

Chapter 9 – AutoCAD 2D**Part I: Short Questions****Q1. Define Polyline command?**

- A **Polyline (PL)** is a connected sequence of line or arc segments that form one single object.
 - Easier to edit compared to multiple separate lines.
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Q2. Define Hatch & Block commands?

- **Hatch (H):** Fills a closed area with a pattern, solid color, or gradient.
 - **Block (B):** A group of objects combined into a single named object for reuse.
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Q3. Define Rectangular command?

- **RECTANGLE (REC):** Creates a four-sided shape by specifying two opposite corners.
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Q4. Define Arc command & Circle command.

- **Arc (A):** Creates a curved line using 3 points or start–center–end options.
 - **Circle (C):** Creates circles based on radius, diameter, or 3-point method.
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Q5. Differentiate between Draw Commands-I & Draw Commands-II.

- **Draw Commands-I:** Basic drawing commands → LINE, CIRCLE, ARC, RECTANGLE, POLYGON.
 - **Draw Commands-II:** Advanced drawing commands → HATCH, BLOCK, ELLIPSE, SPLINE.
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Q6. Define Elevation Drawings.

- 2D drawings that represent the **front, side, or back view of a building or object.**
 - Used in architectural design.
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Q7. Define Layers.

- Layers are used to **organize drawings** by color, line type, and visibility.
 - Example: Separate layers for walls, furniture, and text.
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Q8. Define Text Command.

- **TEXT / MTEXT:** Adds annotations to the drawing.
 - **TEXT:** Single-line text.
 - **MTEXT:** Multi-line paragraph text.
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Q9. Define Ctrl+0 and Ctrl+Shift+S short keys of AutoCAD.

- **Ctrl + 0:** Clean screen (hides toolbars).

- **Ctrl + Shift + S:** Save As (saves drawing with a new name).
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Q10. Write steps to draw an arc using Start, Center, Angle option.

1. Type **ARC** in command line.
 2. Select **Start point**.
 3. Select **Center point**.
 4. Enter **Angle** value.
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Part II: Long Questions

Q1. Describe Draw Commands-I and Draw Commands-II.

- **Draw Commands-I:**
 - LINE, CIRCLE, ARC, RECTANGLE, POLYGON → used to create basic shapes.
 - **Draw Commands-II:**
 - HATCH, BLOCK, ELLIPSE, SPLINE, DONUT → used for advanced and complex objects.
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Q2. Write detailed note on:

i) Hatch & Block Commands

- **Hatch:**
 - Fills closed area with predefined patterns (bricks, lines, dots).
 - Used in floor plans and sectional views.
- **Block:**
 - Groups objects into one reusable object.
 - Saves time, ensures consistency.

ii) Elevation Drawings

- Show **vertical views** of a structure (front, back, side).
 - Useful in architectural drawings for design approval and construction.
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Q3. Briefly describe Layers in AutoCAD.

- **Layers organize drawings** by categories.
 - **Functions:**
 1. Control visibility (ON/OFF).
 2. Assign different colors and linetypes.
 3. Make editing easier.
 - **Example: Walls on one layer, furniture on another.**
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Q4. Describe Apply Commands in AutoCAD 2D.

- **Move (M):** Shifts objects from one place to another.
 - **Copy (CO):** Duplicates objects.
 - **Mirror (MI):** Creates a flipped duplicate.
 - **Trim (TR):** Removes extra portions.
 - **Extend (EX):** Extends objects to meet boundaries.
 - **Offset (O):** Creates parallel copies.
 - **Rotate (RO):** Rotates objects around base point.
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Q5. Describe Creating Command (Circle) and Creating Command (Arc).

- **Circle (C):**
 - Create using center + radius, center + diameter, 2-point circle, or 3-point circle.
 - **Arc (A):**
 - Create using start–end–angle, start–center–end, or start–center–angle.
 - Used for curved portions in drawings.
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✳ Extra Important Questions (for Exam)

Q1. Difference between Hatch and Gradient.

- **Hatch:** Pattern (lines, dots, bricks).
- **Gradient:** Smooth color transition.

Q2. Difference between Block and Group.

- **Block:** Saved in drawing library, reusable.
- **Group:** Temporary grouping of objects.

Q3. Write difference between MText and Text.

- **Text:** Single line only.
- **MText:** Multi-line with formatting (bold, italic, color).

Q4. Define Annotation in AutoCAD.

- Text, dimensions, leaders, and tables used for describing drawings.