



Noah's Ark Independent Primary School

Subject: Technology	Examiner: Moyo, S
Type: End of Year Exam	Moderator: Rwizi, A
Date: 23 November 2020	Grade: 7
Marks: 100 Marks	Time: 2 hours

Name: _____

Instructions:

Read the questions carefully before you start writing.

Make sure you answer ALL the questions.

Write neatly and legibly.

1. Choose the correct answer. Circle the correct letter (10)

1.1 Which of these is a metal that is not attracted by a magnet?

- a) Aluminium
- b) Gold
- c) Nickel
- d) Copper

1.2 Movement along a straight line in one direction is...

- a) Linear motion
- b) Reciprocating motion
- c) Oscillating motion
- d) Rotary motion

1.3 A crank

- a) is used in tricycles only
- b) is a second- class lever system
- c) changes linear movement to rotary movement
- d) is found in mechanisms like see-saws

1.4 Which of the following is the incorrect use of the pulley system?

- a) Cranes: to lift heavy materials
- b) Escalators: to carry people up and down
- c) Venetian blinds: to open and close
- d) Crank: to move the pedal

1.5 Sturdy means...

- a) squeeze together
- b) breaks easily
- c) cannot be changed
- d) strongly built

1.6 A short circuit happens when....

- a) the circuit is open
- b) bare wires touch
- c) there is no connection
- d) the circuit is closed

1.7 Which of these machines work using hydraulics?

- a) Air brakes
- b) A front-end loader
- c) A hammer drill
- d) A dentist's drill

1.8 You create an artistic drawing by....

- a) shading, to give the illusion of reality
- b) making sure that construction lines are faint
- c) adding measurements to the drawing
- d) using the correct scale

1.9 The state of an object being steady and unlikely to change, fall or move is....

- a) Rigidity
- b) Strength
- c) Stability
- d) None of the above

10.1 When we say that we are recycling items we mean....

- a) we renew an old untidy product by adding a coat of paint
- b) we buy refillable products whenever possible
- c) we reuse many products instead of throwing them away
- d) All of the above

2. Look at the images below. Name them and state whether they are man-made or natural structures. (5)

A.



B.



C.



D.



E.



Source: Images taken from google images.

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

3. Answer by filling in the missing words or phrases. (5)

3.1 When two people pull a rope on either side, it causes _____

3.2 A way of drawing a 3D object with a front view is called an _____ projection.

3.3 An _____ is a person who plans, designs and oversees the construction of buildings.

3.4 Unattractive visual elements such as too many poles and wires, is called _____ pollution.

3.5 The _____ of a drawing means it is drawn to a particular size so that it can fit onto a piece of paper.

4. State true or false. If false rewrite the correct statement. (8)

4.1 An emergency situation is not a serious situation that happens unexpectedly. _____

4.2 Tastifeed is given to children or adults who suffer from starvation or malnutrition. _____

4.3 A wetsuit for a driver or rescue worker is made from a synthetic rubber that is not flexible and elastic. _____

4.4 Reciprocating movement or motion is when an object turns and moves sideways. _____

4.5 The NSRI is the abbreviation for national sea rescue institute and they provide emergency services in South Africa's seas. _____

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

Column A	Answer	Column B
Refugee		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.

6. Classify the following structure as frame, solid or shell structure (5)

a.



b.



c.



d.



e.



- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

7. A cell phone company called Mobi cell is planning to put up a tower near your school. The company has asked you to prepare a design for a cell phone tower that impacts as little as possible on your school. It must blend in and not visually pollute the area.

Write a design brief, three specifications and three constraints to your design.

Design brief (2)

Design specifications (3)

8. Figure 1 shows two pulley systems. Decide if each system does or does not achieve mechanical advantage. Use the written form of $MA > 1$ or $MA < 1$ (2)

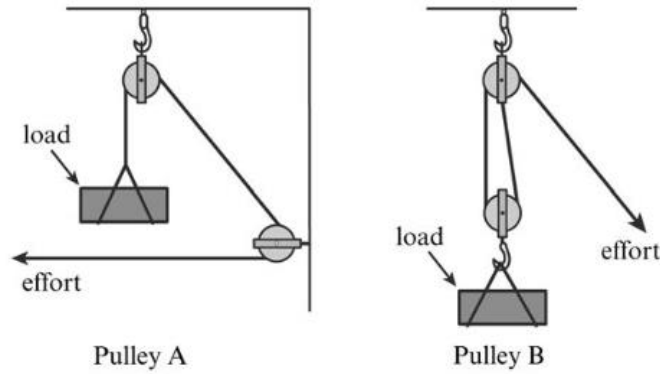


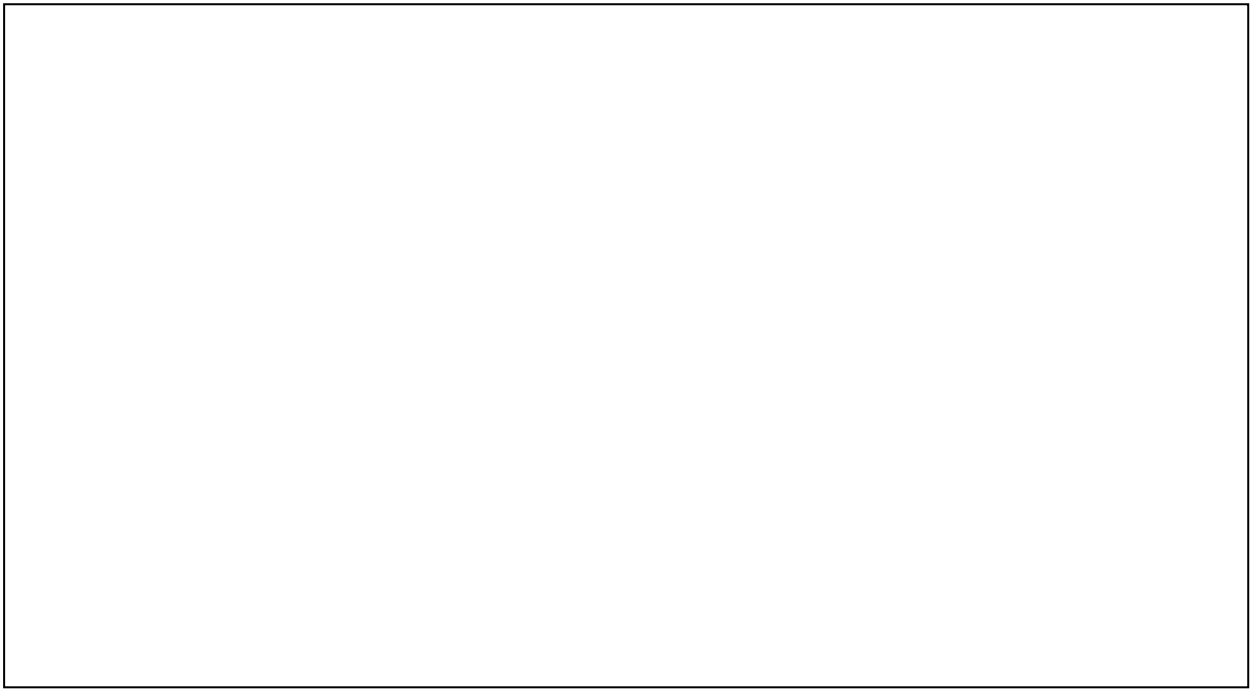
Figure 1: Two different pulley systems

Source: Today, Technology Grade 7, Teacher's Guide, Page 109

Pulley A: _____

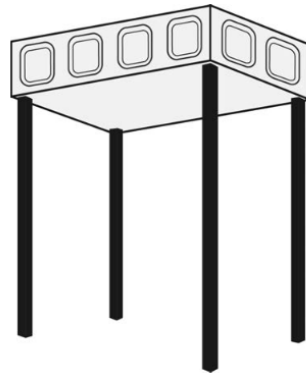
Pulley B: _____

9. Draw a circuit diagram that includes three light bulbs, a battery and a switch, the circuit must allow all the three lights to shine brightly. (6)



10. Jane after trying to connect the circuit similar to the one you drew in 9. the bulbs did not light. Suggest what could be the problem. (4)

11. Using the drawing of the water tank supported by the four poles below. You have another four poles that can be used to prevent the tank from falling over. Use four different-coloured pencils, one for each extra pole, and draw them on to the upright poles to show how you would prevent the water tank from falling over. (4)



Source: Today Technology Grade 7 Teacher's Guide, Page 65.

12. Sort the information in the table below so that when you read across they match. (8)

Mechanical system	Means of movement	Example
Hydraulics	Compressed fluids	Expanding security door
Linked levers	Fixed pivot	Jack hammer
Pneumatics	Moving pivot	Bulldozer
Paired levers	Non- compressed fluids	Scissors

Mechanical system	Means of movement	Example
Hydraulics		
Linked levers		
Pneumatics		
Paired levers		

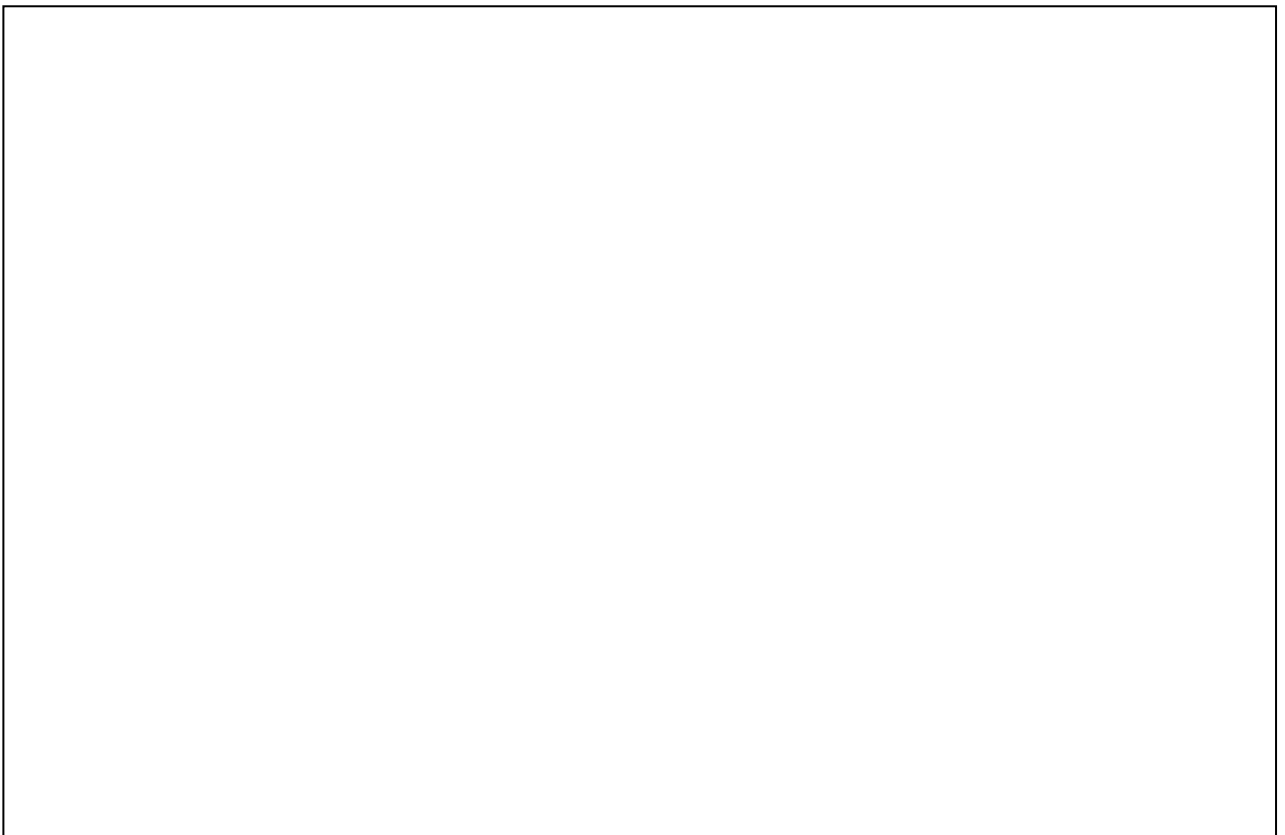
13. Food that is supplied to people in refugee situations must suit the conditions and the people living in the camp. Advise what the suppliers of emergency food should put into consideration when supplying the food. Give at least four points. (8)

14. Although the suppliers of emergency food are always willing to do so, they usually encounter problems. Describe the kind of problems they encounter. (6)

15. You are working at a refugee camp as one of the volunteers. Design a lunch pack that you would give to each refugee during lunch. Justify why you would include each item you have included. (8)

16. Distinguish between a foul-weather gear and a Bunker gear. (4)

17. Draw a mind map to summarise the properties of neoprene. (4)



_____ / 100 Marks TOTAL