



SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A++' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai



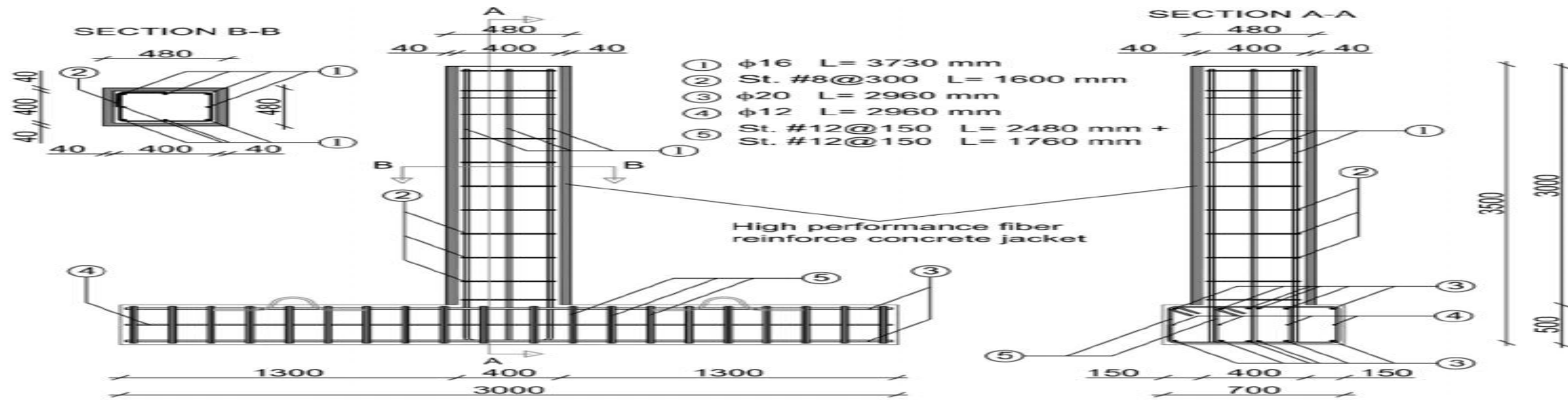
DEPARTMENT OF CIVIL ENGINEERING

23GET102-BASIC CIVIL AND MECHANICAL ENGINEERING

I YEAR ISEM

UNIT 2 – BUILDING COMPONENTS

Topic 6 : Column And Types

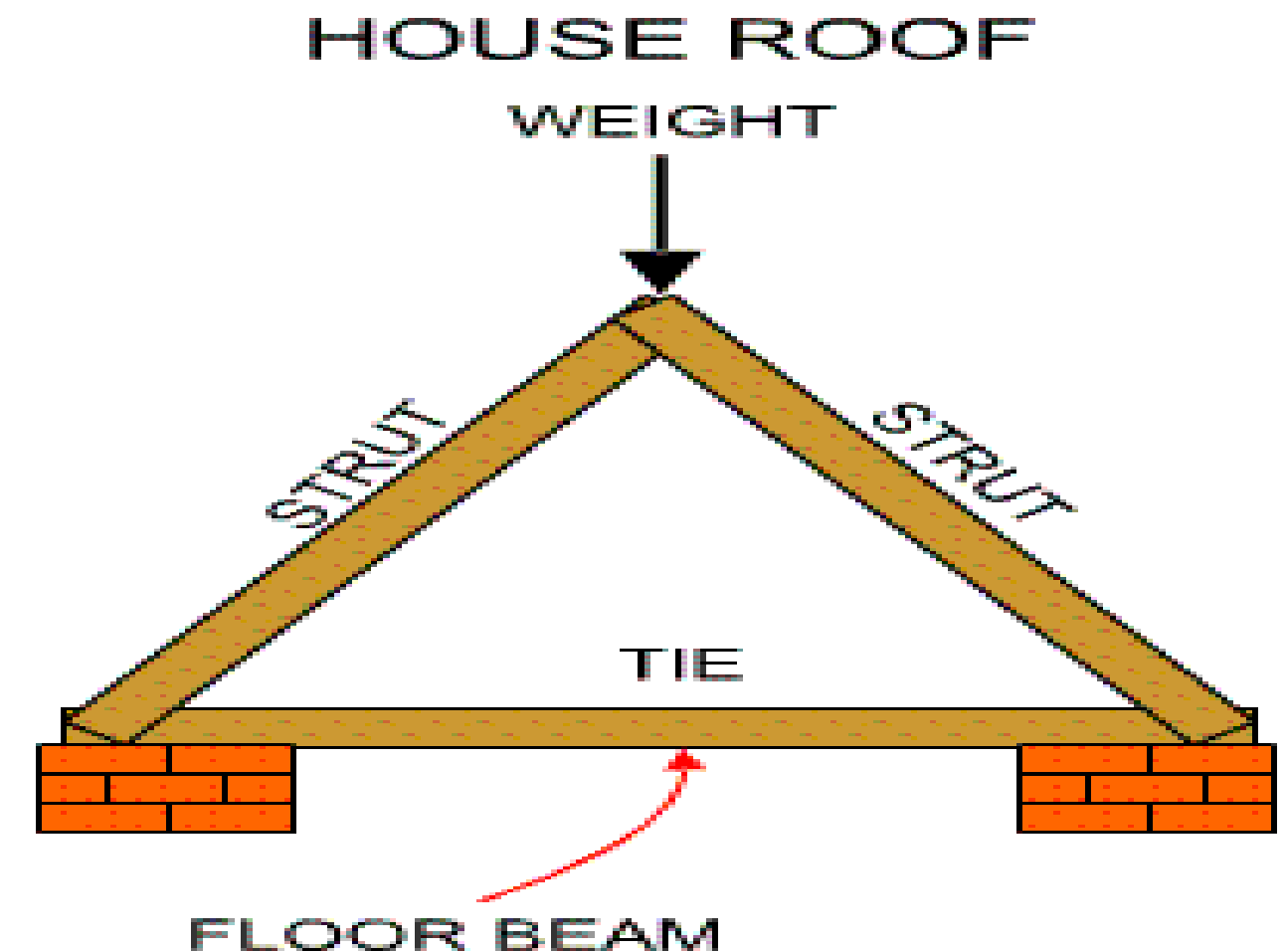




Column/ Compression Member



- ❖ A vertical member whose effective length is greater than 3 times its least lateral dimension carrying compressive loads
- ❖ Transfer the loads from the beams or slabs to the footings or foundations
- ❖ The inclined member carrying compressive loads as in the case of frames and trusses -struts.





Classification of Column-Based on Shape



- ❖ Rectangular Column
- ❖ Circular column
- ❖ L- Type Column
- ❖ V- Type Column
- ❖ Hexagon Column
- ❖ Arch type columns
- ❖ Y type Column with Arch



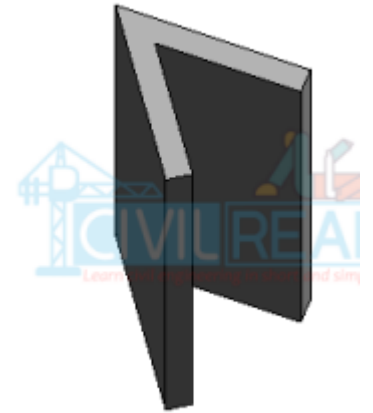
CIRCULAR COLUMN



L- Type Column



T- TYPE COLUMN



V TYPE COLUMN



HEXAGON COLUMN



ARCH TYPE COLUMN



Y TYPE COLUMN



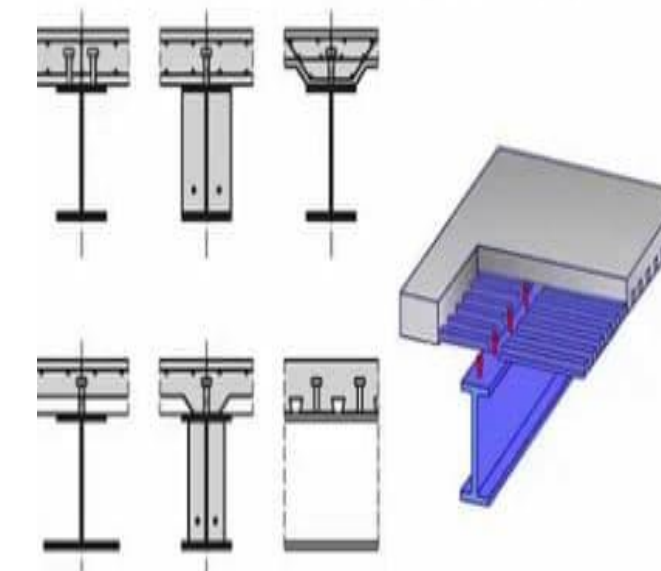
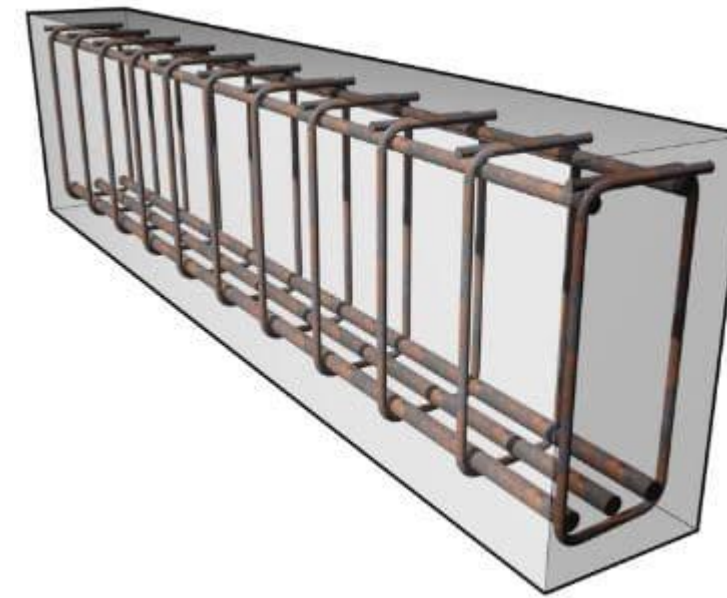
Y TYPE COLUMN WITH ARCH



Classification of Column-Based on Construction Materials



- ❖ Reinforced Concrete Columns
- ❖ Steel Columns
- ❖ Timber Columns
- ❖ Composite Columns





QUESTION TIME



WHAT TYPE OF COLUMN USED IN
CLASS ROOM....???

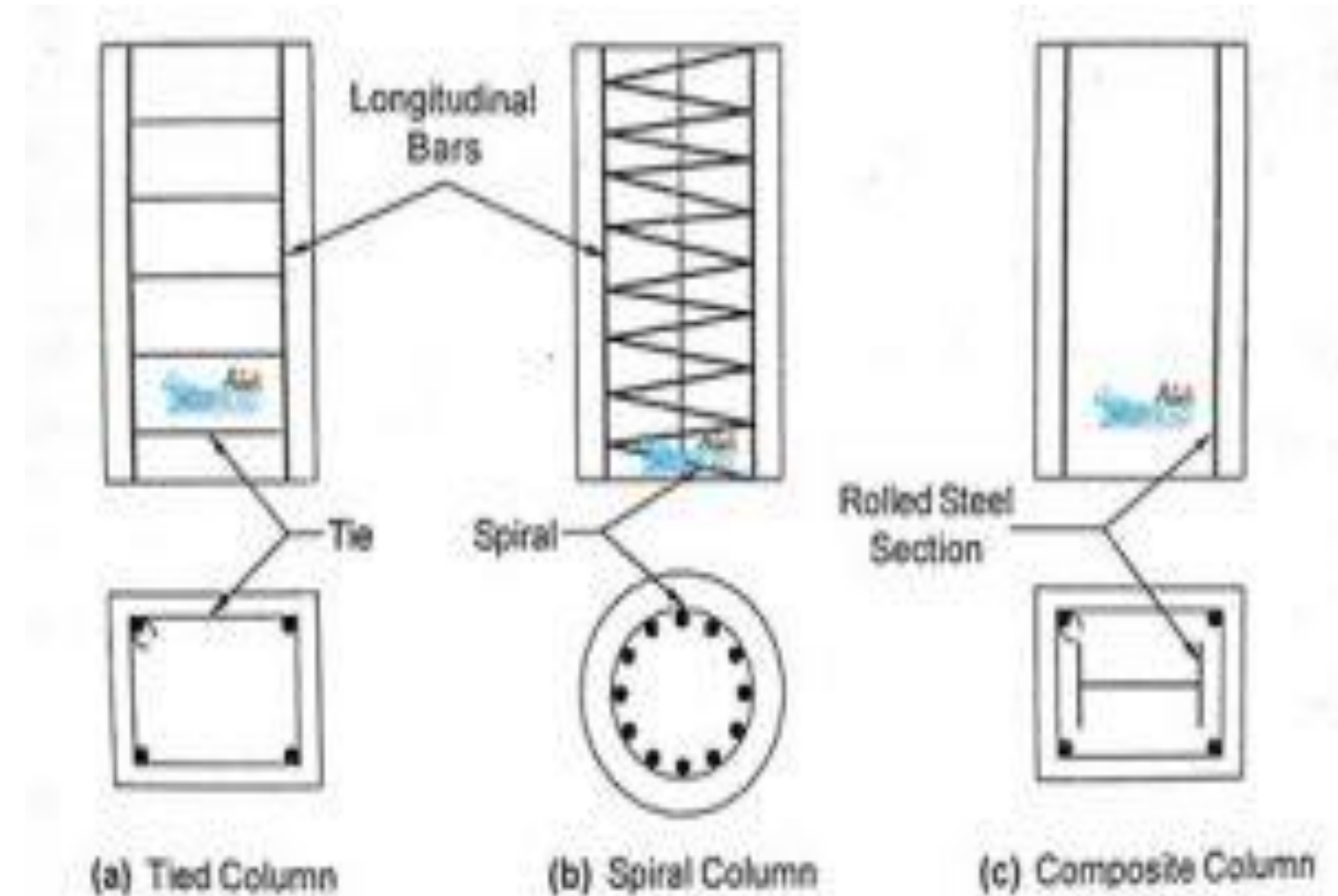
WHERE YOU SEE CIRCULAR
COLUMN IN OUR COLLEGE
AREA....???



Classification of Column-Based on Type of Reinforcement



- ❖ Tied Column
- ❖ Spiral Column
- ❖ Composite Column






Classification of Column-Based on Type of Reinforcement

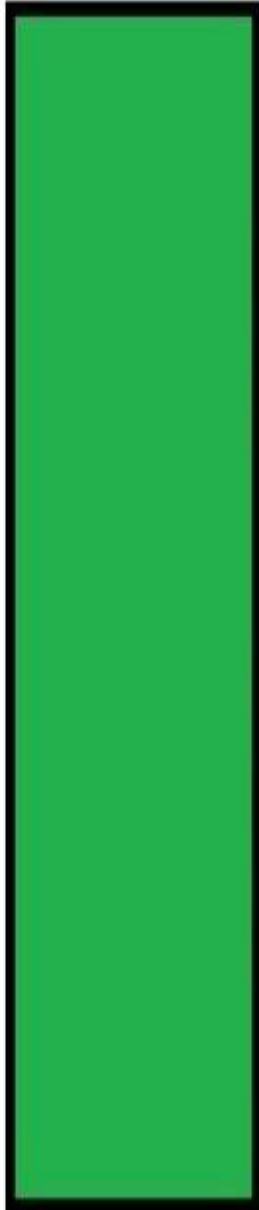


- ❖ Short Column
- ❖ Long Column

Short Column

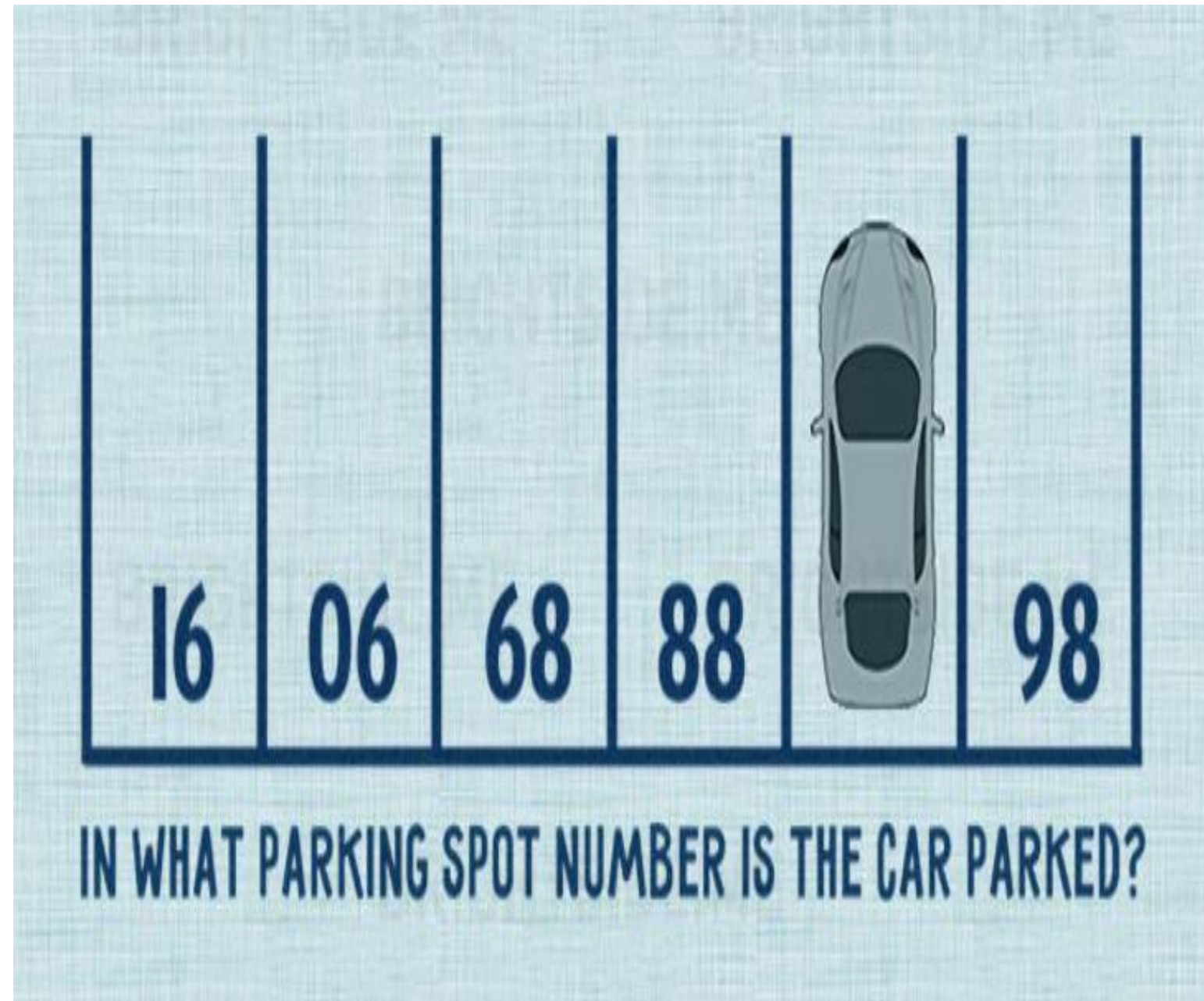
- 
- * Length/Least Dimension < 12
 - * Fails by Crushing
 - * Slenderness Ratio < 45
 - * Subjected to Compressive stress
 - * Radius of Gyration is more
 - * More Load Capacity

Long Column

- 
- ** Length/Least Dimension > 12
 - ** Fails by Buckling
 - ** Slenderness Ratio > 45
 - ** Subjected to Buckling stress
 - ** Radius of Gyration is less
 - ** Less Load Capacity



QUESTION TIME ...



The answer is 87. Just turn the picture upside-down in your head.

