

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: Memo

EXAMINER:

Mr. J Wright

GRADE 7: _____

SUBJECT HEAD:

Mr. J Wright/Mrs. Hamilton (DH)

PARENT SIGNATURE: _____

TOTAL MARKS:

60 Marks (90min)

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)

1. Provide the definitions for the following terms:

(3)

1.1 Specification: Detailed description of the features or requirements / in order to function properly. ✓

1.2 Constraint: The limitation or restriction ✓

1.3 Visual Pollution: Refers to unattractive or excessive elements in an environment ✓

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

(2)

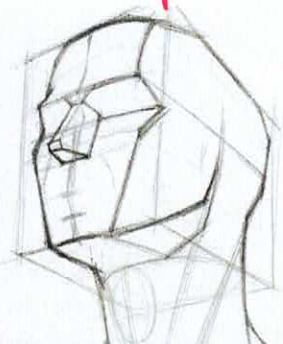
2.1 Ergonomics are the feature of a product that makes it user-friendly.

True ✓

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

False, HD Lines are used to show parts of a product not visible. ✓

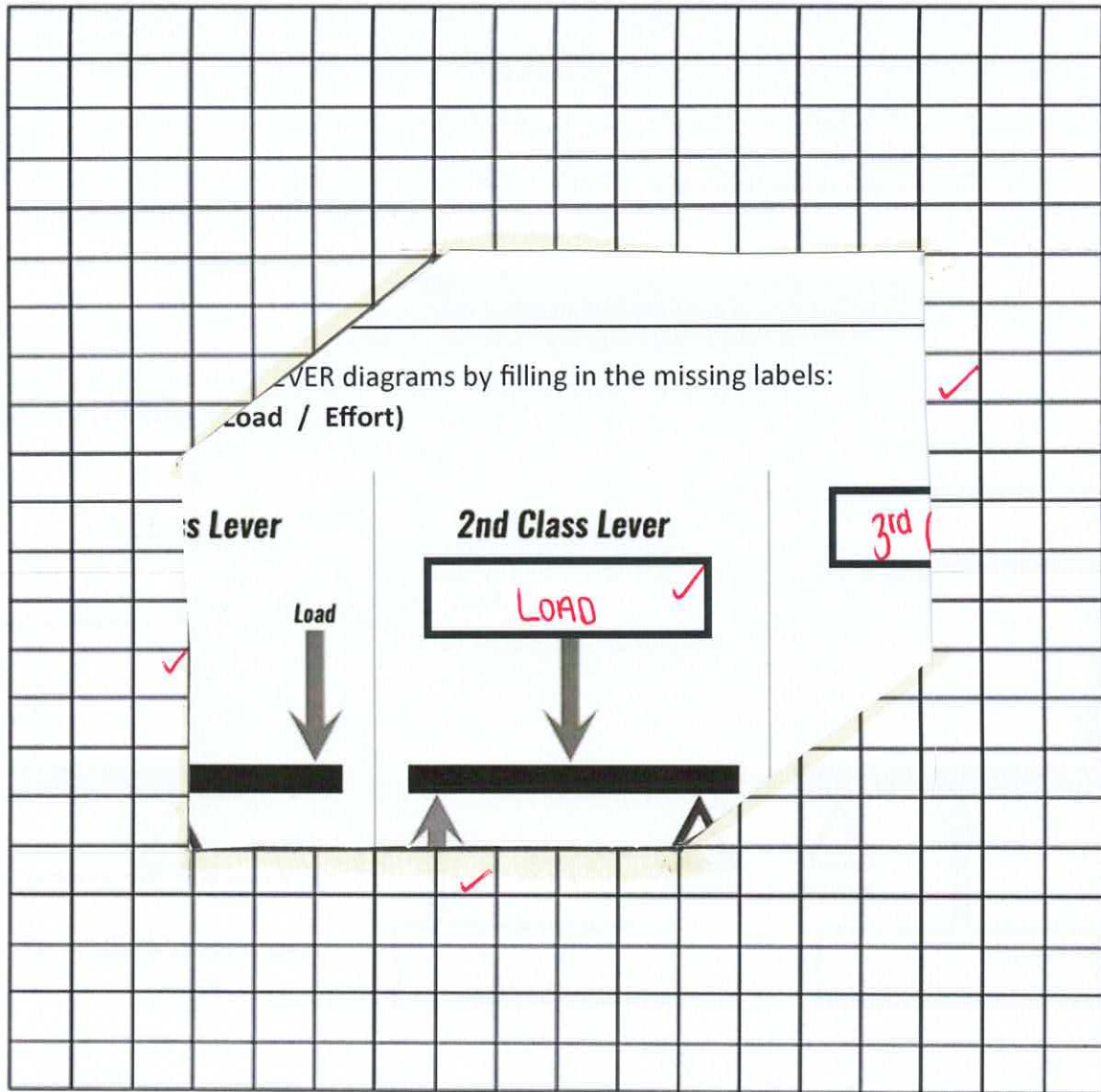
LINES



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 Construction Line	_____	Used to create the framework in which the object is drawn.
Hidden details	3.2.3 -----	Used to show edges that can not be seen
3.2.4 Dimension Line	3.2.5 _____	Are used to show length, width or height of a product. It indicates the size.

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.

8.1 Complete the DESIGN BRIEF for the problem presented above:

Design and make a school bag ✓ for Petha ✓
that she can use to carry school items. ✓

8.2 List three specifications from the scenario:

- Durable ✓
- Comfortable ✓
- Eco-Friendly ✓

8.3 List two constraints from the scenario:

- Long distance ✓
- Weather ✓

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

- Plastic ✓
- Material ✓
- Wire ✓

Design Thinking: A 5-Stage Process

