



**Sastri College**  
**March Controlled Test -2020**  
**Grade 8 – Technology**



**TOTAL MARKS: 50**

**DURATION: 1 Hour**

**Examiner: Mr Matonhodze E**

**Moderators: Mr Muzanenhamo E  
Mr Noubouth D**

**INSTRUCTIONS AND INFORMATION**

Read the following instructions carefully

1. Answer ALL the questions.
2. Use a blue or black pen to answer the questions.
3. Use a pencil to draw .
4. Write neatly and legible.

**Question 1: MULTIPLE CHOICE (5 marks)**

Choose the correct answer. Write only the number and the correct letter, (eg 1.1 A)

1.1. Drawing to scale means that...

- A) the object is smaller than the drawing.
- B) the object should be drawn to size.
- C) the length, breadth and height are in proportion.
- D) working drawings that do not need to be drawn to scale.

1.2. The mechanical advantage (MA) of a lever depends on...

- A) the size of the fulcrum.
- B) the weight of the load.
- C) the length of the lever.
- D) the amount of effort put into it.

1.3. What is the best method to strengthen structures?

- A) Tubing
- B) Triangulation
- C) Folding
- D) Framing

1.4. What is the purpose of the shell of a crab?

- A) To contain
- B) To protect
- C) To support
- D) A and B above

1.5. Oblique lines in 3D drawings are usually drawn at....

- a) 90°
- b) 60°
- c) 45°
- d) 180°

## QUESTION 2: TRUE OR FALSE (5 marks)

Read the statements below and state if **TRUE** or **FALSE**.

- 2.1. A third-class lever is used to pick up objects, e.g. a pair of tweezers, braai tongs or a fishing rod.
- 2.2. Bridges and electricity pylons are often made in the same way as a bicycle frame, i.e. pieces joined together.
- 2.3. Second-class levers/ systems are like a wheelbarrow which we use every day, with the load between the fulcrum and the effort.
- 2.4. Natural structures are structures made by people.
- 2.5. The base of a structure, e.g. a cell phone tower must be bigger than the top.

(1x5=5)

## Question 3 (5 marks)

- 3.1 What is technology ? (1)
- 3.2 Clearly state which step in the technological process below the following statements would fall under i.e. (**investigate, Communicate, Make .Design, Evaluate**)
  - 3.2.1 Check the stability of the roof truss. (1)
  - 3.2.2 Research done at the library. (1)
  - 3.2.3 Constructing the stadium model. (1)
  - 3.2.4 Explaining the model to your audience (1)

(1x5=5)

## Question 4 (5 marks)

Match Column A with Column B. Only write the number and the letter,

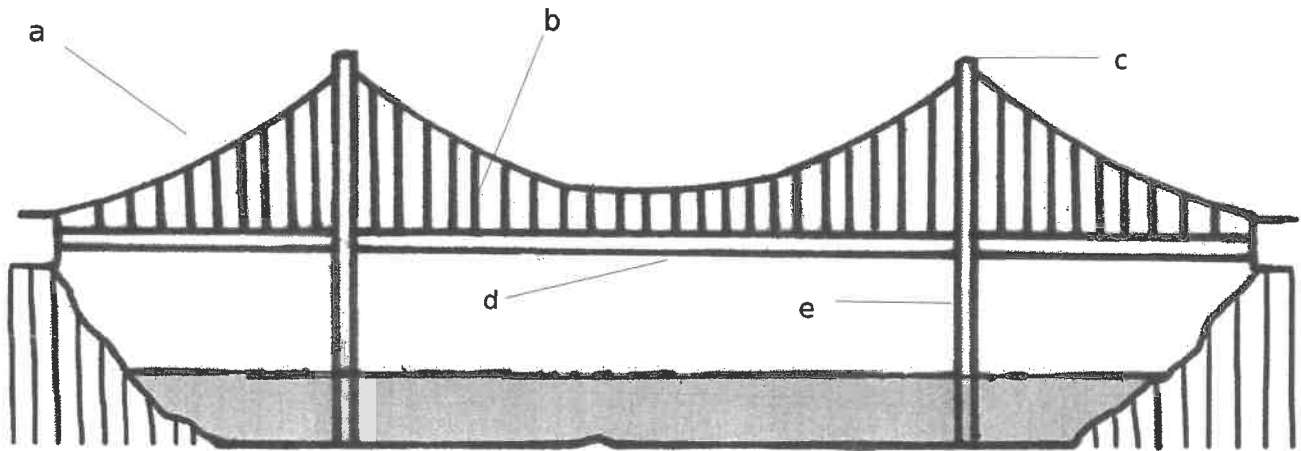
Column A	Column B
4.1. Investigate	A. A square strengthened by putting a triangular shape in it.
4.2. Design brief	B. Thin lines used in sketches or drawings.
4.3. Construction lines	C. To find, use and acknowledge information.
4.4. Cross-braces / Gussets	D. Make something unrecognisable by altering its appearance.
4.5. Disguised	E. Includes instructions, specifications and constraints.

(1 x 5=5)

**Question 5 (10 marks)**

- 5.1 List **THREE** causes of structural failure. (3)
- 5.2.1 Give 3 examples of triangulation in a local structure. (3)
- 5.2.2 Describe a queen post and state two of its uses in a frame structure. (4)

**Question 6 (15 marks)**



**Figure 1**

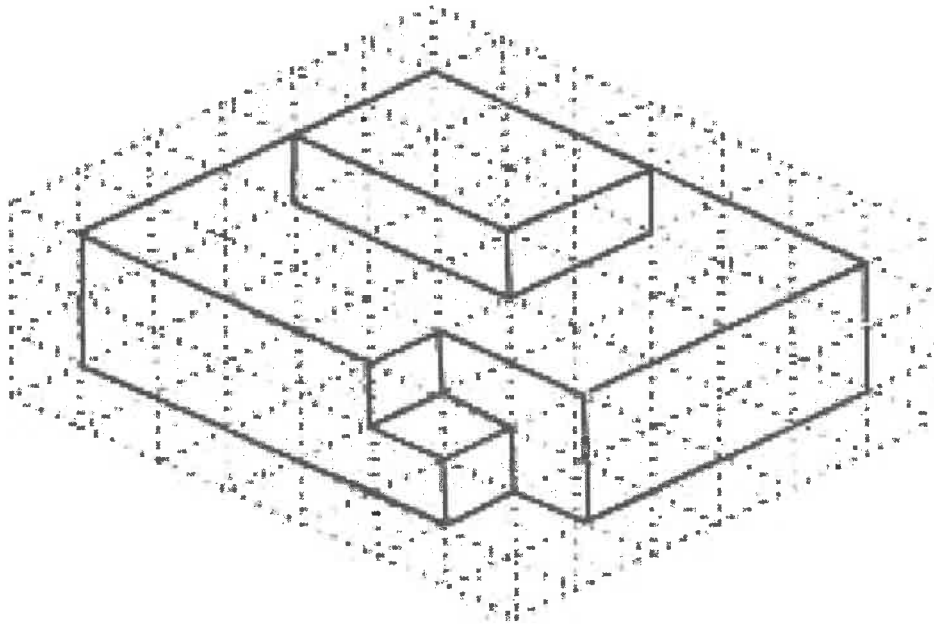
- 6.1 What type of bridge is shown in **Figure 1**. (1)
- 6.2 Name the parts labeled (a-d) . (5)
- 6.3 Give 2 advantages and 2 disadvantages of bridge in **Figure 1**. (4)
- 6.4 State 3 design considerations when building such a bridge. (3)
- 6.5 Describe the difference between suspension bridge and an arch bridge. (2)

**Question 7 (5 marks)**

Draw the given Isometric block in **Figure 2** on the isometric grid provided.

(5)

Name \_\_\_\_\_ Surname \_\_\_\_\_ Grade 8 \_\_\_\_\_



Qn	mark
1	
2	
3	
4	
5	
6	
7	
Total	

**Figure 2**

