

**RAMOTSHERE MOILOA SUB-DISTRICT**

**TECHNOLOGY**

**TERM 2 EXAMINATIONS**

**JUNE 2018**

**GRADE 8**

**MARKS: 100**

**DURATION: 2 HOURS**

**NAME OF LEARNER: \_\_\_\_\_**

**CLASS: \_\_\_\_\_**

**INSTRUCTIONS**

1. Answer all questions.
2. Write neatly and legibly.
- 3. All the answers should be written in the spaces provide in the question paper.**
4. Follow instructions promptly.
5. All the drawings should be in pencil, neat and fully labelled.
6. Colored pencils may be used only for shading where such is required.

**This Question paper consists of 14 pages.**

**Question 1**

1.1 Frame structures support the load from ...

- A. Inside
  - B. Outside
  - C. Both inside and outside
  - D. Neither inside nor outside
- (1)

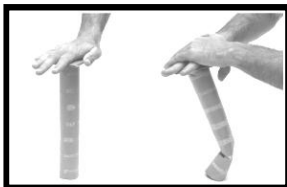
1.2 Bending as part of structural failure is usually caused by lack of...

- A. Strength
  - B. Stiffness
  - C. Stability
  - D. Hardness
- (1)

1.3 Which of the following causes a structural failure?

- A. Poor Quality of materials
- B. Bad design
- C. Weak foundation (1)
- D. All of the above

1.4 Which force is applied in the figure below



- A. Bending
- B. Compression
- C. Torsion
- D. Tension

1.5 Bio-degradable materials are...

- A. Environmentally friendly as they easily decompose
- B. Cannot decompose

- C. None of the above
- D. All of the above (1)
- 1.6 One of the **negative** impacts of plastics scattered in our environment is that...
- A. If eaten by animals, they could die.
- B. They make the environment clean
- C. They are expensive to buy
- D. Some do decompose (1)
- 1.7 The disadvantage of wood as a source of energy as **compared** to electricity is that...
- A. Wood is expensive
- B. Wood is readily available
- C. Open fire from wood can heat the pots faster
- D. Smoke from open wood fire causes air pollution (1)
- 1.8 The force acting on a chair when a person is sitting on the chair is \_\_\_\_\_
- A. compression
- B. gravity
- C. push (1)
- 1.9 The outer line in a drawing is shown by means of a \_\_\_\_\_ line.
- A. dimension
- B. Thin
- C. dark bold (1)
- 1.10 A structure member under tension is a \_\_\_\_\_
- A. pillar.
- B. tie
- C. load (1)

**[10]****Question 2**

2.1 Which of the following statements are **TRUE** and which are **FALSE**? Just write true or false in the space provided at the end of each question.

2.1.1 Materials are said to be recyclable if they can be remade in a different form so as to be used again. \_\_\_\_\_ (1)

2.1.2 One of the disadvantages of modern technology is that it can cause fatal accidents or even dearth. \_\_\_\_\_ (1)

2.1.3 A Buttress can be used to support the wall of the dam. \_\_\_\_\_ (1)

2.1.4 The steel ropes that are used to make the bridge stable are called stay cables/wires. \_\_\_\_\_ (1)

2.1.5 All structures are natural. \_\_\_\_\_ (1)

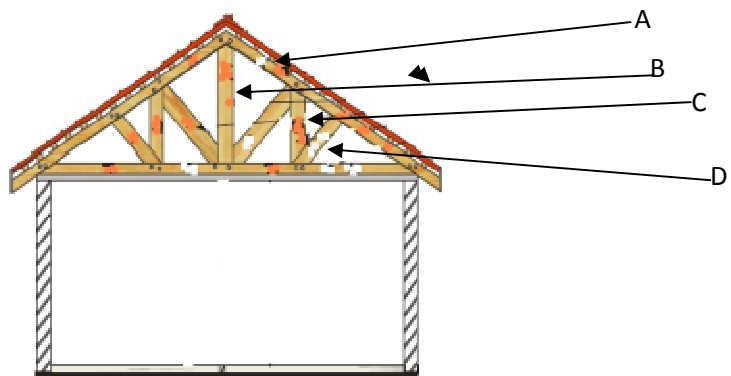
**[5]**

**Question 3**

**3.1** In a local farmstead, majority of houses are roofed with thatch. The problem of this area is that it is usually affected by draught and veld fires which burn the thatch as it easily burns. You are now tasked to change the roofing of these houses to the one that cannot be easily affected by fire.



**FIGURE 1: THATCHED HUT**



**FIGURE 2: PITCHED ROOF**

3.1.1 Carefully read through the above scenario and with the help of Figure 1 and Figure 2, formulate your own design brief to solve the existing problem. (2)

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3.1.2 Figure 2 was drawn when the design for the solution was made. Write the names of the members labeled A – D on the spaces provided below. (4)

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

D. \_\_\_\_\_

3.2 Give a reason why structural member: (3)

3.2.1 Fracture \_\_\_\_\_

\_\_\_\_\_

3.2.2 Bend \_\_\_\_\_

\_\_\_\_\_

3.2.3 Topple over \_\_\_\_\_

\_\_\_\_\_

3.3 What is the purpose of internal cross bracing and triangulation in structures? (1)

\_\_\_\_\_

3.4 Name any **THREE** types of bridges. (3)

a) \_\_\_\_\_

b) \_\_\_\_\_

c) \_\_\_\_\_

**QUESTION 4**

Look at the picture of plastic bag below and answer the question 2.



4.1. Which material is biodegradable between plastic and paper? Give reason for your answer.

(2)

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4.2. Which is natural material between plastic and paper? Give reason for your answer. (2)

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4.3. Which bag could carry liquid between plastic and paper material? Explain your answer.

(2)

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4.4. Is it the good or bad idea to sell plastic bags in shops? Give two reasons for your answer. (4)

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4.5 Is the plastic in the environment harmful for animals? Explain your answer. (2)

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4.6. What is the difference between thin and thick plastic bags? (4)

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4.7. Which shops are mainly using paper bags between grouser shops and clothing shops? Give two reasons and one example of the shop. (4)

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4.8. List five waste materials that could be found in your area. (5)

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[25]

**QUESTION 5**

5.1 During lunch time, learners at your school buy food in plastic packages. They then throw them everywhere around the school yard thus causing littering.

Suggest **THREE** ways to solve this littering problem. (6)

a) \_\_\_\_\_  
\_\_\_\_\_

b) \_\_\_\_\_  
\_\_\_\_\_

c) \_\_\_\_\_  
\_\_\_\_\_

5.2 Why is the burning of plastics not very suitable for solving littering problem? (2)

\_\_\_\_\_  
\_\_\_\_\_

5.3 FIGURE 5 below shows a man throwing different sorts of garbage in the flowing stream. Use it to answer the question that follow.



**FIGURE 5: MAN THROWING GARBAGE IN THE RIVER**

Give 4 negative effects of throwing such garbage in the stream. (4)

5.3.1 \_\_\_\_\_

5.3.2 \_\_\_\_\_

\_\_\_\_\_

5.3.3 \_\_\_\_\_

\_\_\_\_\_

5.3.4 \_\_\_\_\_

\_\_\_\_\_

5.4 Which types of materials are said to be bio-degradable?

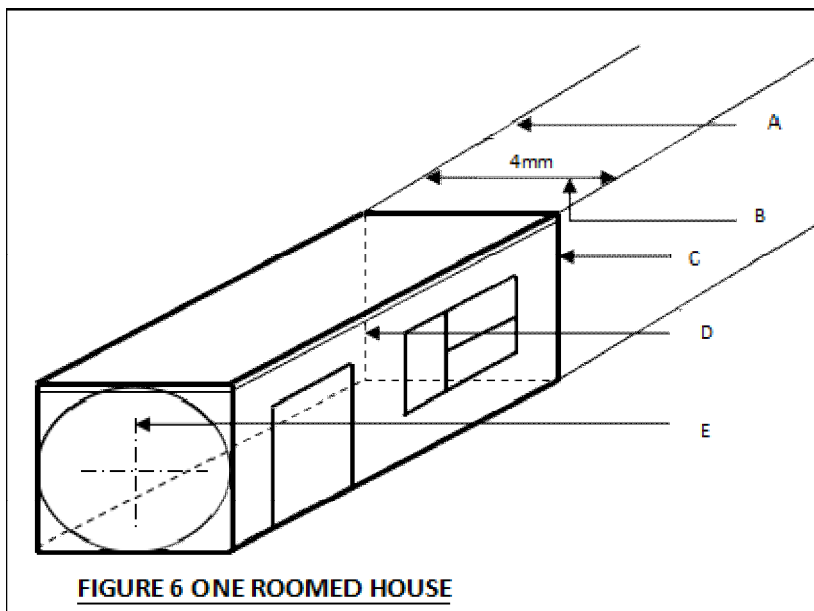
(2)

\_\_\_\_\_

[14]

**Question 6**

6.1 FIGURE 6 below shows the oblique drawing of the one roomed house. Use it to answer the questions that follow.



6.1.1 Give the names of the lines numbered A – E

- A. \_\_\_\_\_ (1)
- B. \_\_\_\_\_ (1)
- C. \_\_\_\_\_ (1)
- D. \_\_\_\_\_ (1)
- E. \_\_\_\_\_ (1)

6.1.2 Draw the house in FIGURE 6 in 2 points perspective in the box below. (12)



(17)

**Question7.**

Read the case study below and answer questions that follow

**HELP PREVENT THE PLASTIC PERIL!**

Plastic bags are so convenient that South Africans use approximately eight billion of tons of them annually. Even **biodegradable** plastic bags take 15 to 100 years to break down. Thin plastic bags don't biodegrade. Some plastics are photodegradable (This means that the sunlight breaks them down into **smaller toxic** bits) and then they contaminate the soil and waterways. Because they are light and moist-resistant, they can travel long distances into the sea.

The result is not only a solid waste problem; animals choke on plastic or they get tangled in and trapped by plastic. Hundreds of thousands sea birds, sea turtles, whales and other marine mammals die each year from plastic they mistaken for food. You can make a difference! Take part in our beach cleanup on the first Sunday of each month between (9:00 and 16:00.)

Source: [Technology today]

7.1. Explain what bio-degradable materials are? (2)

7.2. Give one negative impacts of plastic. (2)

7.3. What can be done to reduce the negative impact of plastic? (2)

7.4. Identify any two-biodegradable waste in your school environment. (2)

**[8]**

