



**HILLCREST HIGH SCHOOL
TECHNOLOGY
JUNE EXAMINATION 2022
GRADE 8**

TOTAL: 100 MARKS

TIME: 1 HOUR

**EXAMINER: MRS J M BEGA
MRS N MAGUBANE**

MODERATOR: MRS T TONKIN

NAME: _____ GRADE 8 _____

SUBJECT EDUCATOR: BEGA/STOLS/TONKIN /MAGUBANE

INSTRUCTIONS

1. The question paper consists of 4 questions and 6 pages including the cover page.
2. Answer all questions in the spaces provided.
3. Write your name and grade clearly and neatly in the space provided.
4. Highlight your Technology teacher's name above.
5. Technological based answers must be written.
6. All drawings/sketches must be completed using a sharp pencil and drawing instruments unless otherwise instructed.
7. Marks will be deducted for untidy work especially drawings/sketches.

Q1	Q2	Q3	Q4	TOTAL	PERCENTAGE
25	10	30	35	100	%

QUESTION 1: SHORT QUESTIONS**[25]**

1.1 Highlight or circle the correct answer in the multiple-choice questions below:

1.1.1 A house is classified as a..... structure

- A Solid
- B Frame
- C Shell
- D Natural

(1)

1.1.2 are used to show hidden details

- A Centre lines
- B Construction lines
- C Outline
- D Dashed lines

(1)

1.1.3 The purpose of dimensioning in graphic communication is to make sure that the drawing....

- A is neat
- B is accurate
- C informs the reader of its size
- D is complete

(1)

1.1.4 A bridge that is supported on one end only is known as a / an....

- A Arch bridge
- B Suspension Bridge
- C Clapper Bridge
- D Cantilever Bridge

(1)

1.1.5 A force that causes a member to stretch is....

- A Tension
- B Bending
- C Twisting
- D Shearing

(1)

1.2 Match the DEFINITION in **Column A** with the correct TERM in **Column B**

(5)

DEFINITION	TERM		Letter
1.2.1 2 Dimensional	A Investigating	1.2.1	
1.2.2 Provide stability to the roof truss	B Up-scaling/scaling up	1.2.2	
1.2.3 3 Dimensional	C King post	1.2.3	
1.2.4 Finding information about a given topic	D Orthographic	1.2.4	
1.2.5 Drawing objects bigger than its original scale drawing	E Isometric	1.2.5	



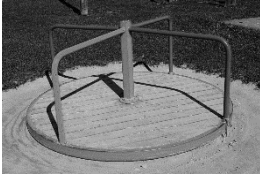
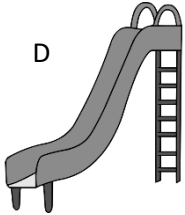
1.3 Rearrange the following steps of a design process. Write numbers A-E e.g. A,B,C...

- A Communicate
- B Designing
- C Making
- D Investigating
- E Evaluating

(5)

- 1.4 Complete the sentences below by filling in the missing word / term: (6)
- 1.4.1 Reciprocating motion is a _____ and _____ motion.
- 1.4.2 _____ motion is a circular or turning motion.
- 1.4.3 _____ motion is the movement in a straight line.
- 1.4.4 Oscillating motion is a _____ back and _____ motion.

1.5 Identify the types of motion below:

A  B  C  D  (4)

A _____ C _____

B _____ D _____

QUESTION 2: WHAT IS TECHNOLOGY

[10]

- 2.1 Indicate whether the following is TRUE or FALSE. (5)
- 2.1.1 Technology is the use of knowledge, skills and resources to meet human wants and needs. _____
- 2.1.2 Communication technology has advanced in recent years. _____
- 2.1.3 Innovation and creativity are a disadvantage of technology. _____
- 2.1.4 Job loss is an advantage of technology. _____
- 2.1.5 Technology is developed by humans. _____

2.2 Fill in the system diagram below for a food processor. (5)

INPUT	PROCESS	OUTPUT
(2)	(2)	(1)

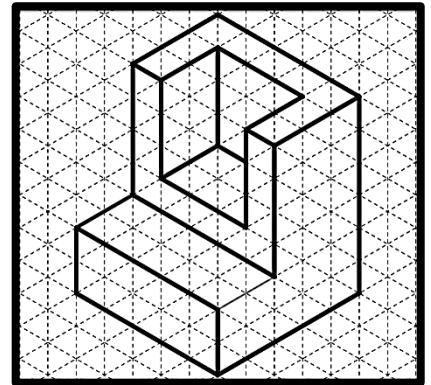
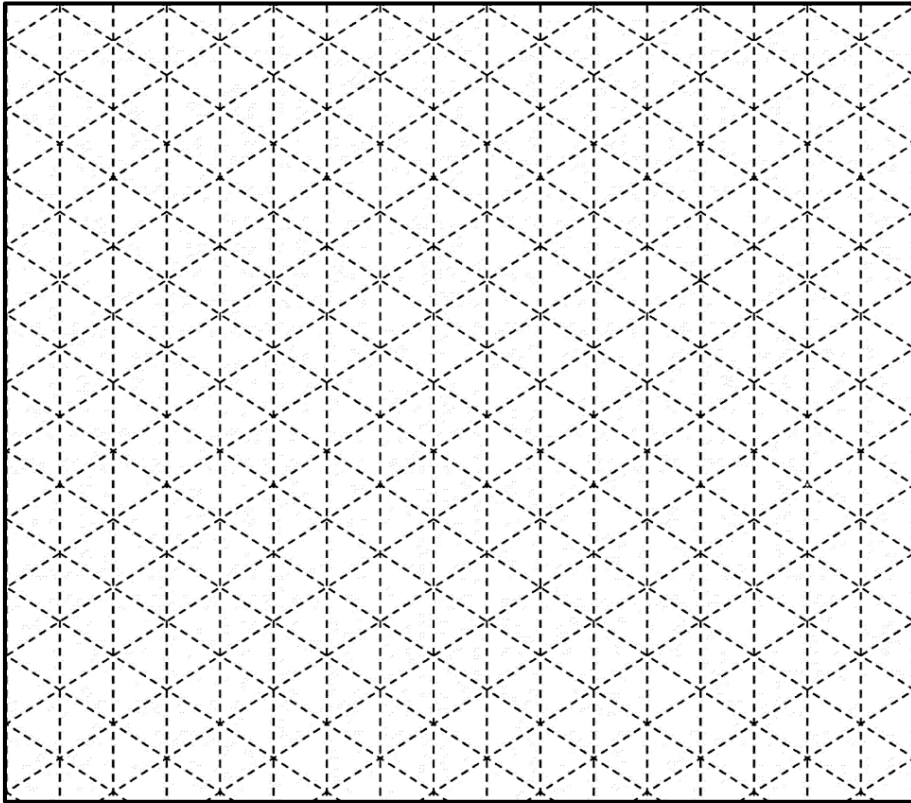
QUESTION 3: GRAPHIC COMMUNICATION

[30]

3.1 Draw the different lines that are used in graphic communication. (5)

Type of line	Draw the line
Construction line	
Hidden detail line	
Dimension line	
Outline	
Centre line	

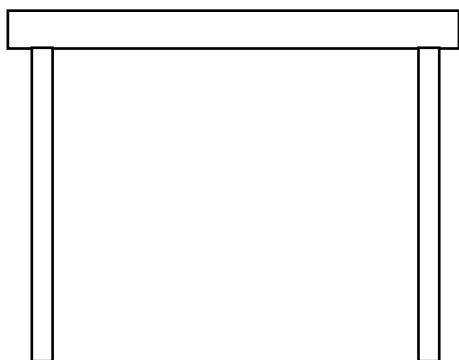
3.2 The given figure shows an isometric view of a simple object. Copy the object onto the isometric grid below. Colour in each view a different colour. (15)



Sides = 8
Colour views = 5
Linework / neatness = 2

3.3 Complete the table below in single – perspective drawing. Add colour to your drawing. (10)

● VP



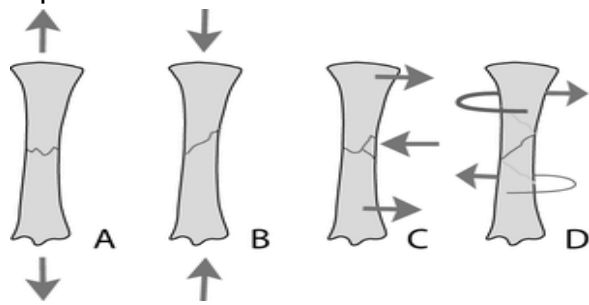
QUESTION 4: STRUCTURES

[35]

4.1. Draw a rough sketch of a King post roof truss and label the rafter, king post, strut and tie beam. (8)

4.2. Identify the following type of forces on the pictures below: (4)

- A _____
- B _____
- C _____
- D _____



4.3. Define the following terms:

4.3.1. Pylon (1)

4.3.2. Cross – bracing (1)

4.3.3. Triangulation (1)

4.4. Study the pictures below and answer the questions that follow:



4.4.1. Name the parts shown in each picture.

- A _____
- B _____
- C _____

(3)

4.4.2. What is the function of each member above?

(3)

A

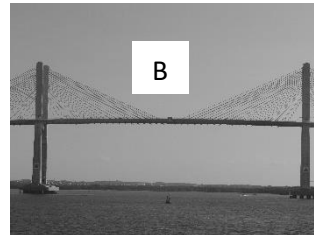
B

C

4.5. Bridges are needed to span greater distances. Study the bridge pictures below and answer the questions that follow.



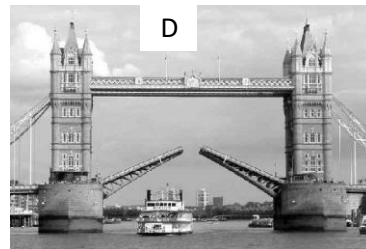
A



B



C



D

4.5.1. State the type of bridge shown in each of the pictures.

(4)

- A _____
- B _____
- C _____
- D _____

4.5.2. Fill in the missing word / term below to explain the difference between a suspension bridge and a cable – stayed bridge. (6)

The difference is the way the _____ are connected. Suspension bridge is supported from _____ by cables that are connected to other _____ that hang between two _____ whereas a cable – stayed bridge is _____ from above by cables that are connected to the _____ tower.

4.6. There are three most likely cases of structure failure. These are fracturing, bending and toppling over. Identify the which type of failure is happening in the pictures below. (4)



A



B



C



D

- A _____
- B _____
- C _____
- D _____

TOTAL MARKS = 100 MARKS