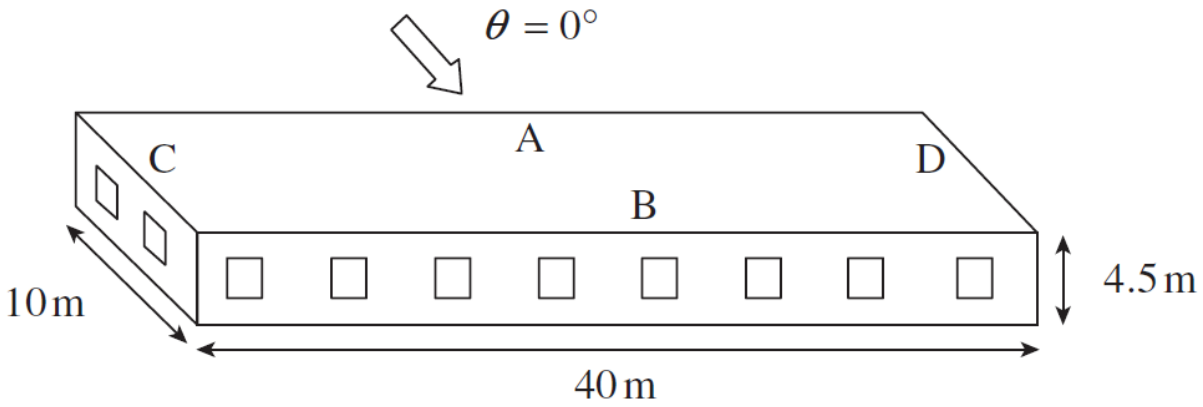
Shantilal Shah Engineering College, Bhavnagar
Applied Mechanics Department
B.E. 6th Civil

3160612 Design of Reinforced Concrete structures

Tutorial-1: Building Layout and Design:

1. A rectangular building situated in an industrial area is to be designed in Chennai city. The height of the building is 4.5 m and the size of the building is 10 m × 40 m. The walls of the building have 20 openings of size 1.2 m × 1.5 m. The building has a fl at roof supported on load-bearing walls (refer Fig. 1). Compute the design wind pressure and design forces on walls and roofs of the building.



Tutorial-2 Design of Retaining wall:

1. What is the purpose of a retaining wall? List and sketch the different types of retaining walls encountered in practice
2. List the various steps involved in the design of retaining walls.

Tutorial-3 Design of Water Tank:

1. Design circular RCC water tank with 5,00,000 litres capacity resting on ground and flexible base. Tank is open at the top. Support your design with drawing.
2. Design and detail RCC rectangular water tank on the ground with dimension of 5.0m x 9.0 m x 5.0m deep with 0.2m free board. Tank is open at top and rigidly connection to the wall and base. Use approximate method.

Tutorial-4 Design of Flat Slab:

1. Explain direct design method for design of flat slab. State limitations of direct design method.