

Q NO 1:

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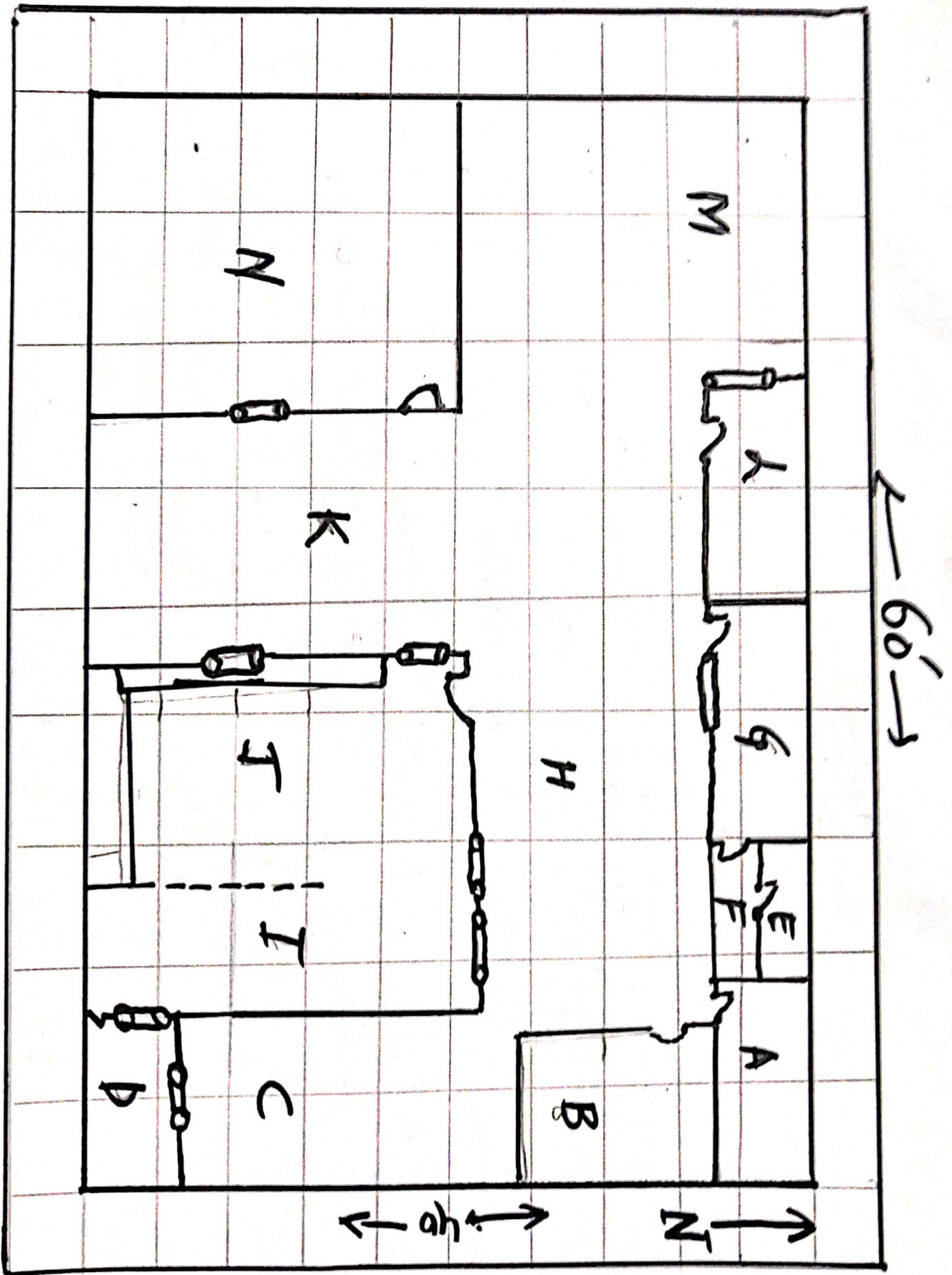
Ans - Building Burj Khalifa:

Challenge & innovations in Building Skyscraper poses challenges that test the mind of any Engineer. Burj Khalifa stand a whopping 2,723 feet in the air making it the tallest building in the world. However this not accomplished without overcoming several major Engineering design obstacles. In order to design such a complex and outstanding structure many records in physical accomplished and innovations had to be shattered. The sheer height of the structure posed many challenges for Engineers construction the Burj Khalifa.

The Stack Effect: The stack effect is a common problem in most high rise Building and also prevalent but less pronounced and dangerous in everyday Building and House. The stack effect is the movement of air into and out of the Buildings. Commonly the warm air is lighter and less dense than cold air. Therefore the warm air will rise to the top of the Building while the cold air will try to fill the cracks in the bottom can build up and can cause more cracking. This could be disastrous to a building as tall as Burj Khalifa. Cracks in the foundation could cause complete structural failure. To mitigate this effect the designers of the Building used several air duct system to move the warm air out of the Building. The stack effect cannot be completely eliminated however it can be mitigated and used as a ventilation system for the upper part of the building.

Q NO 2:

(2)



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Q No 2: F.M

(2)

Ans In The Design Above The Alphabets Represents the following.

- A \Rightarrow Bedroom (12x12) = Here it should be a safe room from noise, summer hot air as well as bad smell of drainage.
- B \Rightarrow Main Bathroom (12x6) = Here it is in between both room.
- C \Rightarrow Bedroom (12x12) = Here it should be safe from noise, summer hot air as well as bad smell of drainage.
- D \Rightarrow open to sky (8x12) = provide fresh air and natural light for rooms and living room.
- E \Rightarrow Attached bath to Master room (6x5).
- F \Rightarrow Dressing room (6x5).
- G \Rightarrow Master room (12x16) = Here it should be safe from noise, summer hot air as well as bad smell of drainage.
- H \Rightarrow Corridor (6x29) = provide easy access to room as well as ventilation.
- I \Rightarrow Living room and Dining room (22x15). Here it is Attached to kitchen.
- J \Rightarrow Kitchen (12x16) = Here it has an Easy Approach from Main door.
- K \Rightarrow Veranda (22x8).
- L \Rightarrow Store (10x8).
- M \Rightarrow Lawn.
- N \Rightarrow Car porch (22x12).