

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. IS code 875 (part I, II, III) 1987 is allowed, if necessary for design.

		MARKS
Q.1	(a) Enlist types of glass.	03
	(b) When delamination issues occur in laminated glass.	04
	(c) What is the importance of glass façade in civil engineering?	07
Q.2	(a) What are Green Buildings?	03
	(b) What is U-value and SHGC for glass façade?	04
	(c) Write short note on IGBC. How IGBC is rating the building?	07
	OR	
	(c) Write fundamental principles of green building.	07
Q.3	(a) Explain insulating glazing and spacer.	03
	(b) What are the reasons for using insulating glass units in hot climate?	04
	(c) How to reduce energy consumption - using inert gases.	07
	OR	
Q.3	(a) What is the role of spacer?	03
	(b) Explain acoustic properties of glass.	04
	(c) What is the function of primary sealant in IGU? What are the reasons for defects in primary sealant?	07
Q.4	(a) Write application of laminated glass.	03
	(b) What is role and efficiency of desiccants?	04
	(c) Write points to be kept in mind while designing glass façade.	07
	OR	
Q.4	(a) Write reasons for glass breakage.	03
	(b) What is the effect of wind on glass building?	04
	(c) What is curtain wall? Write design criteria for curtain wall.	07
Q.5	(a) Write properties of toughened glass.	03
	(b) Enlist different types of doors and explain any one type of door with benefits.	04
	(c) Explain float glass manufacturing technology with flow chart.	07
	OR	
Q.5	(a) Which are the different tests for glass facade?	03
	(b) Write Short note on: On situ test for Glasses.	04
	(c) Design a double glazed panel of reflective glass with dimension size 1200 mm width and 1500 mm height supported on 4 sides for a 70 m high office building located in Ahmedabad in terrain category II. The plan of building is rectangular with the size 50 m x 30 m.	07
