

SAMPLE PAPERS
DIPLOMA THIRD SEMESTER EXAMINATION 2025 (JUT)
BUILDING DRAWING USING CAD
DIPLOMA WALLAH

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Full Marks: 70 marks | Time: 3 Hours

Instructions:

- Question No. 1 is compulsory.
 - Answer any **FOUR** questions from the remaining (Q.2 to Q. 7 marks).
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Q.1 Multiple Choice Questions (Compulsory)

1. Which command is used to join two lines to form a corner (rounded)?
 - a) CHAMFER
 - b) FILLET
 - c) EXTEND
 - d) JOIN
2. The recommended minimum area for a habitable room (like a bedroom) is:
 - a) 5.5 sqm
 - b) 7.5 sqm
 - c) 9.5 sqm
 - d) 12.0 sqm
3. In an electrical layout, the symbol 'X' inside a circle represents:
 - a) Ceiling Fan
 - b) Ceiling Light
 - c) Exhaust Fan
 - d) Main Switch
4. The scale commonly used for a detailed Building Plan submission is:
 - a) 1:1000
 - b) 1:500
 - c) 1:100
 - d) 1:50

5. A horizontal projection over a window to protect from rain is called:

- a) Lintel
- b) Chajja
- c) Sill
- d) Coping

6. The Nahani Trap is generally used in:

- a) Kitchens/Bathrooms
- b) Septic Tanks
- c) Water Closets
- d) Main Sewer

7. To draw a circle in AutoCAD, which input is NOT sufficient alone?

- a) Center & Radius
- b) Center & Diameter
- c) 3 Points
- d) Just one point

Q.2

(A) Explain the difference between Window AC and Split AC systems regarding their installation in a building plan. (7 Marks)

(B) Define the following terms with sketches: (i) Building Line (ii) Plinth Height (iii) Parapet Wall. (7 Marks)

Q.3

(A) Explain the principles of: (i) Grouping (ii) Roominess (iii) Sanitation in building planning. (7 Marks)

(B) Draw the conventional signs/symbols for: (i) Brickwork (ii) Concrete (iii) Single Swing Door (iv) Wash Basin. (7 Marks)

Q.4

(A) Explain the function and procedure for the following AutoCAD commands: (i) HATCH (ii) POLYLINE (iii) EXTEND. (7 Marks)

(B) Differentiate between Absolute Coordinate System and Relative Coordinate System in AutoCAD with examples. (7 Marks)

Q.5

(A) Write the steps to Plot/Print a drawing in AutoCAD. What settings need to be checked before printing? (7 Marks)

(B) Describe the procedure to prepare a Drainage Plan for a residential building. (7 Marks)

Q.6

(A) What is a Building Automation System (BAS)? Briefly explain its benefits in modern construction. (7 Marks)

(B) Draw the plan view of a 1½ Brick Thick Wall in English Bond. (7 Marks)

Q.7 Write Short Notes on (Any 4):

(4 × 3.5 Marks = 14 Marks)

- (A) Rain Water Harvesting
 - (B) Perspective Drawing Terms (Station Point, VP)
 - (C) Types of Switches & Sockets
 - (D) Ortho Mode in AutoCAD
 - (E) Requirements of a Staircase
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✓ **SOLUTIONS (Paper 2)**

- **MCQ Key:** 1.(b), 2.(c), 3.(b), 4.(d), 5.(b), 6.(a), 7.(d)
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