



Noah's Ark Independent Primary School

Subject: Technology	Examiner: Moyo, S.
Type: End of Year Exam	Moderator: Rwizi, A
Date: 14 November 2019	Grade: 7
Marks: 100 Marks	Time: 2 hr 30 minutes

Name: _____

Instructions:

Answer ALL the questions in the spaces provided.

Write neatly and legibly

Carefully read all questions before answering

1. Match Column A with the answers in Column B. (5x1)

Column A	Answer	Column B
Refugees		a) A type of cloth or woven fabrics for example, cotton, polyester and nylon
Shelter		b) A fire-fighter's outer shell that has to be very strong and heat resistant contains this fabric.
Nomex		c) Building houses from natural materials, and using traditional building techniques.
Textiles		d) People who have left their country because they fear for their own safety.
Indigenous construction		e) It is a basic need, like a tent or place of safety.

2. True or False

(5x1)

- a) People sometimes are forced to leave their countries due to environmental, economical or political problems.

- b) An economic crisis is a sudden down turn in business.

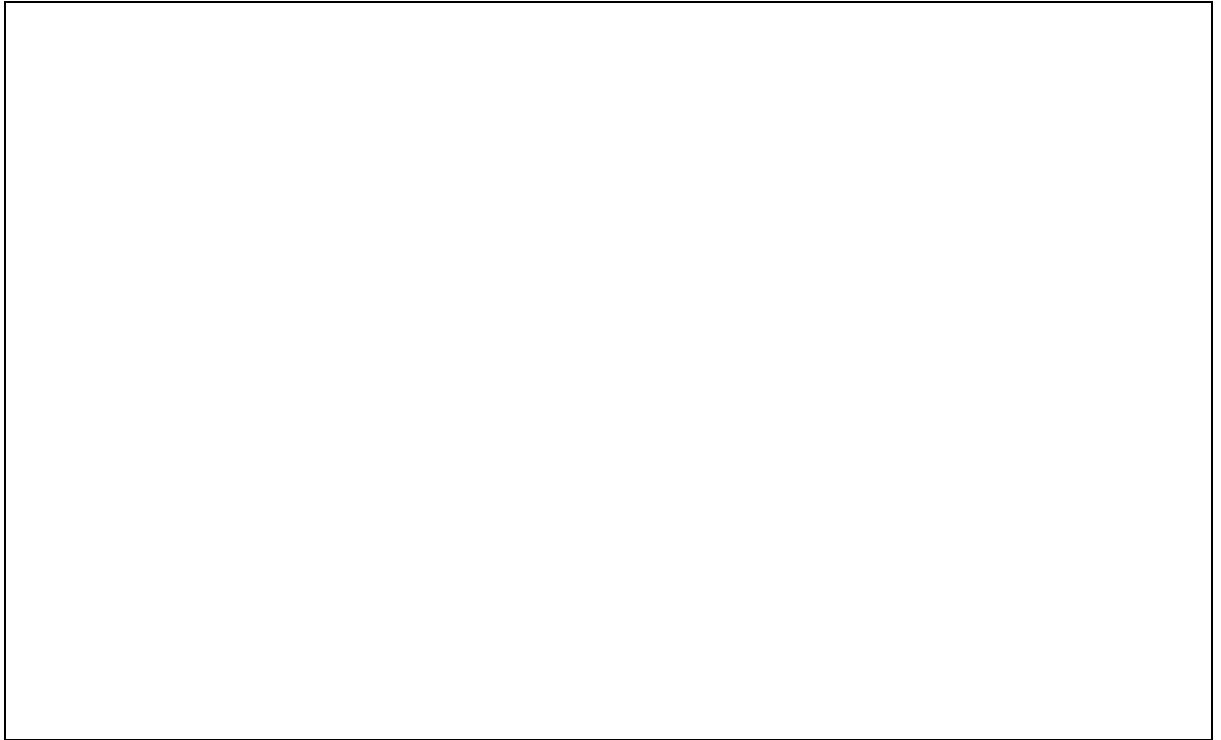
- c) The International Red Cross, Rotary International and National breweries are examples of organisations that provide help to refugees. -----
- d) Food provided to refugees should be perishable, nutritious and very expensive. -----
- e) Non-governmental organisations help to provide resources to take care of refugees. -----

3. An electric circuit has the following components: a motor, a switch and a cell.

- a. Explain the functions of each component. (3x2)

b. Draw the above circuit and clearly label it.

(8x1)



4. Food that is supplied to people in refugee situations must suit the conditions and the people living in the camp. Advise what the suppliers of emergency food should put into consideration when supplying the food. Give at least four points. (4x2)

5. Use the information below to answer the following questions.

	Number of pulleys		
	1	2	3
Effort of 1kg	Load of 1 kg	Load of 2 kg	Load of 31kg
Effort of 2 kg	Load of 2 kg	Load of 4 kg	Load of 6 kg
Effort of 4 kg	Load of 4 kg	Load of 8 kg	Load of 12 kg
Effort of 8kg	Load of 8 kg	Load of 16 kg	Load of 32 kg

5.1 Which is the weakest pulley system? (1x1)

5.2 Calculate how much stronger the pulley system with an effort of four kilograms and two pulleys is than one with an effort of two kilograms and one pulley. (6x1)

5.3 Which do you think is the best pulley system. Support your answer. (4x1)

6. Read the following case study then answer the questions that follow:

Case Study: Living through a war

John Yeuku, 27, a school teacher in Hlabanya village tells the story: "When we heard the bombs falling near the school, two other teachers and myself gathered the children and took them to hide in caves in the mountains, as we are used to doing. The next day, while the bombing continued, we started our journey with 172 children.

We walked early in the morning because of the sun; the kids were exhausted. We only had nuts to eat. We had to hide ourselves every time we heard the planes.

We reached the camp after five days of walking. The children know nothing of their parents; they are not the only ones. In the centre of the camp there are many shelters for orphans."

These Hlabanya children are now refugees from violence. But there are many more emergency situations that result in people becoming refugees.



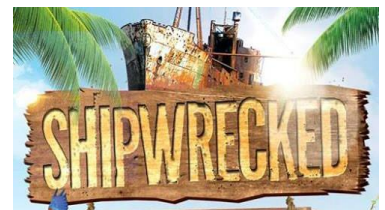
- 6.1 List the challenge's faced by the children and the school teacher in the story. (3x1)

6.2 The teacher says there were many shelters at the camp. Explain how this set up can be a problem to the refugees in the camp. (4x2)

7. Read the following scenario and then answer the questions.

SCENARIO

Imagine you and your family are on a cruise ship on your way to an exotic holiday. After a terrible storm the ship sinks and you are stranded on a deserted island. Every night there are torrential storms. In your possession you have only a few candles, matches, a bottle of paraffin, a small amount of food and water and a pocket knife. Some debris has also washed ashore, including old bed sheets.



To keep your family warm and safe you need to build a shelter. The shelter needs to be waterproof. It must be made from materials that you have in your possession or that you would find on the island. It needs to be stable, strong and durable.

7.1 Write a design brief. (1x2)

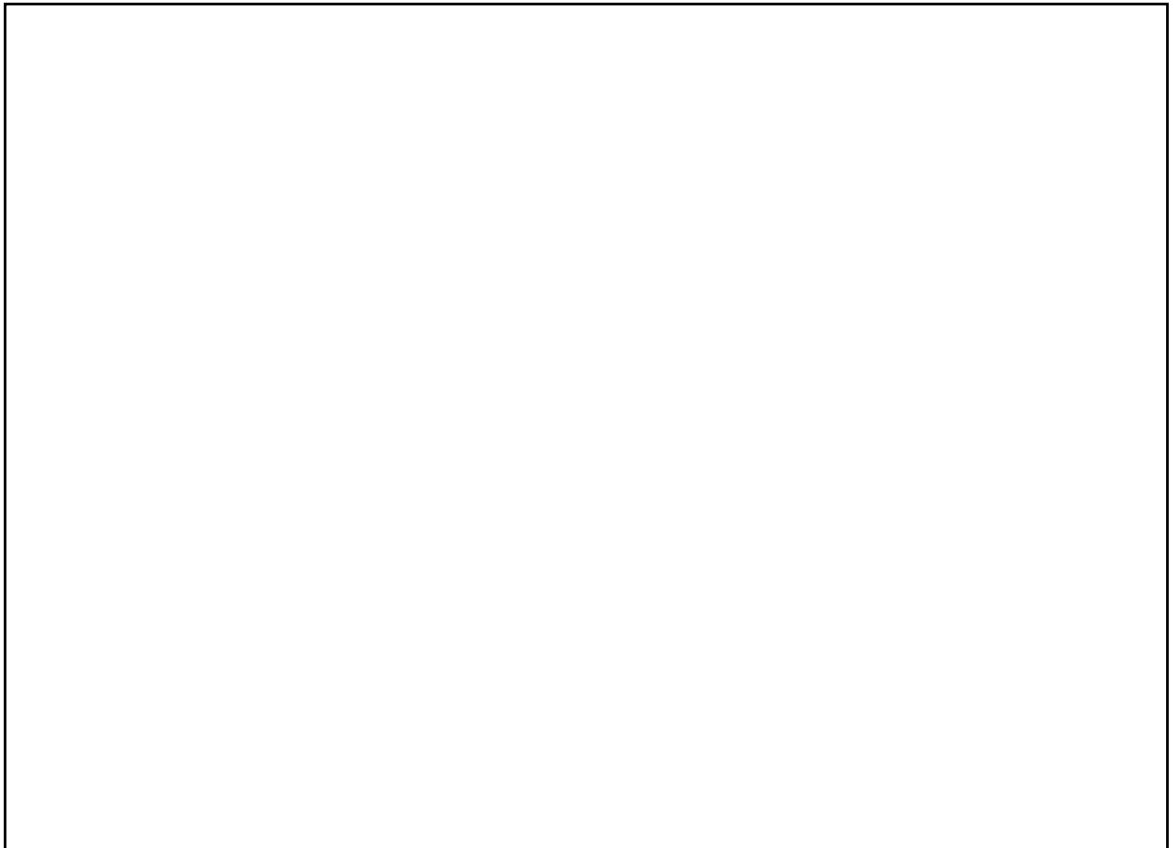
7.2 List three specifications. (3x1)

7.3 List two constraints.

(2x1)

7.4 Make a 3D oblique drawing of your solution.

(6x1)



7.5 Make a one point perspective drawing of your solution.

(4x1)



7.6 List the criteria with three points you would use to evaluate your shelter. (3x1)

7.7 Analyse the impact the shipwreck could have on the environment. (Consider, specifically, oil tankers) (2x2)

7.8 Determine the best method to waterproof your shelter using the resources you have available. (1x2)

8. There are three basic types of structures. Name them. (3x1)

9. Read the case study and look at the images then answer the questions that follow:

A group of people whose village is located at the bottom of the mountain want to use big rocks to build the kraals for their cattle to be kept inside at night. It is important that the rocks be big and very strong to make a tall wall that could not

be shaken by the strong winds. The kraal should also not be invaded by wild animals that can kill the cows. The only problem is that the rocks that they want to use to build the kraals are at the top of the mountain. They find it very difficult to carry the rocks down the steep mountain as they are very heavy. The only available things at the top of the mountain are trees, dry woods and the rocks themselves.

Figure 1 & 2 below shows the rocks that are at the top of the mountain and the kraal already made of rocks.

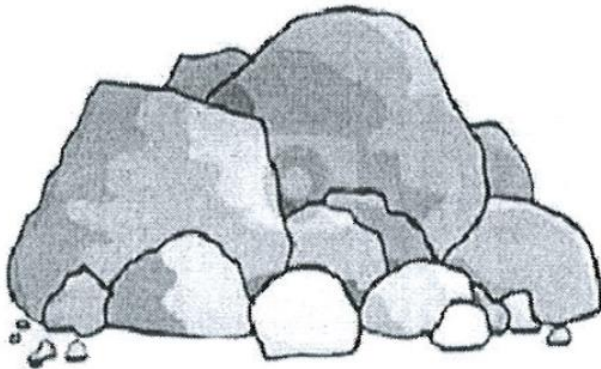


Figure 1: Rocks on top of the mountain

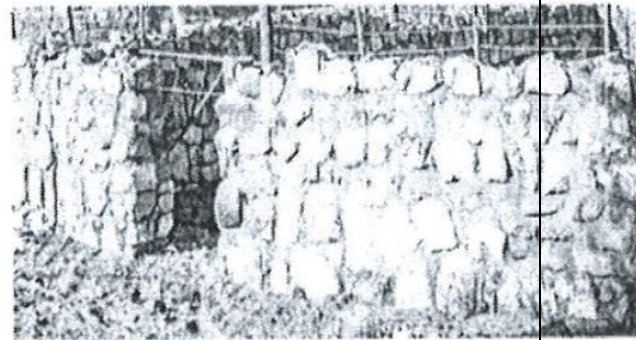


Figure 2: Kraal made of rocks

9.1 Describe how you would help these villagers bring the rocks down the mountain using the resources available, which are a small stone, a long strong piece of wood and a big rock themselves. (1x2)

9.2 Explain the advantages of using your method as compared to using the modern machines such as cranes. (1x2)

10. Read the information below and study the figures to answer the following questions.

There is a serious problem of water supply throughout the country. The department of education has decided to dig your school a borehole to solve the problem of water at your school. Your class is tasked to design a water tank stand for the 5000 litre tank that will be supplying learners with water. The following are two of the examples of water tank stands that you can choose from.

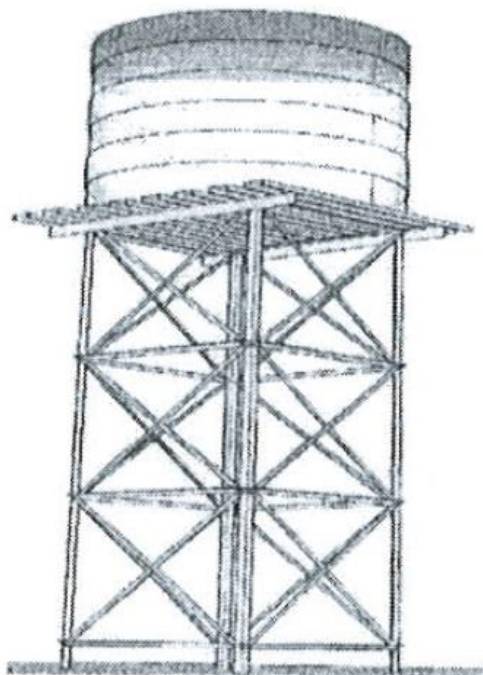


Figure 3: 1st water tank stand

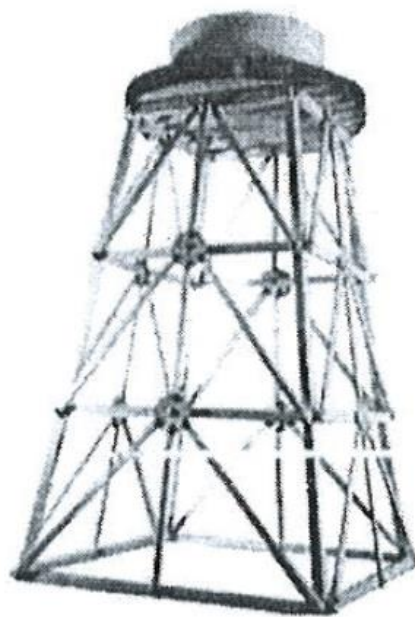


Figure 4: 2nd water tank stand

10.1 Give a detailed explanation of how you can construct the stand in a way that it will become very stable. (2x2)

10.2 What do you think is the reason for many people to mount or put the tank on a very low cement stand than on the high steel stand. (1x2)

11. Classify the following statements as advantages of cell phones and advantages of landlines. Tabulate your answer. (3x1)

- Thando only has R/ to make a call to his friend and he does so.
- Siphso phones her mother when she had a car puncture during the night coming home from work.
- A hailstorm destroyed infrastructure in your neighbourhood leaving a lot of homes destroyed but you managed to call for help and notify your brother.

Advantages of cell phones	Advantages of land lines

12. The following sentences are false, re-write them as true.

12.1 The human foot is an example of a third-class lever. (1x1)

12.2 A wax candle is a shell structure. (1x1)

13. Distinguish between a hydraulic machine and a pneumatic machine.

(2x1)

_____ / 100 Marks