Noah's Ark Independent Primary School

Subject: Technology	Examiner: Moyo, S
Type: End of Term Three	Moderator: Rwizi, A
Date: 5 October 2020	Grade: 7
Marks: 60 Marks	Time: 2 hours

Name: _____

Instructions:

Answer ALL the questions in the spaces provided.

Write neatly and legibly

Carefully read all questions before answering

Section A

1. Give a term for each definition. (3)

   1.1 A rod forming part of a structure and is designed to resist compression. _____

   1.2 The state of being stable. _____

   1.3 The load bearing part of a structure on top o which other parts are built. _____

2. Are the following statements true or false. If false, re-write them to be correct. (5)

   2.1 Trees found in a forest are known as natural structures.

   _____

   _____

   2.2 The skin that covers a body of a human being is man-made.

   _____

   _____

2.3 The clay pots used by traditional South African cultures to store grain are natural structures.

_____

_____

3. Study the image below then answer the following questions.

A B

Images taken from Technology Today Grade 7 Learner's book, page 77

3.1 What is common with the two structures? (2)

_____

_____

_____

3.2 Briefly explain why structure A is having triangular shapes on its body. (3)

_____

_____

_____

_____

3.3 Give the term used to describe what is happening with structure B. (1)

_____

3.4 Suggest why structure B is created in the way it is. (5)

_____

_____

_____

_____

_____

4. Read the case study below then answer the questions.

Case study How cellphones affect bees

Research has shown that the signals from cellphones affect bees.

Bees react to cellphones placed near or in hives. The bees sense the signals transmitted when the phones rang and make a buzzing noise during the calls.

The phone signals confuse the bees and cause them to fly erratically.

Bees are pollinators so they are a crucial part of our agricultural and ecological systems.

Technology Today Grade 7 Learner's book, page 101

4.1 Justify why people should be concerned if bees are affected by cellphone signals. (4)

_____

_____

_____

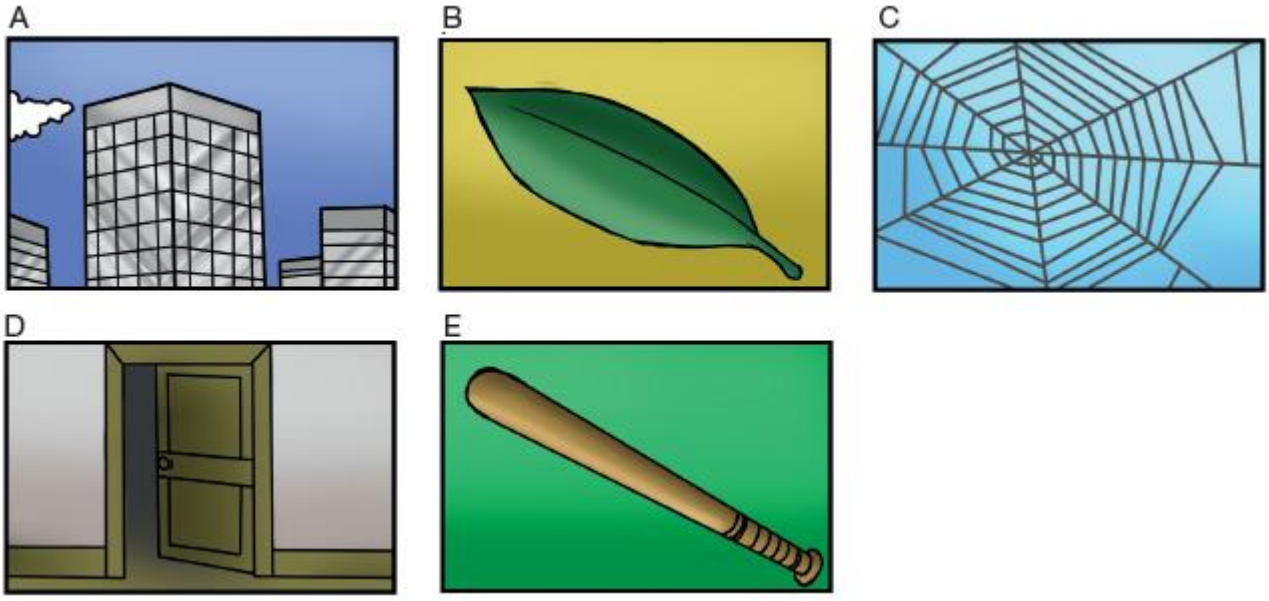
_____

4.2 Explain why it is important to consider all possible impacts of technology when designing a product. (2)

_____

_____

5. Classify the following structures in the table provided. (5)



Images taken from Oxford Successful Technology Grade 7 Learner's Book, page 57

Structure	Natural	Man-made	Solid	Frame	Shell

Section B:

1. The figure below shows a winch, which is a type of crank.

Platinum Extension and Remediation Worksheet Grade 7 Technology, page 16.

1.1 Define a crank. (4)

_____

_____

_____

_____

1.2 Explain what cranks are used for. (2)

_____

_____

1.3 Give two other examples of machines that use a crank. (2)

_____

_____

2. Nationally, about two billion rands' worth of telephone cables have been stolen, disrupting the lives of our citizens, endangering the safety of communities and causing unnecessary costs. Two members of a syndicate who disrupted telephone communications by stealing copper telephone wire from Telkom were sentenced to eighteen years in jail.

2.1 Explain whether you think the prison sentence they received was justified. (2)

_____

_____

2.2 Why is cable theft a threat to national security? (2)

_____

_____

2.3 Suggest how the amount of cable theft in South Africa could be reduced. (2)

_____

_____

3. Distinguish between permanent and temporary magnets. (2)

_____

_____

4. Name the magnets below (2)

Figure 1

Figure 2

_____ _____

5. Which poles of the magnet attracts and which ones repel. (2)

_____

_____

6. Read the Scenario below then answer the questions.

Scenario
Scrap-metal dealers play a vital role in the recycling of metal products. As you learnt in Chapter 7, people collect different kinds of metal products and sell them to scrap-metal dealers. The dealers sort the metal into different types, for example, ferrous and non-ferrous metals. The ferrous metals (iron and steel) are magnetic and so they can be separated out from non-ferrous metals using an electromagnet on the end of a crane. The crane operator can switch on the electricity to the electromagnet from the cab of the crane. The metal is attracted to the electromagnet and is lifted up. It is deposited in a collection point when the crane operator switches off the current to the electromagnet.

Today, Technology Grade 7 Learner's Book, page 148.

6.1 Write a design brief for the crane. (4)

_____

_____

_____

_____

_____

6.2 State at least one of the design specifications to be considered. (1)

_____

_____

6.3 Before making the crane, some sketches will need to be made using free hand sketching. Explain two advantages of free hand sketching. (2)

_____

_____

_____

6.4 Evaluate the importance of using an electromagnet in recycling. (3)

_____

_____

_____

_____

____ / 60 Marks