

SMARTWIZ

GRADE11 Engineering Graphic Designing (EGD) EXAM

MARKS: 100

MARKS	

TIME: 2 HOURS

SCHOOL _____

CLASS (eg. 4A) _____

SURNAME _____

NAME _____

Instructions for Learners:

- Read all instructions carefully before you begin the exam.
- Write your full name and student number clearly on the answer sheet/book.
- Answer all questions unless otherwise instructed.
- Show all your work/calculations where necessary.
- Write neatly and clearly.
- Use only a blue or black pen. Do not use correction fluid or tape.
- Electronic devices (calculators, cell phones, etc.) are not allowed unless explicitly permitted.
- Raise your hand if you have any questions.
- Do not talk to other learners during the exam.
- Any form of dishonesty will result in immediate disqualification from the exam.

This exam consists of five pages, including the cover page.

Section A: Multiple Choice Questions (20 marks)

Circle the correct answer.

1. Which drawing standard is commonly used internationally for technical drawings?
 - a) ISO
 - b) ANSI
 - c) DIN
 - d) JIS
 2. What is the purpose of a **break line** in a drawing?
 - a) To show hidden edges
 - b) To indicate a section cut
 - c) To shorten a long object in the drawing
 - d) To show center lines
 3. In a technical drawing, which type of view shows the object from directly above?
 - a) Front view
 - b) Side view
 - c) Top view
 - d) Isometric view
 4. What is the meaning of the term '**tolerance**' in engineering drawings?
 - a) The exact size of a part
 - b) The allowable variation in a dimension
 - c) The scale used for drawing
 - d) The type of line used
 5. Which tool would you use to draw arcs of a specific radius?
 - a) Ruler
 - b) Protractor
 - c) Compass
 - d) Set square
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Section B: True or False (10 marks)

Write **True** or **False** next to each statement.

1. Orthographic projection shows an object in 3D. _____
 2. A center line is drawn using a continuous thick line. _____
 3. Dimension lines have arrows at each end. _____
 4. CAD stands for Computer-Aided Design. _____
 5. In first angle projection, the top view is placed above the front view. _____
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Section C: Short Answer Questions (30 marks)

1. Define the term '**engineering drawing**'. (5 marks)

2. Name and describe **three types of technical drawings** used in engineering. (9 marks)

3. _____

4. _____

5. _____

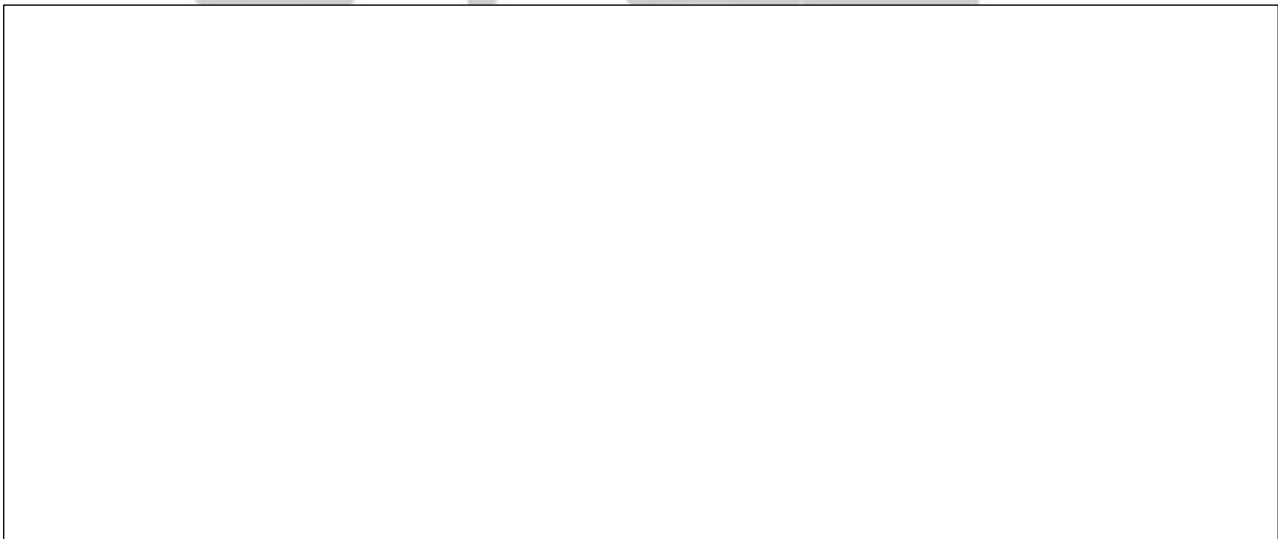
6. Explain the importance of **line conventions** in engineering drawings. (6 marks)

4. What is a **sectional drawing** and when would you use it? (5 marks)

5. List **four safety rules** to follow when using drafting tools. (5 marks)

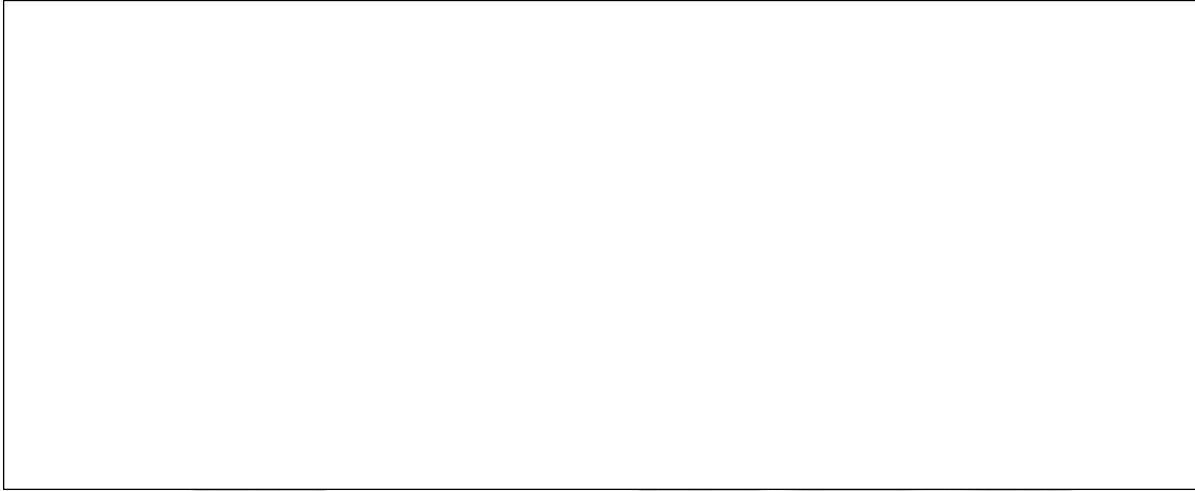
Section D: Drawing (40 marks)

1. Draw the **front, top, and right side views** of a rectangular prism with dimensions:
Length = 120 mm, Width = 50 mm, Height = 70 mm.
Label all views and dimensions clearly. (25 marks)



2. Draw an **isometric projection** of the same rectangular prism above. (15 marks)

(Use the back of the paper if necessary)



End of Examination

MYST PATHWORKS

MEMO

Section A: Multiple Choice Questions (20 marks)

1. a) ISO
 2. c) To shorten a long object in the drawing
 3. c) Top view
 4. b) The allowable variation in a dimension
 5. c) Compass
-

Section B: True or False (10 marks)

1. Orthographic projection shows an object in 3D. **False**
 2. A center line is drawn using a continuous thick line. **False** (It's a chain line)
 3. Dimension lines have arrows at each end. **True**
 4. CAD stands for Computer-Aided Design. **True**
 5. In first angle projection, the top view is placed above the front view. **False** (In first angle, top view is below front view)
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Section C: Short Answer Questions (30 marks)

1. **Definition of engineering drawing:** (5 marks)
 - Engineering drawing is a detailed and accurate graphical representation of an object, used to communicate technical information clearly and precisely.
2. **Three types of technical drawings:** (9 marks)
 - **Orthographic drawing:** Shows multiple 2D views of an object from different angles.
 - **Isometric drawing:** A 3D pictorial drawing where three axes are equally angled at 120°.
 - **Sectional drawing:** A cutaway view showing internal features of an object.
3. **Importance of line conventions:** (6 marks)
 - Line conventions help differentiate between types of lines (visible edges, hidden edges, center lines, etc.).
 - They improve clarity and prevent misinterpretation.
 - Essential for standardized communication in engineering drawings.
4. **Sectional drawing and usage:** (5 marks)
 - A sectional drawing shows an object as if it were cut through to reveal internal details.
 - Used when internal features cannot be clearly shown in external views.

5. Four safety rules for drafting tools: (5 marks)

- Handle sharp tools carefully to avoid injury.
 - Keep your workspace clean and organized.
 - Store tools safely when not in use.
 - Use tools only for their intended purpose.
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Section D: Drawing (40 marks)

1. Orthographic views (25 marks):

- Front view: Correct length 120 mm, height 70 mm.
- Top view: Correct length 120 mm, width 50 mm.
- Right side view: Correct width 50 mm, height 70 mm.
- Views aligned properly.
- Neat and accurate dimensioning and labeling.

2. Isometric projection (15 marks):

- Correct isometric shape with edges drawn at 30° from horizontal.
- Proportions match the given dimensions.
- Neat and clear labeling of edges and dimensions.

TOTAL : 100