming vegetarians. (3 Marks)
- Religion
 - Health
 - Animal welfare
 - Taste
 - Allergy
117. Explain how the following factors influence people to become vegetarians.
- i. Religion : (2 Marks)
 - Vegetarianism is the dietary choice for some religions.
 - ii. Health: (2 Marks)
 - Some people think that a vegetarian diet is healthier than that which contains meat or other animal products.
 - iii. Animal welfare: (2 Marks)
 - Some people believe it is wrong to kill animals for food.
 - iv. Taste : (2 Marks)
 - Some people do not like taste of meat or fish.
 - v. Allergy: (2 Marks)
 - Some people are allergic to animal products such as mat, eggs, milk, cheese and ghee.
118. Why is it difficult to plan meals for vegetarians? (1 Mark)
- It is difficult to plan meals lacking proteins, vitamins A and D, Calcium and Iron from animal sources.
119. State any three guidelines followed when planning meals for vegetarians. (3 Marks)

- Provide sufficient protein from animal products such as milk and eggs for lacto- vegetarians.
 - Use plenty of vegetables proteins such as peas , beans and groundnuts for strict-vegetarians.
 - Provide foods rich in oils and fats from plants sources.
 - Use a variety methods of cooking and serve with different combinations to bring variety of vegetarians diets.
 - Large portion should be served for maximum supply of proteins.
120. Write down a sample breakfast for lacto-vegetarians. (2 Marks)
- Bananas
 - Poached eggs
 - Fresh bread with margarine
 - Tea with milk
121. Write down a sample lunch/supper for lacto-vegetarians. (2 Marks)
- Stewed fish
 - Bonongwe
 - Nsima
 - Orange drink.
122. Write down a sample breakfast for a strict-vegetarians. (2 Marks)
- Pawpaw salad
 - Mgaiwa porridge with groundnuts flower
 - Beans
 - Bread with tomato jam
 - Tea
123. Write down a sample lunch/ supper for a strict- vegetarians. (2 Marks)
- Tomato soup
 - Stewed beans and ground nuts flour
 - Boiled rice
 - Boiled rape mixed fruit salad
 - Guava juice
124. State any three guidelines followed when planning meals for the elderly. (3 Marks)
- Adequate supply of calcium and vitamins is needed
 - Provide iron giving food
 - Food should be easy to eat because of weak teeth
 - Ensure a good supply of dietary fibre
 - Meals should contains more fruits, vegetables and less fats.
 - Provide plenty of fluids in the form of water and other beverages.
 - Meals should be served attractively.
125. Write a sample breakfast for the elderly. (2 Marks)
- Mixed fruit salad

- Rice porridge
 - Tea with milk
 - Boiled eggs
126. Write a sample lunch/supper. (2 Marks)
- Mixed vegetable soup
 - Stewed meat
 - Boiled nkhwani with g/nuts flower
 - Mashed potatoes as soft nsima
 - Mango juice
127. State the three main meals of the day. (3 Marks)
- Breakfast
 - Lunch
 - Supper.

UNIT 6: IMPROVING A TRADITIONAL KITCHEN

128. Define a ‘kitchen’ (1 Mark)
- Is a place where food is prepared and cooked.
129. State two main types of kitchens. (2 Marks)
- Modern kitchen
 - Traditional kitchen
130. Explain importance of having a modern kitchen with the following;
- Walls with sufficient windows. (2 Marks)
 - For good lighting and ventilation to avoid eye strain.
 - Closed off from the rest of the house. (2 Marks)
 - To prevent cooking odours from entering the rest of the rooms in the house
131. State any two characteristics of a modern kitchen. (2 Marks)
- Walls are easy to clean and resistant to moisture condensation and grease
 - Floor is easy to clean and non slippery
 - Equipment used is labour saving
132. State four main features of kitchen. (4 Marks)
- Preparation centre
 - Cooking centre
 - Storage centre
 - Washing centre
133. Describe the following features of a kitchen.
- Preparation centre. (2 marks)
 - It is where most of the food preparation activities are done
 - Cooking centre. (2 Marks)
 - Is where food dishes are cooked
 - Washing centre. (2 Marks)
 - Is where all washing of utensils and equipment is done
 - Storage centre. (2 Marks)
 - Is where food stuffs and kitchen equipment are stored.
134. State three things that should be done to avoid time wastage in a kitchen. (3 Marks)
- Shelves and cupboard should be placed at a reasonable heights (reachable)
 - Working in the kitchen should be pleasant and comfortable.
135. Why is it important to place kitchen equipments such as shelves and cupboard at a reasonable heights? (1 Mark)
- To avoid backache caused by unnecessary bending and stretching.
136. State any three characteristics of a traditional kitchen. (3 Marks)
- Poorly arranged
 - Not labour saving .
 - Generally lacks storage facilities



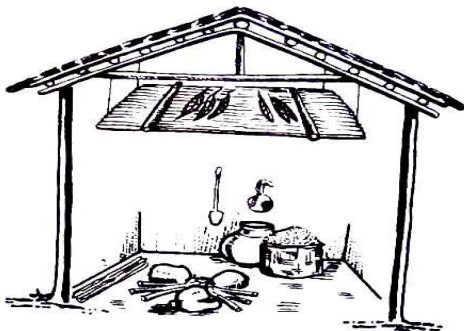
- Equipment used is not labour saving .
137. State two types of traditional kitchen. (2 Marks)
- Open-air kitchen
 - Enclosed kitchen
138. State two main reasons for using an open –air kitchen. (2 Marks)
- To boil water for domestic purposes
 - To cook food.

Figure below shows a traditional kitchen , use it to answer questions that follow.



139. Identify the traditional kitchen above. (1 Mark)
- Open-air kitchen
140. What is the main reasons of using the kitchen above? (1 Mark)
- To boil water for domestic purposes and cook food.
141. Why is the traditional kitchen not recommended during rain season? (1 Mark)
- To avoid disturbs the fire.
 - To avoid splashes of waste into the food.

Figure bellow shows a traditional kitchen . Use it to answer questions that follow.



142. Name the traditional kitchen above. (1Mark)
- Enclosed
143. State any three materials used to make the kitchen above. (3 Marks)
- Poles, grass

- Bricks, reeds
 - Mud
144. What is the main source of ventilation if a traditional kitchen above have no windows. (1 Mark)
- The door.
145. How do the following features of a modern kitchen compared with that of traditional .
- i. Storage centre? (1 Mark)
 - In traditional kitchen storage centre is inside the main house unlike in modern .
 - ii. Cooking centre? (1 Mark)
 - In traditional kitchen it is made of a three stones fire place while in modern cookers are used
 - iii. Preparation centre? (1 Mark)
 - In traditional it is done at any appropriate place unlike modern kitchen.
146. State any three storage equipments in a traditional kitchen. (3 Marks)
- Baskets
 - Pots
 - They are hung on walls
147. State any three storage equipments in a modern kitchen. (3 Marks)
- Shelves
 - Cupboard
 - Refrigerator
148. State the differences between the modern and the traditional kitchen. (1 Mark)
- Modern kitchen is expensive to construct while traditional is cheap and easy to construct.
 - Modern kitchen has adequate ventilation and lighty unlike traditional kitchen.
 - Modern kitchen has enough space while in traditional, sometimes space is limited.
 - Modern kitchen has working surface while traditional has no working surfaces.
 - Modern is expensive to maintain while traditional kitchen is easy to maintain.
149. Give any two strengths of a traditional kitchen . (2 Marks)
- Easy to construct
 - Easy to maintain
150. State any two limitations of a traditional kitchen. (2 Marks)
- Produce a lot of smoke because of the kind fuel used.

- Food cooked smell smoky if not properly cooked .
- There is wastage of fuel energy.
- Space is limited which makes it difficult to store food in the kitchen .
- The traditional kitchen does not have work surfaces which makes it time wastage.

151. State any three ways of improving the traditional kitchen. (3 Marks)

- Making a kitchen with window and chimney.
- Fixing surfaces and shelves to an already existing kitchen
- Making a dry rack outside the kitchen.
- Constructing a mud stove with more than one cooking place.

152. Explain uses of the following structures in an improved traditional kitchen.

i. Windows and chimney: (2 Marks)

- To improve ventilation / to solve the problem of ventilation.

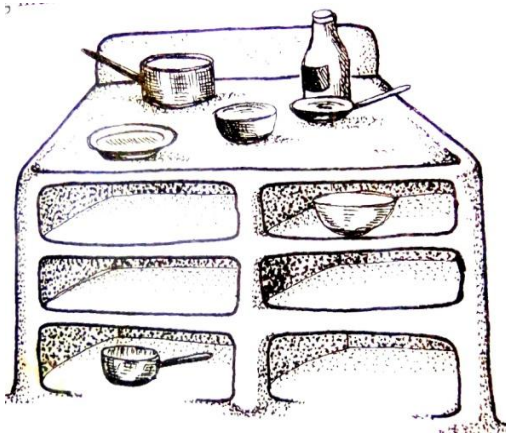
ii. Dry rack: (2 Marks)

- For drying pots and plates.

153. State any two materials used to make a cupboard. (2 Marks)

- Poles
- Soil
- Bamboo
- Water
- Nails
- Panga knives
- Buckets
- Piece of rope
- Hoe

Figure below shows a structure used to improve a traditional kitchen. Use it to answer questions that follow.

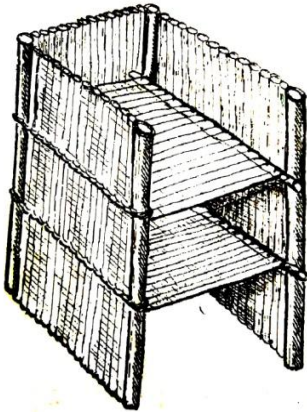


154. Name the structure. (1 Mark)

- Cup board

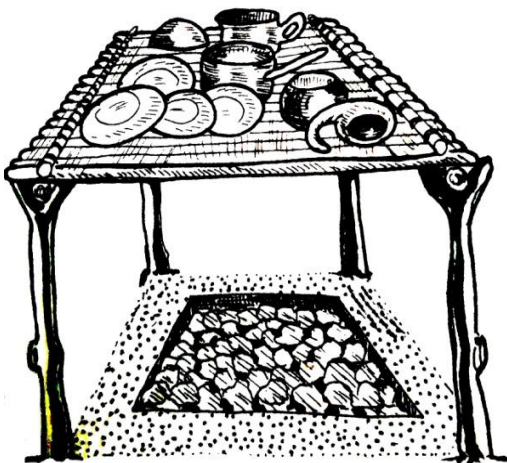
155. Explain how the structure is used. (2 marks)
- To store kitchen equipments and utensils.

Figure below shows a structure used to improve a traditional kitchen. Use it to answer questions that follow.



156. Name the structure. (1 Mark)
- A shelf
157. What is the use of the structure? (1 Mark)
- For storage of kitchen utensils.
158. State any two materials used to make the structure. (2 Marks)
- Bamboo strips
 - Reeds
 - Grass (Tsekera , nsenjere)
 - Millet
 - Maize stems
 - Pieces if strings

Figure below shoes a structure used to improve a traditional kitchen. Use it to answer questions that follow.



159. Name the structure. (1 Mark)
- Drying rack / sun table

160. Explain the use of the structure. (2 Marks)
- For drying pots and plates.
161. State any two materials used to make the structure. (2 Marks)
- Poles
 - Bamboo strips
 - Pieces of strings
 - A hoe
 - Chilaya (a tool for digging holes)
 - Hammer
 - Panga knife
 - Nails
162. State any three steps followed when making the structure above. (3 Marks)
- Dig a soak pit and fill it with stones.
 - Make holes on the ground 30 cm or more in depth
 - Put poles into the holes to the required height
 - Cover the holes with soil to keep the poles firmly into the ground
 - Lay poles horizontally on top of the vertical poles
 - Put bamboo strips or sticks on top of the horizontal poles and tie
163. Give any two ways of making the structure last longer. (2 marks)
- Using strong poles
 - Using nails / nailing

UNIT 7 : IMPROVING THE QUALITY OF PRODUCTS

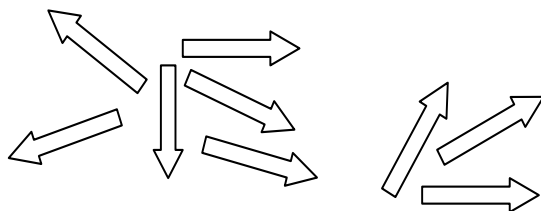
164. State any three products that are locally produced in the community. (3 Marks)
- Wood carvings
 - Mats
 - Clay pots
 - Mortar and pestle
 - Hoe handles
165. State three ways of improving the quality of products. (3 Marks)
- Improving the smell
 - Improving the taste
 - Improving the appearance
 - Improving the colour
 - Improving the volume
 - Improving the shape
 - Packaging
 - Decoration
 - Labeling

Figure below shows some products that are locally produced in the community. Use it to answer questions that follow.



166. Name the product. (1 Mark)
- Mortar
167. Explain one way of improving the quality of the product. (2 Marks)
- By decoration

Figure below shows a product which is locally produced in the community. Use it to answer questions that follow.



168. Identify the products. (1 Mark)
- Unpacked crayons
169. State two ways of improving the quality of the product. (2 marks)

- Packaging
- Labeling

Figure below shows locally made product used in the community. Use it to answer questions that follow.



X



Y

170. Identify the product. (1 Mark)
- Clay pot
171. Explain two ways in which the quality of the product has been improved in Y. (4 marks)
- Improved shape
 - Decoration
172. Explain three ways in which improving the quality of products are important. (6 marks)
- Helps to build confidence in the customer
 - Assure high sales at a better price
 - Helps the products to look attractive
173. State three negative effects of improving the quality of products. (3 Marks)
- Products are made expensive
 - Products become slow to sell as many people would go for cheaper ones.
 - Materials used for improving products may not be found locally and expensive

UNIT 8 : FOOD PROCESSING

174. Define "Food processing". (1 Mark)
- Refers to the method that are used to change raw ingredients into food products for human and animal consumption.
175. State three reasons for processing food. (3 Marks)
- Improving flavor, texture and appearance of food
 - Preserving the food
 - Improving the quality of food
 - Preventing waste products
 - Improving the livelihood of people
176. State two ways of processing food. (2 Marks)
- Primary
 - Secondary
177. Describe the following ways of processing food.
- Primary: (2 Marks)
 - Involves changing raw materials / ingredients for sale, consumption or making them ready for cooking.
 - Secondary : (2 Marks)
 - Involves turning basic processed foods into new products
178. State any three examples of each of the following:
- Primary: (3 Marks)
 - Grinding grain into flour
 - Sorting and washing vegetables
 - Extracting oil from seeds and nuts
 - Soaking cassava
 - Fermenting cereals such as millet, sorghum, maize for making chimera.
 - Soaking mphale to make flour
 - Pounding cereals such as rice and maize.
 - Secondary : (3 Marks)
 - Making margarine from oil
 - Making bread, cakes and biscuits from flour
 - Making thobwa, starch, nsima from cassava flour.
 - Making peanut butter from groundnuts
179. State three advantages of food processing. (3 Marks)
- Improve the taste, flavour and appearance of food
 - Preserving food
 - Improving the quality of food
180. State three disadvantages of food processing. (3 Marks)
- Loss of nutrients during processing

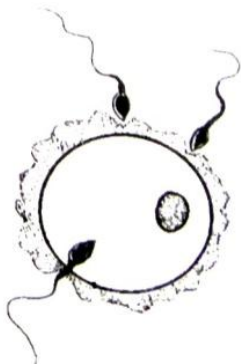


- Some of the methods used in processing food are not hygienic
 - Some methods used in processing can lead to wastage
 - Food processing can lead to increase in the cost of food
181. State any food products made from the following ingredients:
- i. Chimera : (1 Mark)
 - Thobwa
 - ii. Groundnuts : (1 Mark)
 - Peanut butter
 - iii. Wheat flour : (1 Mark)
 - Bread, scones or biscuits
 - iv. Mangoes : (1 Mark)
 - Jam. Juice
 - v. Tomatoes : (1 mark)
 - Jam, sauce, puree
 - vi. Mphale : (1 Mark)
 - Maize flour

UNIT 9 : REPRODUCTION IN HUMAN BEINGS

182. Define the following :
- Conception : (1 Mark)
 - Is the fertilization of an ovum by a sperm in the fallopian tube followed by implantation in the womb.
 - Semen : (1 Mark)
 - Is a liquid which contains sperms ejaculated by a man during sexual intercourse.
 - Zygote : (1 mark)
 - Is a cell resulting from the union of the male and female gametes.
 - Fertilization : (1 Mark)
 - Is the union of male and female zygote.
183. What name is given to the :
- Male gametes? (1 mark)
 - Sperms
 - Female gametes? (1 Mark)
 - Ovum / eggs

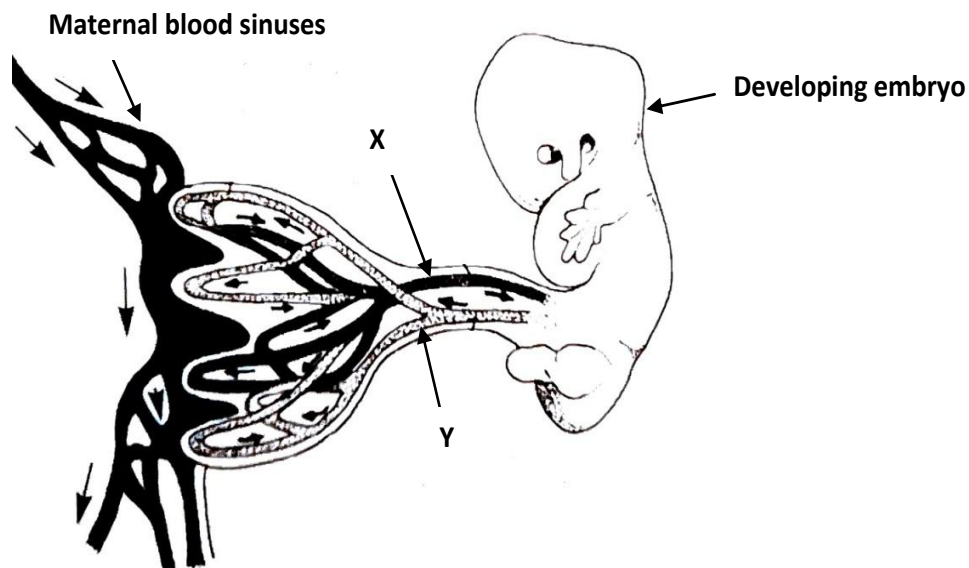
Figure below shows a process in human reproductive system. Use it to answer questions that follow.



184. Name the process shown above. (1 Mark)
- Fertilization
185. What happens to the unsuccessful sperms after one sperm enters the egg? (1 Mark)
- They die
186. Define the following :
- “Implantation” (1 Mark)
 - Is the process in which the embryo becomes attached to the lining of the uterus.
 - “Amnion” (1 Mark)
 - Is the membrane which encloses an embryo.

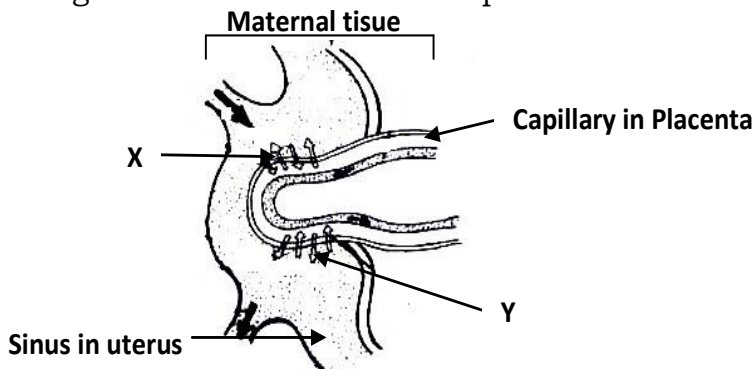
- iii. What name is given to the fluid which encloses an embryo in the amnion?
(1 Mark)
- Amniotic fluid
- iv. Explain any two functions of the amniotic fluid. (2 marks)
- Protects the embryo
 - Supports the embryo
 - Allows the embryo to move freely during growth
 - Lubricates and reduces friction in the vagina during birth.

Figure below shows a placenta. Use it to answer questions that follow.



187. Name the parts marked X and Y. (1mark)
- X : Umbilical vein
 - Y : Umbilical artery
188. State two substances that pass through the parts marked X and Y. (2 Marks)
- X : Dissolved food substances and oxygen
 - Y : Waste products, urea and carbon dioxide

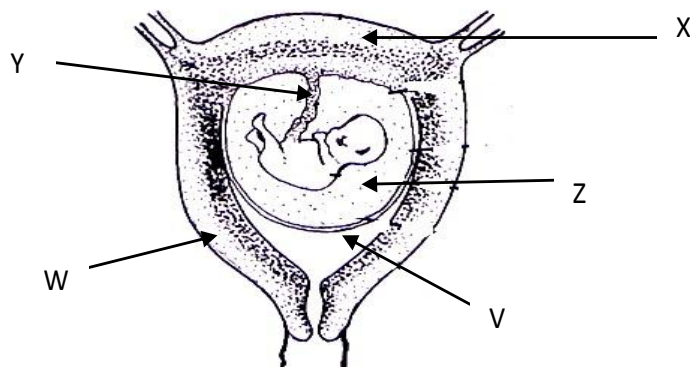
Figure below shows how the placenta works. Use it to answer questions that follow.



189. Name the substances represented by letter X and Y. (2 Marks)
- X : Food and oxygen

- Y : Urea and carbon dioxide
190. Explain any three functions of the placenta. (6 Marks)
- Allows diffusion of food substances from the mother's blood into that of the embryo.
 - Allows diffusion of oxygen from the mother's blood into that of the embryo
 - Allows wastes products such as urea and carbon dioxide to diffuse from the blood capillaries of the embryo into the mother's blood.
 - Allows antibodies to diffuse from the mother's blood into the blood capillaries of the embryo.
191. How do food substances move from the blood of mother to that of the embryo. (1 Mark)
- Through diffusion
192. Explain the role of antibodies that diffuse from the blood of the mother to the blood of the embryo. (2 Marks)
- To protect the embryo against diseases.

Figure below shows stages of growth and development of the embryo during pregnancy. Use it to answer questions that follow.



193. Name the parts marked V, W, X, Y, Z (5 marks)
- V : Amnion (water sac)
 - W : Uterus
 - X : Placenta
 - Y : Umbilical cord
 - Z : Amniotic fluid
194. What name is given to the tube /capillary which connects the unborn baby to the mother? (1 Mark)
- Umbilical cord
195. Explain three functions of part / fluid marked Z. (6 Marks)
- Protects the embryo
 - Supports the embryo
 - Allows the embryo to move freely during growth
 - Lubricates the vagina during birth.

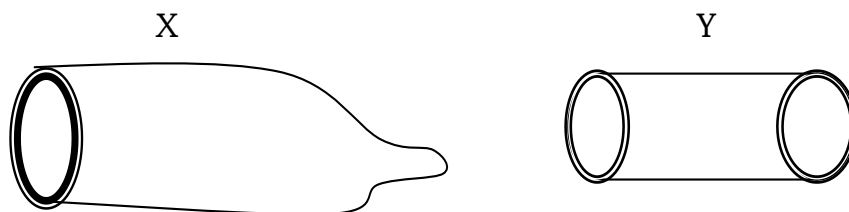
196. What s the first organ formed during pregnancy? (1 Mark)
- The heart
197. Which instrument is used to detect the beating of the heart of the unborn baby? (1Mark)
- Stethoscope
198. How long does a baby take before it is born? (1 Mark)
- About nine months
199. State two organs that are formed at the age of six months. (2 Marks)
- Eye brows
 - Eye lashes
200. State three signs of pregnancy. (3 Marks)
- Menstruation stops to occur
 - Morning sickness
 - Increase in body weight
 - Enlargement of breast and abdomen
 - Vomiting
 - Being choosy about food
 - Nausea
 - Feeling dizziness
 - Swelling of legs
 - Changes in the pigmentation of the skin
 - Changing moods
 - Teeth problems due to loss of calcium to the baby
 - Maternal morbidity
201. State three dietary needs of a pregnant woman. (3 Marks)
- A balanced diet in adequate amounts.
 - Plenty of clean and safe drinking water and other fluids,
202. Explain why pregnant woman should be provided with the following dietary needs.
- “Proteins” (2 marks)
 - For formation of new tissues
 - “Calcium” (2 Marks)
 - For development of bones ad cartilages
 - “Iron” (2 Marks)
 - For the formation of red blood cells
 - “Vitamins” (2 Marks)
 - Regulating growth
 - Controlling metabolic reaction in cells
203. State any three health needs of a pregnant woman. (3 Marks)
- Undergoing regular medical check ups
 - Taking regular baths and wearing clean clothes

- Not smoking and taking drugs
204. State any three psychological needs of a pregnant woman. (3 Marks)
- Love
 - Care
 - Understanding from all people around her
205. State three physiological needs of a pregnant woman. (3 marks)
- Proper attire e.g. loose clothes and flat shoes
 - Regular moderate physical exercise
 - Rest
206. State any three ways of caring for the baby. (3 marks)
- Following good feeding habits
 - Provision of complementary feeding at the appropriate age of the baby
 - Weighing the baby to monitor growth and development at a clinic or health centre.
 - Immunization against diseases such as polio, tuberculosis (TB) and measles.
 - Provision of vitamin A and deworming tablets.
 - Diagnosis and treatment of infections
 - Regular baths and wearing of clean clothes
 - Adequate sleep
207. State any three common diseases of children. (3 marks)
- Whooping cough
 - Tetanus
 - Tuberculosis (TB)
 - Malaria
 - Diphtheria
 - Polio
 - Measles
 - Dysentery
208. Explain any three effects of common diseases of children. (3 marks)
- Paralysis and deformity of limbs in the case of polio
 - Deafness in the case of measles
 - Dehydration in the case of diarrhea disease
 - Anaemia
 - Death resulting from disease.
209. State any three ways of preventing the common diseases of children. (3 Marks)
- Immunization e.g. TB, polio, whooping cough, Diphtheria, measles
 - Following general rules of hygiene e.g. diarrhea disease
 - Sleeping under treated mosquito nets e.g. malaria
210. Explain why under five clinics are important? Give three reasons.

- Provide routine checkups on the health of children.
 - Provide routine monitoring of the weight of children
 - Giving advice on feeding, vaccination and nutrition for both the mother and the child.
 - Administering BCG vaccine to prevent TB, DPT vaccine to prevent Dipthera, whooping cough and tetanus, and other vaccines to prevent polio and measles.
 - Provision of vitamin A
 - Treatment of common infections
211. Define “Family planning” (1 Mark)
- Is the practice of controlling birth to space out births and limit the size of the family.
212. Explain the reasons why family planning is important. (4 Marks)
- Help to improve the well-being of families because couples can have fewer children who can be provided with enough food, clothing and schooling.
 - Women can protect themselves from unplanned pregnancies which can help reduce the number of maternal deaths.
 - It helps to save the lives of children because parents can properly take care of them.
 - It helps nations to develop because the people’s economic situation improves greatly in countries where women have few children.
213. Give any three family planning methods. (3marks)
- Natural method
 - The condom
 - Vasectomy
 - Spermicides
 - The diaphragm
 - Intra – Uterine Device (IUD)
 - Tubal ligation
 - Norplant
214. Explain how natural method works. (2 Marks)
- Keeping careful records of the intervals between menstrual periods help to calculate a fertile period of 10 days in the mid cycle during which sexual intercourse should be avoided.
215. Define “ovulation” (1 Mark)
- Is the process in which a mature egg is released from the ovary.
216. State any two signs of ovulation. (2 marks)
- Temperature rises above the normal body temperature.
 - Mucus secreted by the cervix become more fluidy.
217. Describe the process of ovulation. (2 Marks)
- It is 12 – 16 days before the beginning of the next menstruation period.

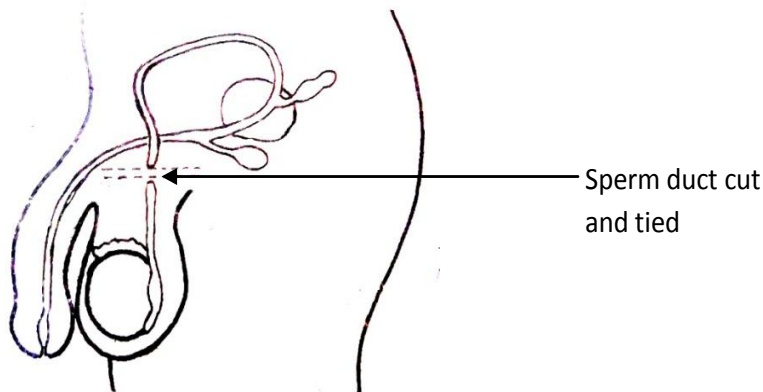
218. Define a “condom”. (1 Mark)
- Is a plastic sheath placed on an erect penis or inserted into the vagina before sexual intercourse.
219. Explain how a condom prevents pregnancy. (2 Marks)
- It prevents sperms from reaching the egg.

Figure below shows a method of family planning. Use it to answer questions that follow.



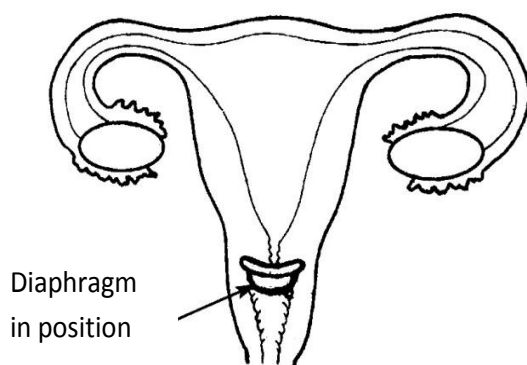
220. Identify the planning method above. (1 Mark)
- Condom
221. Which of the method above is female condom? (1 Mark)
- Y
222. Explain how the method prevents pregnancy. (2 Marks)
- Collects the sperms preventing them from reaching the egg.
223. Explain how contraceptive pills work / prevents conception. (2 Marks)
- The pills suppress ovulation and so prevent conception.
224. Explain how contraceptive pills are used. (2 marks)
- Pills are taken each day between menstrual periods.
225. Explain any adverse effect of long term use of contraceptive pills. (2 Mark)
- Increase risk of breast cancer
 - Increase risk of cervical cancer
226. Explain how vasectomy works. (2 Marks)
- Semen ejaculated during sexual intercourse does not contain any sperm and so fertilization cannot take place.
227. Define “Vasectomy”. (1 Mark)
- Is a surgical operation in which the man’s sperm ducts are cut and the ends sealed or tied.
228. State three things that are not affected by vasectomy. (3 Marks)
- Sexual desire
 - Erection
 - Ejaculation
229. What happens to the sperms produced in a body of a person using vasectomy method of family planning? (1 Marks)
- They are removed by white blood cells as soon as they are they are formed.

Figure below shows a family method. Use it to answer questions that follow.



230. Name the method of family planning shown above. (1 Mark)
- Vasectomy
231. Explain how vasectomy works. (2 Marks)
- Prevents sperms from being ejaculated during sexual intercourse thus preventing fertilization.
232. Explain any danger of using vasectomy as a method of family planning. (2 Marks)
- It is difficult to rejoin the sperm ducts.
233. What is a diaphragm? (1 Mark)
- Is a rubber disc that can be placed in the vagina before sexual intercourse.
234. How does the diaphragm work in preventing pregnancy? (1 mark)
- It covers the cervix and so prevents sperms from entering the uterus.

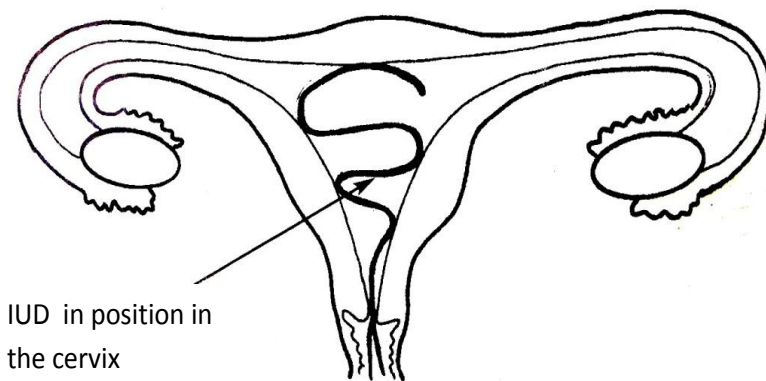
Figure below shows a method of family planning. Use it to answer questions that follow.



235. Identify the family planning method above. (1 Mark)
- Diaphragm
236. How does the family planning method above works? (1 Mark)
- Covers the cervix and so prevents sperms from entering the uterus.
237. What does IUD stand for in relation to family planning? (1 Mark)
- Intra-uterine device

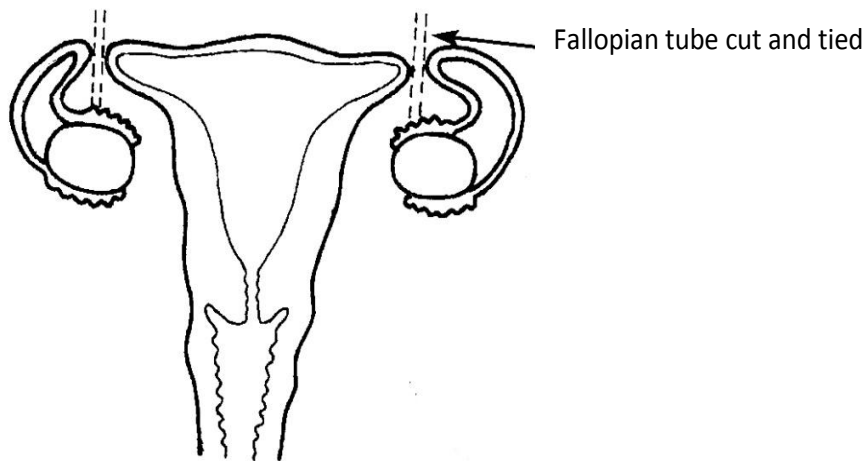
238. What is the intra-uterine device? (1 Mark)
- Is a small metal or plastic strip bent into a loop or coil that is inserted in the uterus
239. Explain how the intra-uterine device works. (2 marks)
- It prevents implantation of the embryo
240. State any dangers of using the intra-uterine device (IUD) (1 Mark)
- It increases risk of uterine infections

Figure below shows a method of family planning. Use it to answer questions that follow.



241. Identify the method of family planning above. (1 mark)
- Intra-uterine device
242. Explain how the above method works. (2 Marks)
- Prevents implantation of the embryo
243. Define "Tubal ligation" (1 Mark)
- Is the process of sterilizing a woman by an operation in which the oviducts are cut and tied.
244. State three things that are not affected by the tubal ligation as a method of family planning. (3 Marks)
- Ovaries
 - Sexual desire
 - Menstruation
245. What happens to the eggs released in the body of a person using tubal ligation? (1 Mark)
- They break down in the upper part of the oviduct.
246. What is the danger of using tubal ligation ? (1 Mark)
- They cannot be reversed.

Figure below shows a method of family planning. Use it to answer questions that follow.



247. Identify the method of family planning shown above. (1 mark)
- Tubal ligation (TL)
248. Explain how the method above works in preventing pregnancy. (2 Marks)
- Prevents the sperms from reaching the egg.
249. Define “Norplant” (1 mark)
- Is a set of small plastic capsules that are placed under the skin of a woman’s upper arm.
250. How does Norplant works? (1 mark)
- Chemicals from the capsules prevents pregnancy.
251. State three side effects of using Norplant as a method of family panning. (3 Marks)
- Changes in menstrual bleeding
 - Headaches
 - Dizziness
 - Enlargement of ovaries
 - Nervousness
 - Breast discharge or hair loss
 - Nausea
 - Skin rash
 - Change in appetite
 - Weight gain
252. Define “Spermicides” (1 Mark)
- Are chemicals in the form of cream, gel or foam that are used to kill or immobilize sperms.

UNIT 10: SOLUTION AND MIXTURES

253. Define a “mixture”. (1 Mark)
- Is when two or more substances are put together.
 - Is the combination of two or more substances.
254. State three ways of forming / making mixtures. (3 marks)
- Solid and solid
 - Solid and liquid
 - Liquid and liquid
 - Liquid and gas
 - Gas and gas
255. Give any examples of the following mixtures.
- Solid and solid. (1 Mark)
 - Maize and beans
 - Solid and liquid. (1 Mark)
 - Sugar and water
 - Liquid and liquid (1 Mark)
 - Fizzy drinks
 - Gas and gas (1 Mark)
 - Air
256. Give two main types of mixtures. (2 Marks)
- Suspension
 - Solutions
257. Explain the difference between suspension and solution. (2 marks)
- Suspension is a mixture where components are clearly seen while solution, the components cannot be recognized.
258. Give any example of each of the following types of mixtures.
- Suspension: (1 Mark)
 - Flour and water
 - Solution : (1 mark)
 - Salt and water
259. Define the following terms:
- “Solute” (1 Mark)
 - Substances that dissolve in another substances.
 - “Solvent” (1 Mark)
 - Is a substance in which something dissolves.
260. What names are given to the following:
- Substances that dissolve in water? (1 Mark)
 - Soluble
 - Substances that do not dissolve in water? (1 Mark)
 - Insoluble
261. A girl mixed sugar and water for her breakfast. Identify;

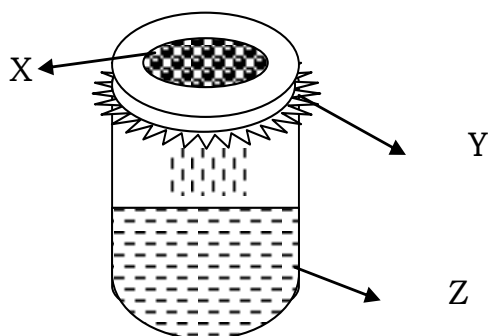


- i. Solvent: (1 Mark)
 - Water
 - ii. Solute : (1 Mark)
 - Sugar
 - iii. What type of mixture does the girl make? (1 Mark)
 - Solution
 - iv. Explain your answer.
 - Components of this mixture cannot be clearly seen.
262. State three factors that affects the solubility of substance in water. (3 Mar)
- Size of particles
 - Temperature
 - Stirring
 - Nature of substances
263. Explain how the following factors affect the solubility of substances in water.
- i. Size of particles: (2 Marks)
 - Small particles dissolve faster than large ones because small particles provide large surface area to the water.
 - ii. Temperature: (2 Marks)
 - Substances dissolve faster in water of high temperature because particles collide more often and harder.
 - iii. Stirring : (2 Marks)
 - The faster one stirs the faster substances dissolve because of more collisions and increases surface area of solute.
 - iv. Nature of substances: (2 Marks)
 - Some substances dissolve faster in water than others.
264. State two factors that affect the solubility of kitchen salt. (2 Marks)
- Size of particles
 - Temperature
265. State any three methods of separating mixtures. (3 Marks)
- Hand picking
 - Winnowing
 - Sieving
 - Filtration
 - Decanting
 - Evaporation
 - Distillation
 - Magnetism
266. Which method of separating mixture can be used to separate beans from sand? (1 Mark)
- Hand picking



267. Define “Winnowing” (1 Mark)
- Is a method of separating solid mixtures using a winnower.
268. Explain how mixtures are separated by winnowing method. (2 Marks)
- Lighter solid are carried away by wind leaving the heavier ones
269. Which method of separating mixture can be used to separate tea leaves from tea? (1 Mark)
- Sieving
270. Explain how sieving separate mixtures. (2 Marks)
- Small particles pass through the sieve while the bigger ones remain behind.
271. Define “Decanting” (1 Mark)
- Is the method used to separate liquid mixtures which forms a clear boundary.
272. Explain how decanting is done. (2 Marks)
- One liquid is poured off leaning the other liquid behind.
273. Which method of separating mixtures can be used to separate mixture of paraffin and water? (1 mark)
- Decanting
274. Define “Filtration” (1 Mark)
- Is a method of separating solid substance from liquid using a filter.
275. How does filtration separates mixtures? (2 Marks)
- The liquid passes through the filter while the solid remains behind.
276. Define the following terms:
- Filtrate: (1 Mark)
 - Is the substance that passes through the filter during filtration
 - Residue : (1 Mark)
 - Is the substance that does not pass through the filter during filtration.

Figure shows a method of separating mixture. Use it to answer questions that follow.

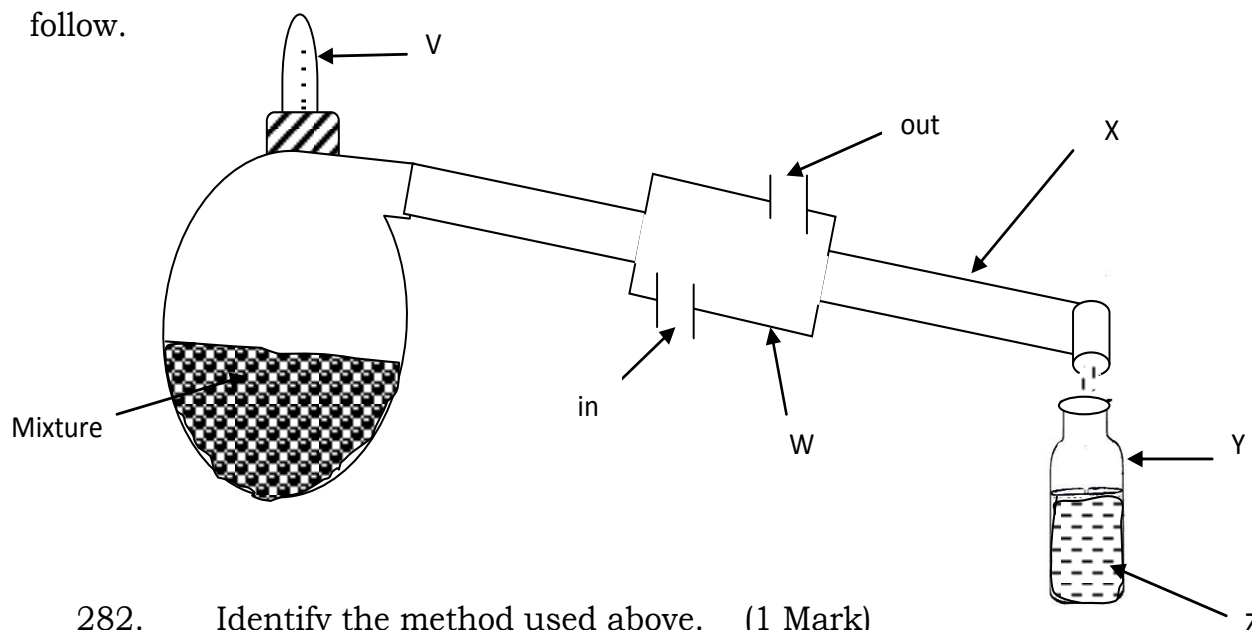


277. Identify the method of separating mixture above. (1 mark)
- Filtration
278. Name the parts marked X, Y, Z (3 marks)
- X : Residue

- Y : Filter
- Z : Filtrate

279. Define "Distillation" (1 mark)
- Is the method used to separate liquid mixture of components with different boiling points.
280. Explain how distillation separate mixtures. (2 Marks)
- The liquids that boils first evaporates leaving the other liquid.
281. Which method of separating mixtures can be used to separate mixture of water and alcohol / kachasu? (1 Mark)
- Distillation

Figure below shows a method of separating mixtures. Use it to answer questions that follow.



282. Identify the method used above. (1 Mark)
- Distillation
283. Name the parts marked V, W, X, Y, Z (5 Marks)
- V : Thermometer
 - W: Condenser
 - X : delivery tube
 - Y : Collecting bottle
 - Z : Distillate
284. Explain the function of part V. (2 Marks)
- To measure temperature .
285. Explain the function of part W. (2 Marks)
- Is where alcohol is changed back into liquid
286. What is the state of alcohol as it passes through part X? (1 Mark)
- Liquid
287. Which method of separating mixture can be used to separate iron steel from sand? (1 Mark)
- Magnetism

288. Define “Magnetism” (1 Mark)
- Is the method of separating magnetic materials from non magnetic materials.
289. Explain how Magnetism works to separate mixture. (2 marks)
- The magnets attract magnetic materials only from the mixture leaving behind non magnetic ones.
290. State three uses of mixtures in everyday life. (1 Mark)
- For making chemicals
 - For making food
 - For making medicines
 - For making paints
 - For making dyes
 - For making jewelries.

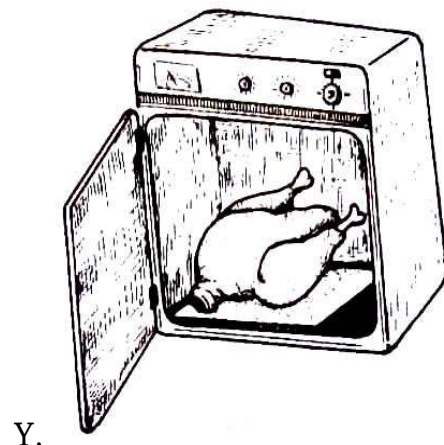
UNIT 11 : METHODS OF COOKING

291. State three reasons or cooking food. (3 marks)
- Improving taste
 - Improving appearance of food
 - To kill germs taken together with food
 - To make food easily digested
292. State two classes of cooking food. (2 marks)
- Dry method
 - Moist method
293. Explain the difference between dry and moist method of cooking. (2 Mark)
- Dry methods are methods where heat is applied directly while moist methods heat is not applied directly.
294. State any two examples of each of the following cooking methods.
- i. Dry method: (2 marks)
- Frying
 - Baking
 - Roasting
- ii. Moist method: (2 Marks)
- Boiling
 - Stewing
 - Steaming
295. Define “baking”. (2 marks)
- Is the dry method of cooking using dry heat in a oven or in a pot.
296. State two examples of food that can be cooked using baking. (2 marks)
- Chigumu
 - Chimimina
 - Biscuits
 - Fisi
 - Root vegetables
297. State two advantages of baking method. (2 marks)
- Food does not break up if cooked well
 - No soluble nutrients are lost
 - The food looks good
 - Flavor is improved
298. State two disadvantages of baking method. (2 marks)
- Baking ingredients are expensive
 - Needs careful attention
 - Not good for cooking for the sick
299. Define “Roasting” (1 Mark)

- Is coking food with little oil or fat in an oven or saucepan over glowing charcoal, fire or an oven.
300. State three examples of food that can be cooked using roasting method. (3 marks)
- Meat
 - Fish
 - Green maize
 - Potatoes
 - Cassava
301. State any three advantages of roasting method. (3 marks)
- It is a cheap method
 - Only few soluble nutrients are lost
 - Flavour of the food is improved
302. State any three disadvantages of roasting method. (3 marks)
- Causes food to lose its moisture
 - Does not make food tender
 - Food shrinks
 - Demands more attention
 - Harden inside proteins
 - Not suitable for cooking food with high percentage of water like root vegetables
303. State three similarities between Baking and Roasting. (3 marks)
- Both are dry methods of cooking
 - In all methods, food looks attractive
 - In all methods flavor of the food is improved
304. Explain any two differences between baking and Roasting. (4 marks)
- Oil in baking is used for greasing basin for the food not to stick to the wall of the basin while in roasting, oil aid stewing.
 - Ingredients in baking are more expensive than in roasting.

Figure below shows methods of cooking. Use it to answer questions that follow.

Glowing charcoal



305. Name the methods marked X and Y (2 marks)
- X : Baking
 - Y :Roasting
306. State two similarities between methods X and Y. (2 marks)
- Both are dry methods of cooking
 - In both methods, flavor of the food is improved.
307. Explain any difference between method X and Y. (4 Marks)
- Ingredients for method X are expensive than in method Y
 - Oil in method Y aid stewing unlike in method X

UNIT 12 : TECHNOLOGIES FOR CONSERVING THE ENVIRONMENT

308. Define "Environment" (1 mark)
- Is the total surrounding of living and non living things.
309. State three ways through which environment is important. (3 marks)
- Provide food
 - Provide shelter
 - Provide air
 - Provide water
310. Give any three human activities that can lead to the destruction of the environment . (3 Marks)
- Deforestation
 - Setting bush fires
 - Poor waste disposal
 - Emission of harmful gases
 - Poaching
 - Charcoal production
 - Overgrazing
 - Poor land husbandry practices
 - Use of inefficiency energy stoves
311. State any three effects of destroying the environment. (3 Marks)
- Desertification
 - Global warming
 - Erratic rains leading to droughts and floods.
 - Adverse change in weather and seasons.
 - Outbreak of diseases like cancer and cholera.
 - Low agricultural output leading to famine.
 - Soil erosion
 - Decrease of animal production.
 - Siltation
 - Loss of tourism
312. Give any three technologies for conserving the environment. (3 Marks)
- Solar driers
 - Solar cooker
 - Solar panels
 - Paper recycling
 - Biogas
313. Explain how the following technologies conserve the environment.
- i. Solar cooker: (2 Marks)
- Uses solar energy for cooking
- ii. Dam: (2 Marks)

- Is a barrier for restraining water.
- iii. Biogas: (2 Marks)
 - Is gas produced from fermenting animal excreta.
- iv. Compositing: (2 Marks)
 - Is the production of compost manure from organic matter.

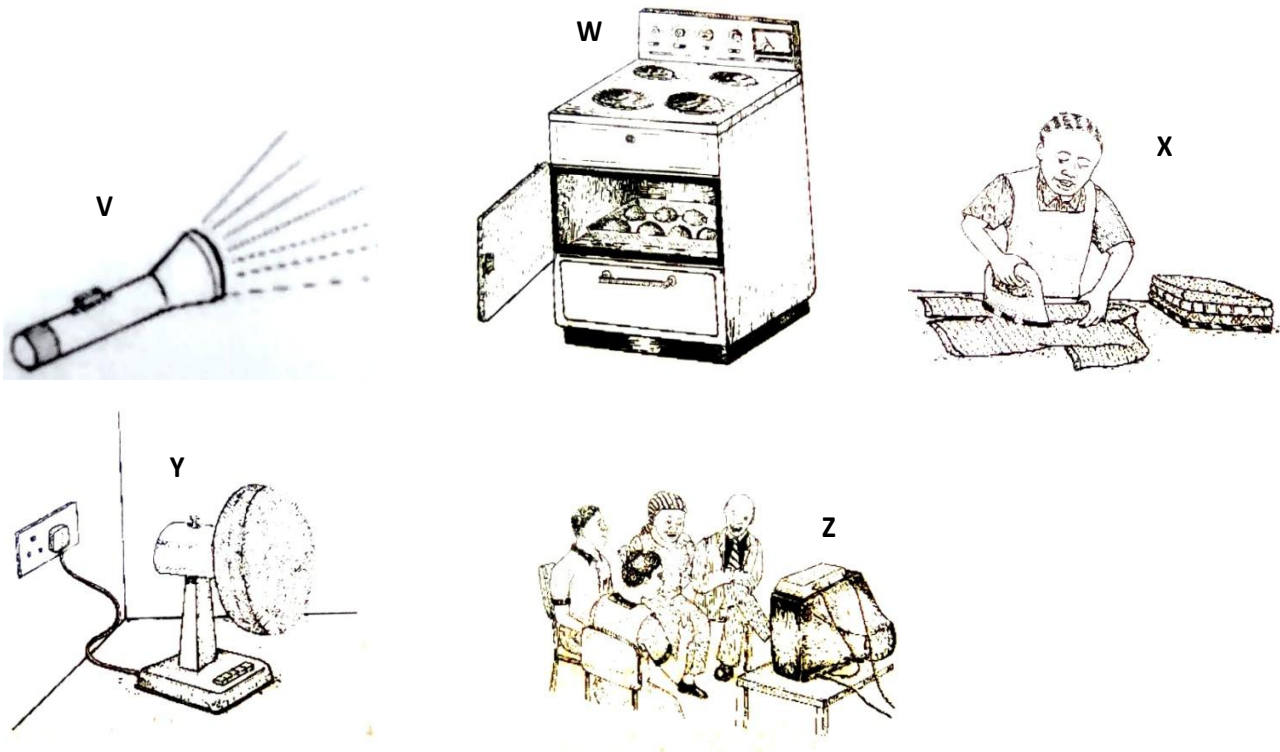


UNIT 13: ELECTRICITY AND ELECTRIC CIRCUITS

314. State the difference between primary and secondary sources of electricity. (1 Mark)
- Primary sources produce electricity directly by connecting a source to a load while secondary sources produce electricity through intermediary such as a generator.
315. State three sources of electricity. (3 Marks)
- Wind power
 - Geothermal power
 - Chemical energy
 - Hydro power
 - Solar energy
316. Explain how the following sources produce electricity.
- Wind power: (2 marks)
 - Wind kills rotate causing a coil of wires between magnets to rotate thereby producing electricity.
 - Geothermal: (2 marks)
 - Steam turns turbines which inturn cause coil of wires between magnets to rotate.
 - Hydro power: (2 Marks)
 - Water turn turbines that rotate a oil of wires between magnets.
 - Chemical energy: (2 Marks)
 - Derived from sources such as nuclear power, coal, lemons, Irish potatoes and cells.
 - Thermocouple: (2 marks)
 - Is a junction of two or more different metals.
 - Solar energy: (2 marks)
 - Solar cells connects sunlight into electricity
317. State three uses of electricity. (3 Marks)
- Heating
 - Ironing
 - Cooking
 - Cooling
 - Cleaning
 - Drying
 - Entertainment
 - Mixing things
 - Propelling machines
 - Air conditioning
 - Washing



Figure below show uses of electricity. Use it to answer questions that follow.



318. Identify uses V, W, X, Y, X (5 marks)

- V : Lighting
- W : Cooking
- X : Pressing clothes
- Y : Air conditioning
- Z : Entertainment

319. Explain the meaning of the following electric symbols.

i.  Cell (2 Marks)

ii.  Switch (2Marks)

iii.  Bulb (2 marks)

iv.  Connecting wire (2 marks)

v.  Fuse (2marks)

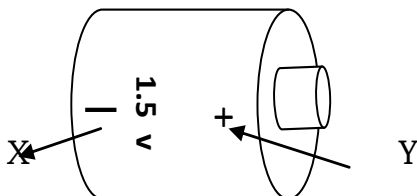
vi.  Diode (2 marks)

320. Explain function of the following electric symbol.

- i. Cell: (2 Marks)
- To provide energy

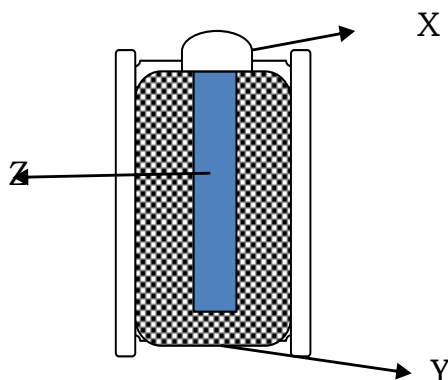
- ii. Switch: (2 marks)
- To control the circuit
 - To complete the circuit
- iii. Bulb: (2 marks)
- To convert electric energy to light energy
- iv. Connecting wire: (2 marks)
- To connect other parts of the circuit
- v. Fuse: (2 marks)
- To prevent the property from damage.
- vi. Diode: (2 Marks)
- To change current from alternate to direct.
 - It directs current in one direction
321. How does the fuse protect electric appliances fro damage? (1 Mark)
- By melting when the current is high.
322. Explain the meaning of the following symbol of a cell.
- i. Long line: (2Marks)
- Represent positive terminal
- ii. Short line: (2 marks)
- Represent negative terminal

Figure below shows a cell. Use it to answer questions that follow.

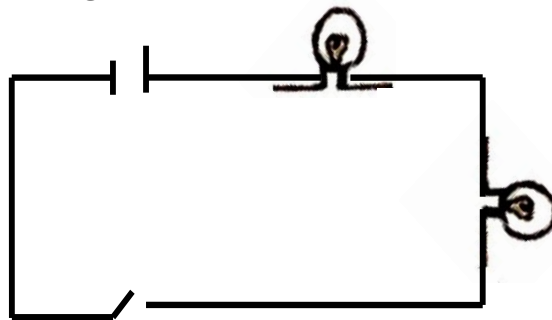


323. What do symbols X and Y mean? (2 Marks)
- X : negative terminal
 - Y : Positive terminal
324. How much power does the cell have? (1 Mark)
- 1.5v

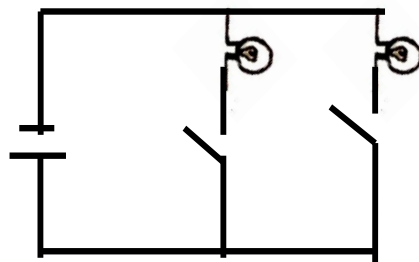
Figure below shows a dry cell. Use it to answer questions that follow.



325. State the parts marked X, Y, Z (3 Marks)
- X : Positive terminal
 - Y : Negative terminal
 - Z: Carbon anode rod
326. Which substance is used to make part Z? (1 Mark)
- Carbon
327. Why is the voltage of cell 1.5v regardless of the size of the dry cell? (1 mar)
- Because the appliance used requires voltage divisible by 1.5v
328. Define the following terms.
- Series circuit: (1 Mark)
 - A circuit with one conducting path.
 - Parallel circuit: (1 mark)
 - A circuit with more than one conducting paths.
 - A circuit: (1Mark)
 - A complete path of electric current.
329. Draw a series circuit with the following components; two bulbs, a cell, switch and connecting wire. (3 marks)



330. Draw a parallel circuit with the following components; a cell, two bulbs, switch and the connecting wire. (3 Marks)



331. Explain the advantages of a series circuit over parallel circuit. (2 Marks)
- The components can be controlled separately.
 - Each component uses the total voltage from the source.
332. Name the instruments used to measure the following.
- Current: (1 Mark)
 - Ammeter
 - Voltage: (1 Mark)
 - Voltmeter

333. What are the units of measurements of the following:

- i. Current: (1 mark)
 - Amperes
- ii. Voltage: (1 mark)
 - Volts

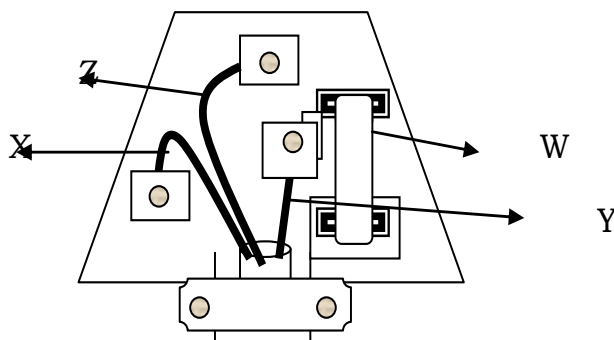
334. How does the bulb give light? (1 Mark)

- Electric current in the tungsten wire meets resistance which produce heat making the wire red as light.

335. State three ways of generating electricity using the locally available resources. (3 Marks)

- Windmills
- Using magnets
- Using lemon fruit

Figure below shows a three pin plug. Use it to answer questions that follow.



336. Name the parts marked X, Y, Z (3 marks)

- W : Fuse
- X : Neutral wire
- Y : Live wire
- Z : Earth wire

337. Explain functions of W and Z. (4 Marks)

- W : Prevents the appliance from damage
- Z : Prevent the user from shock

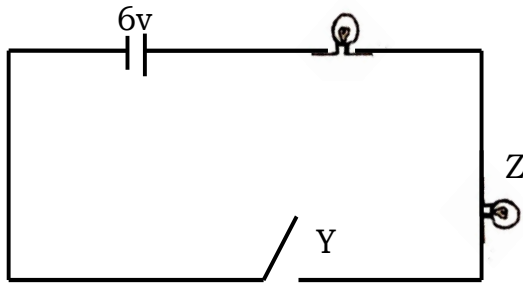
338. How does part Z prevent a person from shock? (1 Mark)

- By directing current into the ground

339. How does part W prevent electric appliance from damage? (1 mark)

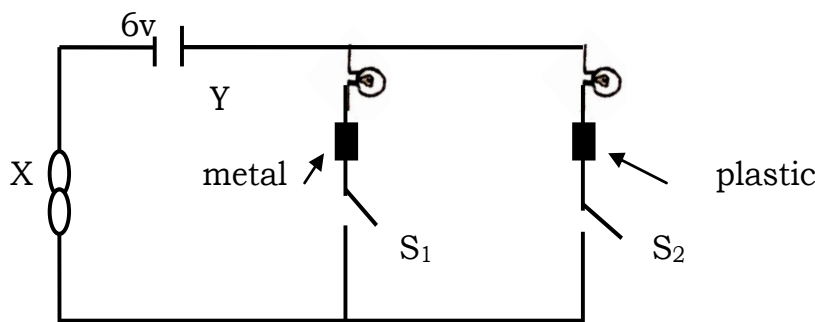
- By melting

Figure below shows a circuit. Use it to answer questions that follow.



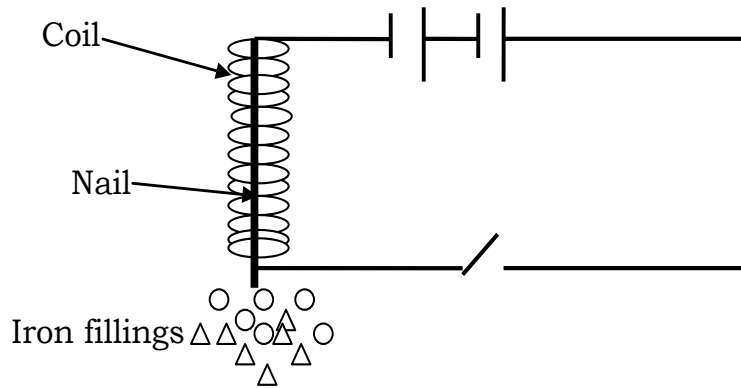
340. Name the type of circuit above. (1 mark)
- Series
341. Explain your answer. (2 marks)
- It has one complete path.
342. Explain the functions of part Z. (2 Marks)
- To convert electric energy to light energy

Figure below shows a circuit. Use it to answer questions that follow.



343. Name the circuit above. (1 mark)
- Parallel
344. Name the part marked X. (1 Mark)
- Fuse
345. Explain the function of part X. (2 marks)
- Prevent the device from damage.
346. Explain how part X prevent the appliance from damage. (2 Marks)
- By melting when current is high.
347. How much current will each bulb in the circuit use? (1 Mark)
- 6v
348. Give a reason for your answer. (2 Marks)
- In parallel, components use the same voltage from the source.
349. What will happen to the bulb when s_2 is closed? (1 mark)
- Will not give light.
350. Explain your answer. (2 Marks)
- The plastic does not conduct electricity.

Figure below shows a circuit. Use it to answer questions that follow.



351. How many cells are in the circuit above. (1 Mark)
 - Two cells
352. What will happen to the Iron fillings when the switch is closed? (1 Mark)
 - They will be attracted and attached to the nail.
353. Explain your answer. (2 marks)
 - When current is flowing, the coil becomes a magnet.

UNIT 14 : FAMILY SIZE, INCOME AND FOOD SUPPLY

354. Define the following terms:
- Family size: (1 Mark)
 - Is the number of people in the family.
 - Income: (1 Mark)
 - Is the amount of money one gets regularly as payment for work or from trading.
 - Food supply: (1 Mark)
 - Is the amount of food available for consumption .
355. Explain the relationship between income and food supply. (2 Marks)
- The more income a family has the more food it acquire.
 - The less income a family has the less food it can acquire.
356. Explain the relationship between family and food supply. (2 Marks)
- Family size determines amount of food to be available to family members for consumption.
357. Give two ways of preventing malnutrition. (2 Marks)
- Producing enough food
 - Proper storage
 - Proper use of food resources
358. State two ways of increasing food supply at family level. (2 marks)
- Producing
 - Buying
 - Donations

UNIT 15: LAUNDERING CLOTHES AND BED LINEN

359. State two types of fibres. (2 marks)
- Natural fibres
 - Artificial fibres (Synthetic)
360. Explain the difference between natural and artificial fibres. (2 Marks)
- Natural fibres are made from plants, animals and minerals while synthetic fibres (artificial) are made by people.
361. Give two examples of each of the following types of fibres.
- i. Natural: (2 marks)
- Plant fibre e.g. Cotton and linen
 - Animal fibre e.g. Wool, silk and leather
 - Mineral fibre e.g. Fibre glass
- ii. Artificial: (2 Marks)
- Polyester
 - Nylon
 - Rayon
 - Acetate
362. State three requirements when laundering clothes and bed linen.(3 Marks)
- Water
 - Soap
 - Bleaches
 - Starch
 - Stain removers
363. Give any three laundry requirements. (3 Marks)
- Pails
 - Basins
 - Bathtubs
 - Sinks
 - Pegs
 - Pressing iron
 - Hangers
 - Ironing blankets
 - Sheets
364. State three processes in laundry. (3 Marks)
- Sorting
 - Mending
 - Soaking
 - Washing
 - Drying
 - Pressing

- Airing
 - Storing
365. State any three factors to be considered when sorting out articles in laundry. (3 Marks)
- Colour
 - Degree of dirt
 - Types of fabric
 - Uses of fabric
366. Why is it important to mend torn parts and split seams before washing clothes? (1 mark)
- To prevent them from becoming bigger.
367. Explain reasons for rinsing clothes;
- i. In warm water: (2 Marks)
- To remove soap
- ii. In cold water: (2 Marks)
- To refreshen the fibres.
368. Explain importance of adding starch to clothes in laundry. (2 Marks)
- To give required stiffness to the garments.
369. Why should coloured articles be hung on the shade? (1 Mark)
- To prevent bleaching the clothes.
370. Why s it important to air clothes after pressing them? (1 Mark)
- *To remove remaining moisture in the garment to prevent mildew.*
 - *To dry them completely.*
371. Why should synthetic fibres be soaked for a short period of time in soapy water before washing? (1 Mark)
- *To loosen dirt.*

UNIT 16. HIV AND AIDS

372. What do the following stand for? (1 Mark)
- HIV :** (1 Mark)
 - Human Immunodeficiency Virus*
 - AIDS :** (1 mark)
 - Acquired Immune Deficiency Syndrome*
373. What causes AIDS? (1 mark)
- Virus called HIV*
374. How does HIV affect the body? (1 mark)
- Destroys the immune system of the body making it easily attacked by different infections.*
375. What does the word “human” mean in HIV? (1 mark)
- It means that the disease affects people only.*
376. State three ways of HIV transmission. (1 Mark)
- Unprotected sexual intercourse with an infected person.*
 - Through blood transfusion when the donor is infected.*
 - Mother to child during pregnancy, birth and breast feeding.*
 - Through sharing of skin cutting, piercing materials e.g. razor blade, needles.*
377. Suggest any two ways of preventing HIV and AIDS. (2 marks)
- Abstinence from sex.*
 - Being faithful to one sexual partner.*
 - Using condom correctly and consistently during sexual intercourse.*
 - Avoid having more than one sexual partner.*
 - Avoid sharing skin cutting materials.*
 - Infected females should avoid getting pregnant.*
 - Avoid bad cultural practices e.g. Chokolo and kulowa kufa.*
378. State two foods that are not suitable for people with HIV and AIDS. (2 marks)
- Processed foods.*
 - Alcoholic drinks*
 - Smoking to avoid lung infections.*
 - Canned foods.*
 - Junk foods such as chips.*
379. Explain the importance of the following foods to people living with HIV and AIDS.
- Meat: (2 Marks)
 - Provide proteins for growth and repair of tissues.*
 - Fish: (2 Marks)
 - Source of proteins and easy to digest.*



- iii. Cereals: (2 Marks)
- *Helps to build the body.*
- iv. Fats and oils: (2 Marks)
- *For gaining weight.*
- v. Vegetables, onions and garlic: (2 Marks)
- *Strengthen immune system.*
380. State two needs of people living with HIV and AIDS. (2 Marks)
- *Moderate exercises*
 - *Love*
 - *Care*

*******END OF QUESTION AND MODEL ANSWERS*******

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WORDS OF THANKS

Firstly to Almighty God for giving me talent and wisdom, I really appreciate.

To my mother for allowing me to exercise my freedom to education. You are a mother of no liken.

To my teachers for removing my bespectacleness. Now I can read and write.

To my 2017 Std 8 learners for pressurizing me to have this booklet produced.

TO THE USER

The book has come to serve both teachers and learners who are always at a fight with the Std 8 Science examination syllabus.

It is useful prior to examinations and also for lesson planning as it comprises of well chunked work and clear instructional objectives.

It is one of the booklets produced by the author.

NB

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