



TECHNOLOGY COMMON EXAMINATION

GRADE 7

TERM 4

2019

TIME: 1 Hour

MARKS: 60

No. of Pages: 9

Learner's Name: _____

Date: _____ **Grade 7** _____

INSTRUCTIONS:

1. Read all the questions carefully before answering them.
2. Answer all the questions in this answer book.
3. Follow the instructions for every question carefully.
4. Write clearly and neatly.
5. Use pencil only when drawing/ sketching.

GOOD LUCK!

SECTION A – TECHNOLOGICAL KNOWLEDGE AND UNDERSTANDING [18 MARKS]**Question 1**

Match Column A with Column B.

Column A	Column B
1. Magnetic	a) Moving
2. Refugee	b) Works with liquids
3. Hydraulic system	c) Someone who flees their home after an emergency
4. Sustainable	d) Ferrous
5. Dynamic	e) Does not harm the environment
6. Battery	f) Light bulb
	g) Energy source

1	2	3	4	5	6

Total: 6 Marks**Question 2**

Classify the following pictures into man-made and natural structures.

2.1.



_____ (1)

2.2.



_____ (1)

2.3.



_____ (1)

Total: 3 Marks

Question 3

Categorise the following levers and indicate the fulcrum, effort and load.

3.1. _____ - Class Lever

($\frac{1}{2}$)



a) _____

($\frac{1}{2}$)

b) _____

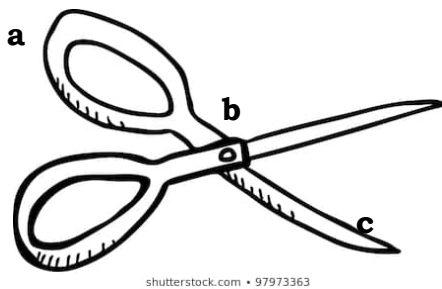
($\frac{1}{2}$)

c) _____

($\frac{1}{2}$)

3.2. _____ - Class Lever

($\frac{1}{2}$)



a) _____

($\frac{1}{2}$)

b) _____

($\frac{1}{2}$)

c) _____

($\frac{1}{2}$)

Total: 4 Marks

Question 4

The following statements are all untrue. Find the errors to make the statements true.

4.1. When a small input force is turned into a bigger output force it causes no mechanical advantage.

(1)

4.2. A sketch is a fixed relationship between a real object and a drawing.

(1)

4.3. Gasses are pressurised therefore there is a delay in the movement of a hydraulic system.

(1)

4.4. In a circuit, electrons move from the positive to negative sides of the battery.

(1)

4.5. Compression is a strengthening technique.

(1)

Total: 5 Marks

SECTION B – TECHNOLOGICAL PROCESSES AND SKILLS [30 Marks]

Question 5

Read the scenario below and answer the questions that follow:

Scenario

On 2 September 2019 hurricane Dorian hit the islands of the Bahamas. It was classified as a Category 5 storm and winds reached up to 180 miles (290 km) per hour. Officials said that it was the strongest storm, to hit the islands, on record. This natural disaster caused mass death and destruction. Thousands of people were left homeless and destitute. The government was immediately forced to set up refugee camps to accommodate these people. The camps had to meet the basic needs of refugees. The shelters should be wind- and fireproof, it needs to be cost effective to make, strong and sturdy and at least one strengthening technique should be used.



Imagine that you are tasked with designing and making a prototype of an emergency shelter.

5.1. Write a short design brief (in paragraph form) explaining the following:

- What is the problem?
- Who will benefit from the solution?
- Why is the solution needed?
- **Remember: Start your sentence with 'I must design and...'**

(3)

5.2. Write down the specifications.

- a) _____ (1)
- b) _____ (1)
- c) _____ (1)
- d) _____ (1)

5.3. Name 2 other disasters that can cause refugees to flee their homes.

a) _____ (1)

b) _____ (1)

Total: 9 Marks

Question 6

Draw a flow diagram to show the sequence that you would follow to build an emergency shelter.

Remember:

- The first shape should identify the topic
- The next shape should show the first step of the process.
- Arrows show the direction of the process from the first step to the end. Follow the steps to read the process in the correct order. They can run horizontally or vertically.
- The last shape is used for the last step in the process.
- At least 4 steps should be indicated.

(6)

Question 7

Design your own rubric to evaluate a possible prototype. Give SIX points

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

(6)

Total: 12 Marks**Question 8**

Design two different sketches of possible shelters. Remember to add suitable labels.

8.1. Idea 1 – 3D Oblique Drawing

	Labels
	

(4½)

Rubric

Criteria	0	1	1½
Accuracy	No attempt at drawing a 3D oblique drawing was made.	The design resembles a 3D oblique drawing.	The design is a 3D oblique drawing, very well drawn.
Line types (feint, hard, construction lines)	No attempt was made to draw different line types.	Some attempt at different line types was made.	Different line types were used well.
Labels	No labelling was done.	Some labelling was done.	Design was labelled well.

8.2. Idea 2 – Perspective Drawing

	Labels

(4½)

Rubric

Criteria	0	1	1½
Horizon line/ vanishing point/ ground line indicated.	None	At least two aspects of the criteria was met.	All aspects of the criteria of single point expectees drawing aspects were met.
Accuracy	Design does not resemble a single vanish point drawing and no vanishing lines were attempted.	Design resembles a single vanishing point drawing and vanishing lines were attempted.	Design is an accurate representation of a single vanishing point perspective drawing, with accurate vanishing lines
Labels	No labelling was done.	Some labelling was done.	Design was labelled well.

Total: 9 Marks**SECTION C – TECHNOLOGY, SOCIETY AND THE ENVIRONMENT [12 Marks]****Question 9**

Answer the following questions.

9.1. Name the three main needs of refugees

- a) _____ (1)
- b) _____ (1)
- c) _____ (1)

Total: 3 Marks

Question 10

Complete the following.

10.1. During an emergency situation food is one of the three basic needs of refugees. Describe the function of each of the four food groups that they will need and give an example of each.

a) Carbohydrates

_____ (1)

b) Proteins

_____ (1)

c) Fats and oils

_____ (1)

d) Vitamins and minerals

_____ (1)

10.2. What do you call the society that is in charge of protecting refugees?

_____ (1)

Total: 5 Marks

Question 11

Natural disasters have shown a sharp increase in recent years. What do we call the phenomenon that leads to this increase and give 3 ways we can help save our planet?

a) _____ (1)

b) _____ (1)

c) _____ (1)

Total: 4 Marks

GRAND TOTAL: 60 MARKS