



Province of the
EASTERN CAPE
EDUCATION

INTERMEDIATE PHASE

GRADE 6

JUNE 2010

TECHNOLOGY

MARKS: 50

TIME: 1 hour

This question paper consists of 9 pages.

INSTRUCTIONS AND INFORMATION

1. Choose any **TWO** Sections and answer all the questions from those two sections.
2. Sketches must be neat done in pencil

SECTION A: STRUCTURES

QUESTION 1

Match the term in **COLUMN A** with the correct description in **COLUMN B**. Write down only the letter of the word in **COLUMN A** and the correct number of the description in **COLUMN B** next to it e.g. **G – 8**.

COLUMN A		COLUMN B	
A	Hardness	1	A mixture of sand, cement and water.
B	Corrosion	2.	A method used to strengthen structures.
C	Stable	3.	A mixture of two metals to improve the properties.
D	Cross-braces	4.	A structure that does not fall over easily.
E	Mortar (dagha)	5.	The ability of a material to withstand scratching, wear and tear.
F	An alloy	6	The slow process of material being eaten away.

[6]

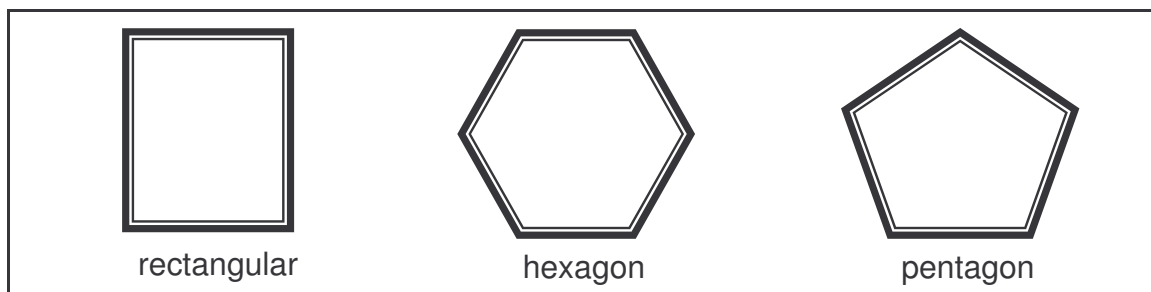
QUESTION 2

Structures can be reinforced by making it more **rigid**. How can you strengthen each of the following frames to make it strong and rigid?

2.1 2.1.1 Copy the diagrams below.

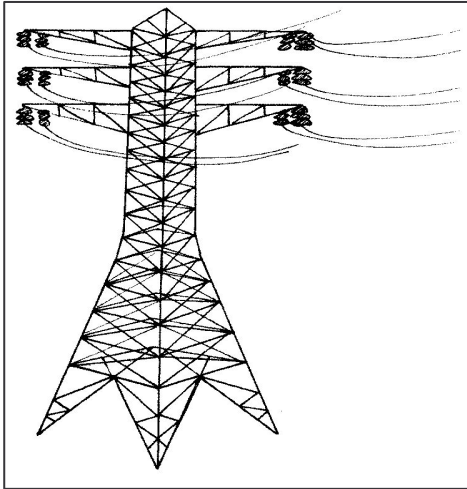
2.1.2 In each frame sketch the card strips you can add to make the whole frame rigid.

2.1.3 What shape is repeated in each frame?

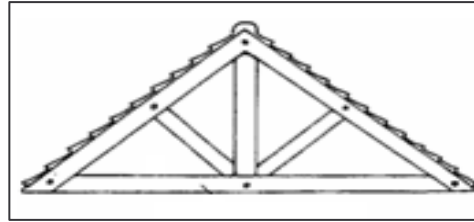


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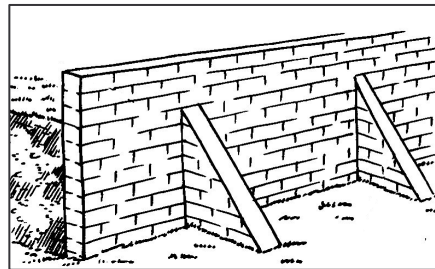
- 2.2 Identify the different types of reinforcement used in each of the following structures:



2.2.1



2.2.2



2.2.3

(3)
[12]

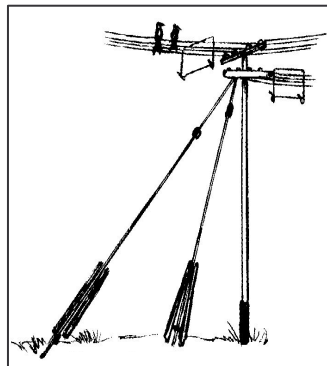
QUESTION 3

- 3.1 The stability of structures is often determined and influenced by certain factors. Name any **TWO** factors that you can think of that determine whether a structure is stable or not.
- 3.2 Structures can also be made stronger and more stable by adding additional support. What additional support has been used in each of the following structures?

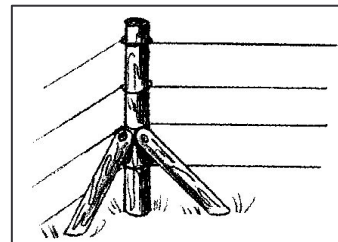
(4)



3.2.1



3.2.2



3.2.3

(3)
[7]

TOTAL SECTION A: 25

SECTION B: SYSTEMS AND CONTROL (MECHANICAL)

QUESTION 1

1.1 Choose the correct word from the list below to complete the sentences below:

sun; crank; force; machine; wind; electricity

1.1.1 A mechanism makes a ____ works.

1.1.2 A mechanism is a simple system that can change one kind of ____ into another and move it from one place to another

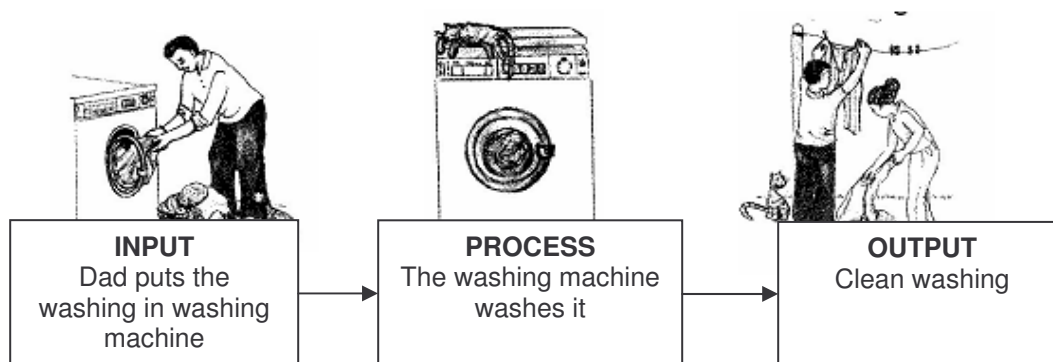
1.1.3 A ____ is a device through which rotary motion can be applied to a shaft.

1.1.4 A mechanical system needs energy to work or to move. The energy can come from many sources including the ____.

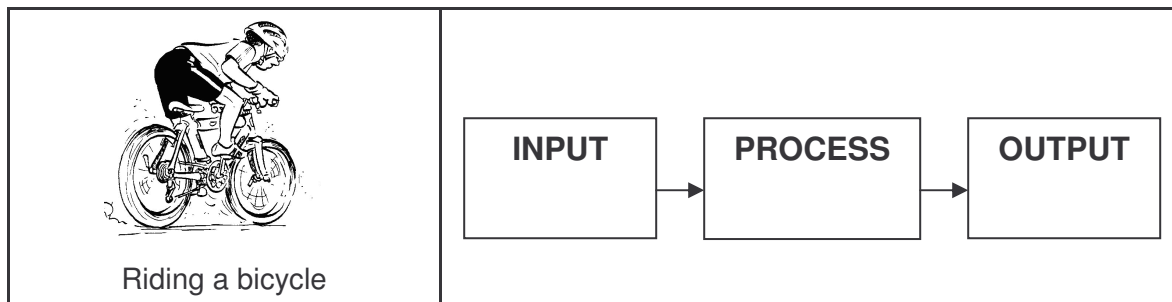
(4)

1.2 All mechanisms have an **input** (what is required to set the machine in motion), a **process** (what happens to the mechanism) and an **output** (what happens as a result of the input and the process).

The illustration below is an example of a simple system diagram.



Copy the table below and explain the input, process and output of the mechanism. Write down the name of the mechanism and complete the system diagram next to it.

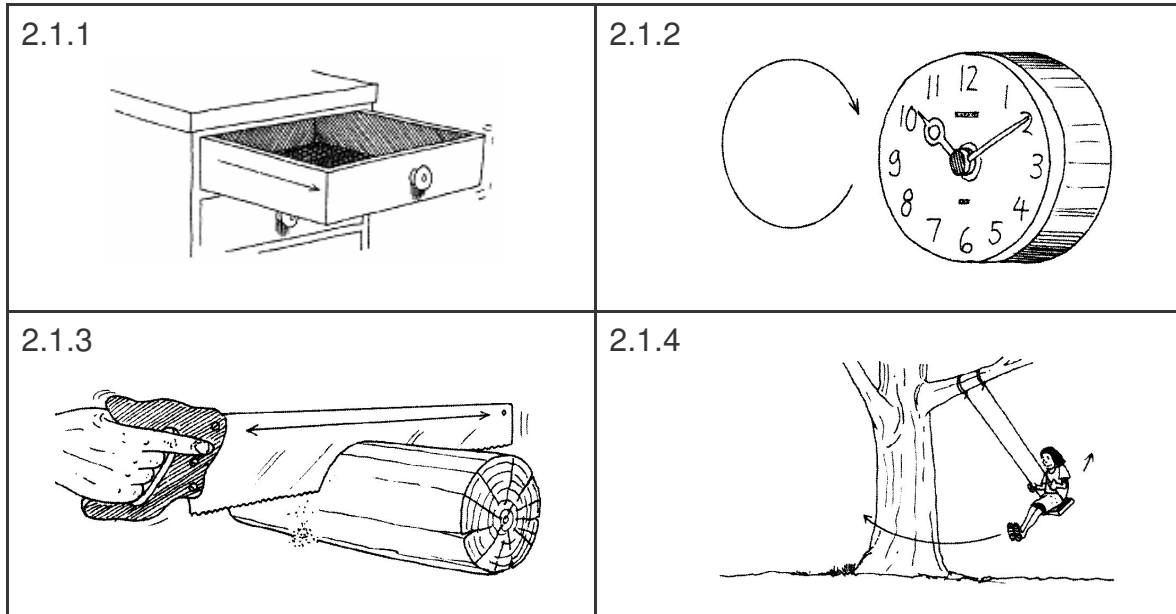


(6)

[10]

QUESTION 2

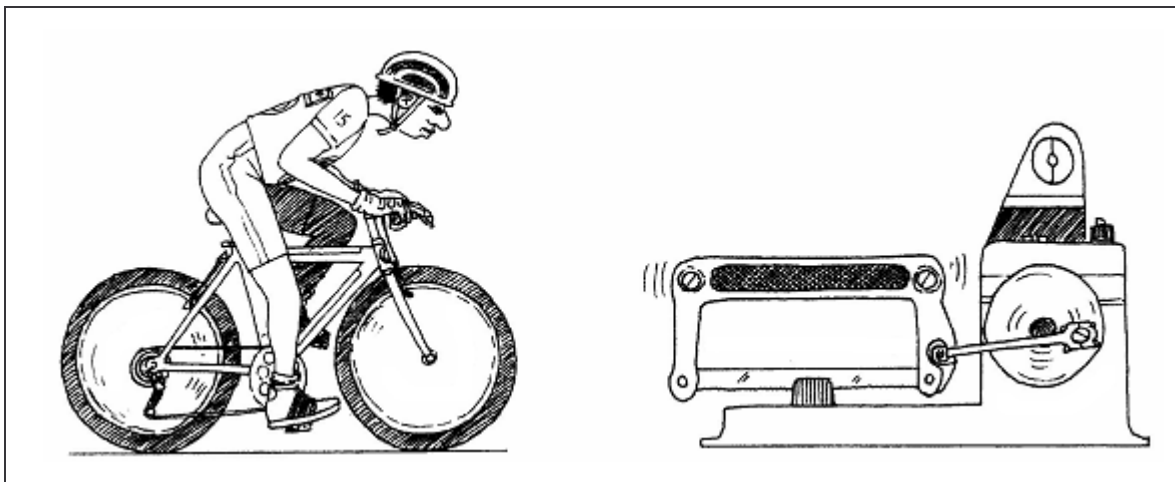
- 2.1 Mechanisms can also **change one type of motion into another**. Identify the **FOUR** types of motions illustrated in the diagrams below:



(4)

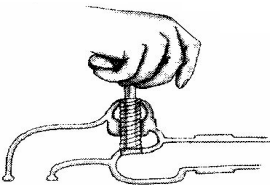
- 2.2 Study the sketches below and write down the type of movement that is demonstrated by the following:

- 2.2.1 The knees of the rider
- 2.2.2 The pedal crank of the bicycle
- 2.2.3 The saw blade
- 2.2.4 The driving wheel of the electric motor

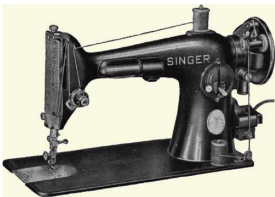
(4)
[8]

QUESTION 3

The table below identifies and explain the type of input and output motion that occur when you open a tap.

Mechanism	Input motion	Output motion
Opening a tap 	Rotary motion: Explanation: To open or close a tap, one has to turn the handle	Linear motion: Explanation: The rubber valve moves up (to open – water flows) and down (to close – water stops flowing)

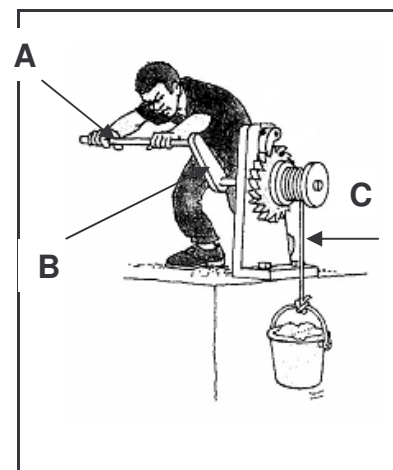
- 3.1 Identify and explain the input and output motion of the mechanism shown below. Write down the name of the mechanism and complete the table below.

Sewing machine	Input motion	Output motion
	_____ motion Explanation: ...	_____ motion Explanation:...

(4)

- 3.2 The sketch below shows a simple mechanism in use. When the person turns the handle, the bucket will be lifted or lowered. Look at the sketch and answer the following questions.

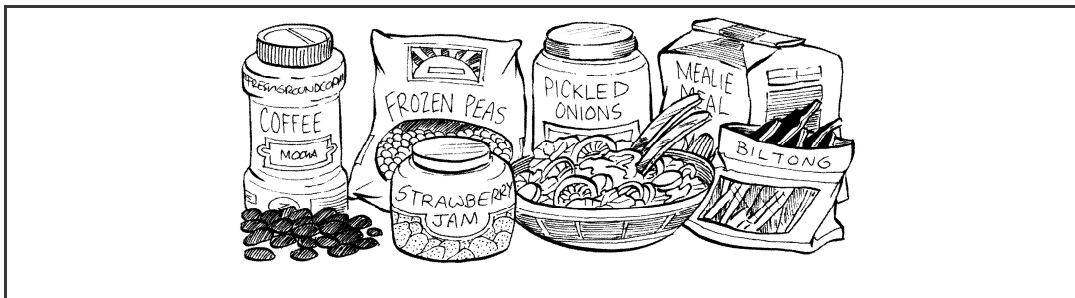
- 3.2.1 What is the correct name of the mechanism labelled **A**?
- 3.2.2 What type of motion is produced at **B**?
- 3.2.3 What type of motion is produce at **C**?

(3)
[7]**TOTAL SECTION B: 25**

SECTION C: PROCESSING

QUESTION 1

1.1 The sketch below shows different groups of processed food.



Name any **TWO** reasons why we process food.

(2)

1.2 When food is kept for a long time, bacteria and germs grow on it and it can be very dangerous and unsafe to eat. Copy the table below and sort the following food products into **perishable** and **non-perishable** foods:

jelly; raw carrots; fish; milk; apples;
meat; uncooked rice; yoghurt

Perishable foods	Non-perishable foods

(8)
[10]

QUESTION 2

2.1 We need to eat the right kinds of food and drink plenty of water to keep our bodies healthy.

Match the food group in **COLUMN A** with the correct description in **COLUMN B**. Write down only the letter of the food group in **COLUMN A** and the correct number of the description in **COLUMN B** next to it.

COLUMN A		COLUMN B	
A	Minerals and vitamins	1	These give healthy tissue and bones
B	Fats	2	These give instant energy
C	Carbohydrates	3	These provide energy that can be stored
D	Fibre	4	These keep every part of our bodies healthy
E	Proteins	5	This gives bulk in the large intestine

(5)

- 2.2 The table below shows the **FIVE** different food groups with an example of a food product under each group. Copy the table and add at least **ONE** more food product under each food group.

Protein	Carbo-hydrates	Minerals and vitamins	Dairy Products	Fats and oils
<i>mutton</i>	<i>corn flakes</i>	<i>cabbage</i>	<i>egg</i>	<i>butter</i>

(5)
[10]

QUESTION 3

- 3.1 Long ago, people all over the world found ways to make food last longer. When there was plenty of fresh food from hunting, gathering wild plants or harvesting crops, people preserved the food for times when they could not find or grow enough food.

Below is a list of preservation methods:

- drying
- canning
- freezing
- pickling
- preserving with sugar

Look at the pictures **A** to **E** below and identify the methods of preservation used for each item.



[5]

TOTAL SECTION C: 25

GRAND TOTAL: 50