

WESTERING PRIMARY SCHOOL
GRADE 7 TECHNOLOGY
EXAMINATION
2 JUNE 2025



Q.1: Multiple Choice		10
Q.2: Short Questions		5
Q.3: Drawings		15
Q.4: Design		9
Q.5: Case Study		11
Total		50

NAME: _____

EXAMINER: _____

GRADE 7: _____

SUBJECT HEAD: _____

PARENT SIGNATURE: _____

TOTAL MARKS: _____

50 Marks (75min)

INSTRUCTIONS:

- Answer all the questions.
- Answer the multiple choice questions on the grid provided.
- Where drawings are required, please use a pencil.
- Write neatly and legibly.

QUESTION 1: MULTIPLE CHOICE – DESIGN PROCESS

(10)

1. Which of the following is a natural structure?

- A. Beam bridge
- B. Tree
- C. Suspension bridge
- D. Skyscraper

2. What is a common method used to strengthen a structure?

- A. Painting
- B. Folding
- C. Sanding
- D. Polishing

3. What type of structure is a tent supported by poles and ropes?

- A. Shell structure
- B. Frame structure
- C. Solid structure
- D. Liquid structure

4. What is the main purpose of triangulation in structures?

- A. To make structures lighter
- B. To add decoration
- C. To prevent bending and collapsing
- D. To reduce material costs

5. Which type of bridge is best known for using cables to hold the bridge deck?

- A. Arch bridge
- B. Beam bridge
- C. Cantilever bridge

D. Suspension bridge

6. Why do we use tubing in structural design?

- A. To make a structure look round
- B. To weaken it
- C. To improve airflow
- D. To strengthen long members and prevent bending

7. Which of the following strengthening methods involves combining a curved shape with structure for added support?

- A. Folding
- B. Corrugation
- C. Arching
- D. Webbing

8. When designing a bridge, what is the first step in the design process?

- A. Building a prototype
- B. Testing materials
- C. Writing a design brief
- D. Drawing the final model

9. During the bridge project, what factor is tested to evaluate the success of the bridge model?

- A. Length of the bridge
- B. Weight of the materials used
- C. Ability to hold a specific load
- D. Colour and decoration

10. What is one reason a structure might fail, according to the notes?

- A. It was too colourful
- B. Poor weather conditions
- C. Weak joints or poor design
- D. Expensive materials



Example	A	B	C	D
1.	A	B	C	D
2.	A	B	C	D
3.	A	B	C	D
4.	A	B	C	D
5.	A	B	C	D
6.	A	B	C	D
7.	A	B	C	
8.	A	B	C	D
9.	A	B	C	D
10.	A	B	C	D

QUESTION 2: SHORT QUESTIONS

(5)

2.1 Provide the definitions for the following terms:

(3)

2.1.1 Specification: _____

2.1.2 Constraint: _____

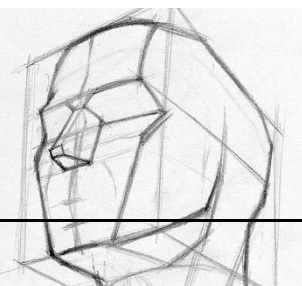
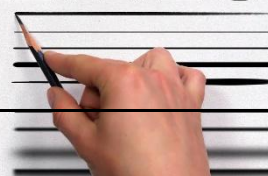
2.1.3 Visual Pollution: _____

2.2 True or False: State whether the following statements are true or false. If false, correct the statement. (2)

2.2.1 Ergonomics is the feature of a product that makes it user-friendly.

2.2.2 Hidden detail lines are used to show the length, width and height of a product.

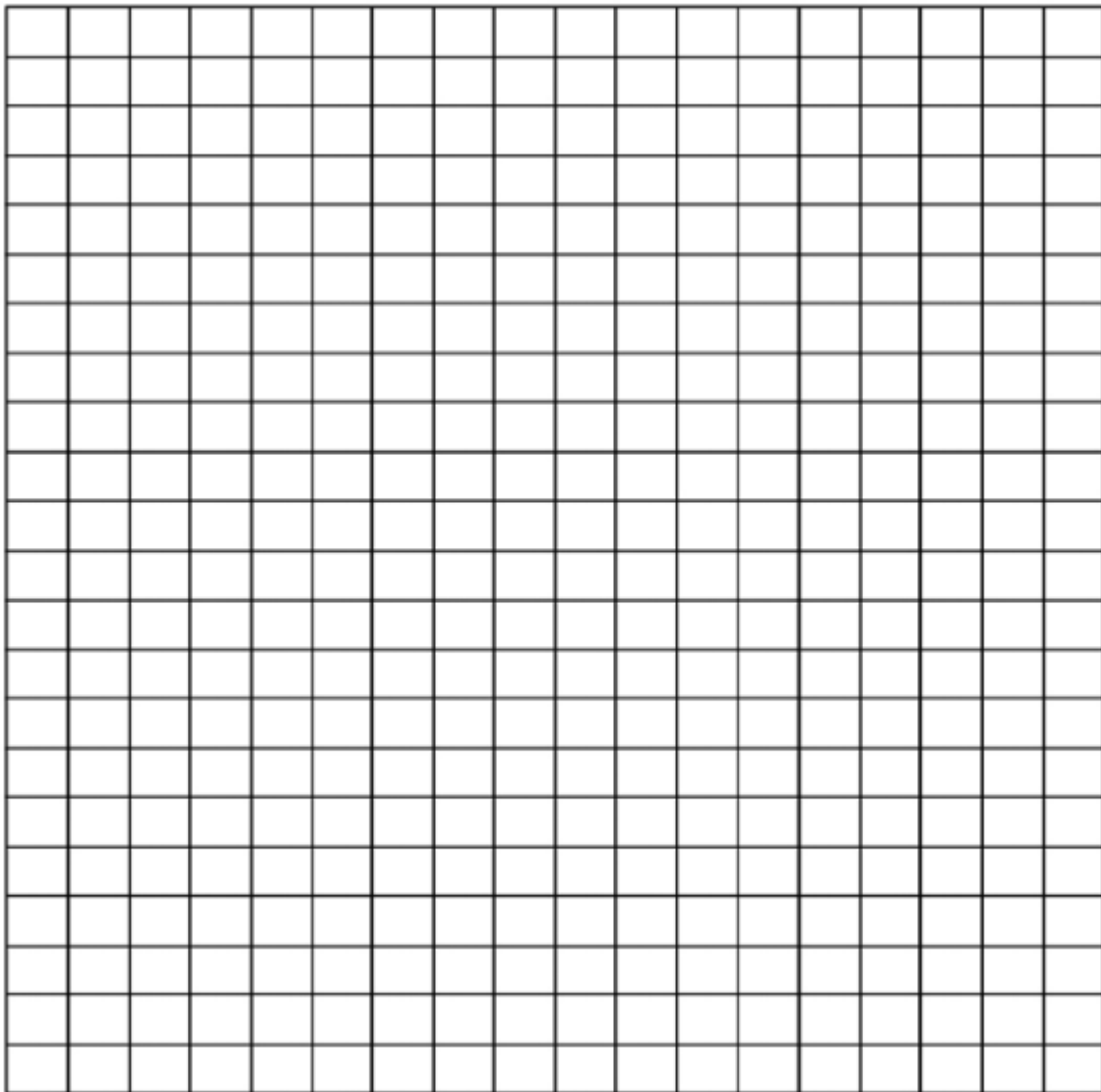
LINES



QUESTION 3: DRAWINGS

(15)

3.1 Using the grid paper, draw a cube, using the steps learnt. The cube dimensions are 8cmx8cm (**1 BLOCK REPRESENTS 1CM**) and all the oblique lines are half the length of the base. (4)



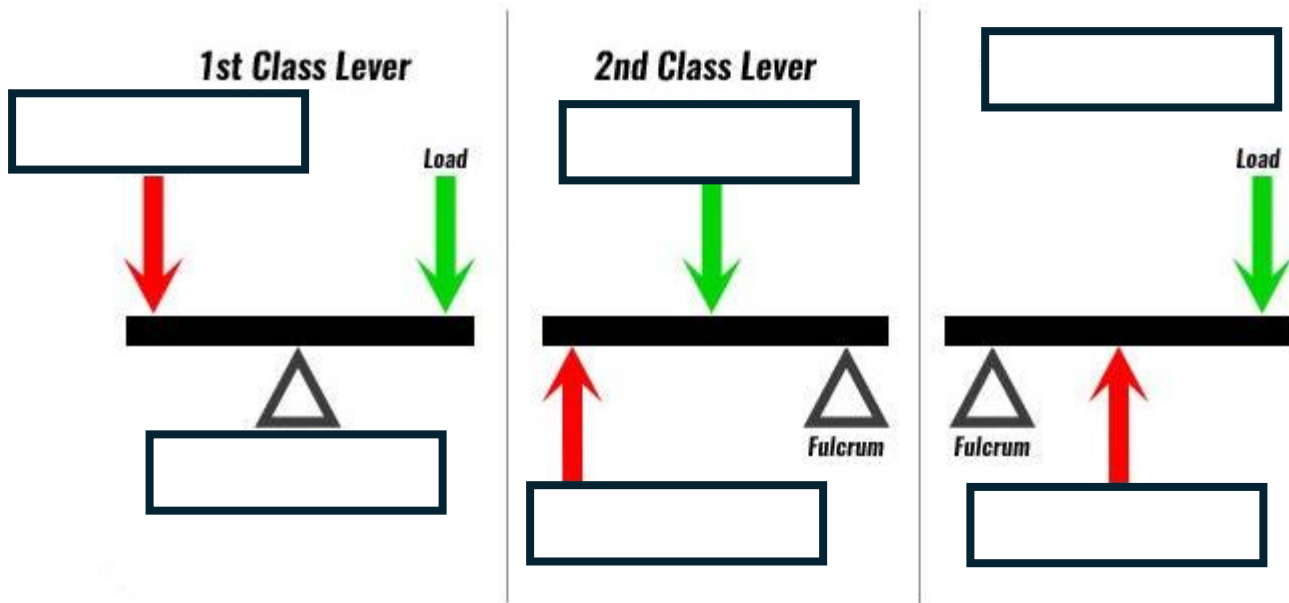
3.2 Complete the following table relating to drawing conventions: (5)

	Example	Use
Outlines	3.2.2	Are used to show the visible edges of objects and drawings.
3.2.1	_____	Used to create the framework in which the object is drawn.

Hidden details	-----	3.2.3
3.2.4	3.2.5	Are used to show length, width or height of a product. It indicates the size.

3.3 Complete the following LEVER diagrams by filling in the missing labels:
(Class ... / Fulcrum / Load / Effort)

(6)

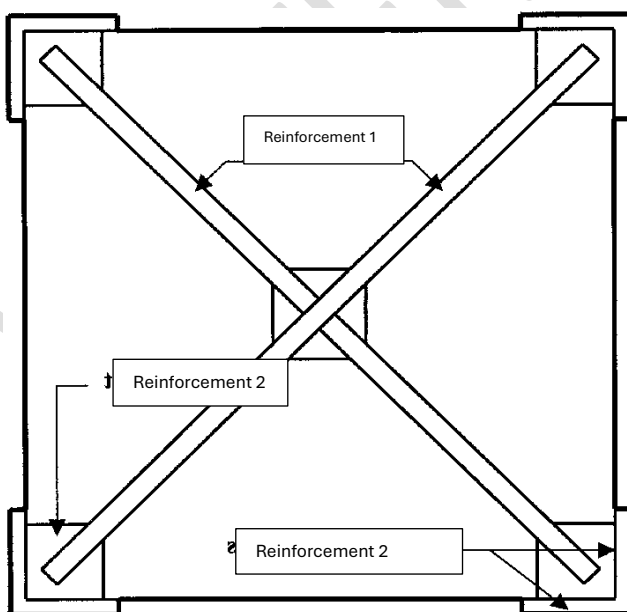


QUESTION 4: DESIGN

(9)

4.1 Look at the diagrams. Name the reinforcement techniques used as well as a description thereof.

(4)



Reinforcement 1: _____

Reinforcement 2: _____

4.2 Name the 5 steps of the design process, in the correct order:

(5)

QUESTION 5: CASE STUDY

(11)

Read through the scenario below and answer the questions that follow.

Petha is a Grade 7 learner who walks a long distance to school every day. She carries her lunch, water bottle, and homework books, but her current bag keeps tearing because it is made of thin fabric. She needs a more durable and comfortable way to carry her school items, especially when it rains. Her school has also requested that learners use eco-friendly and reusable materials wherever possible.

5.1 Complete the DESIGN BRIEF for the problem presented above:

Design and make a _____ for _____
that she can use to _____.

5.2 List three specifications from the scenario:

- _____
- _____
- _____

5.3 List two constraints from the scenario:

- _____
- _____

5.4 List any 2 materials that you could have used to make the school bag:

- _____
- _____
- _____

Design Thinking: A 5-Stage Process

