ENGINEERING MECHANICS BAA1113

ASSIGNMENT 2 (CO2)

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Figure Q1 shows the cross section of the embankment structure. Based on this structure:

a)   Determine the centroid $(\bar{x}, \bar{y})$ of the structure.

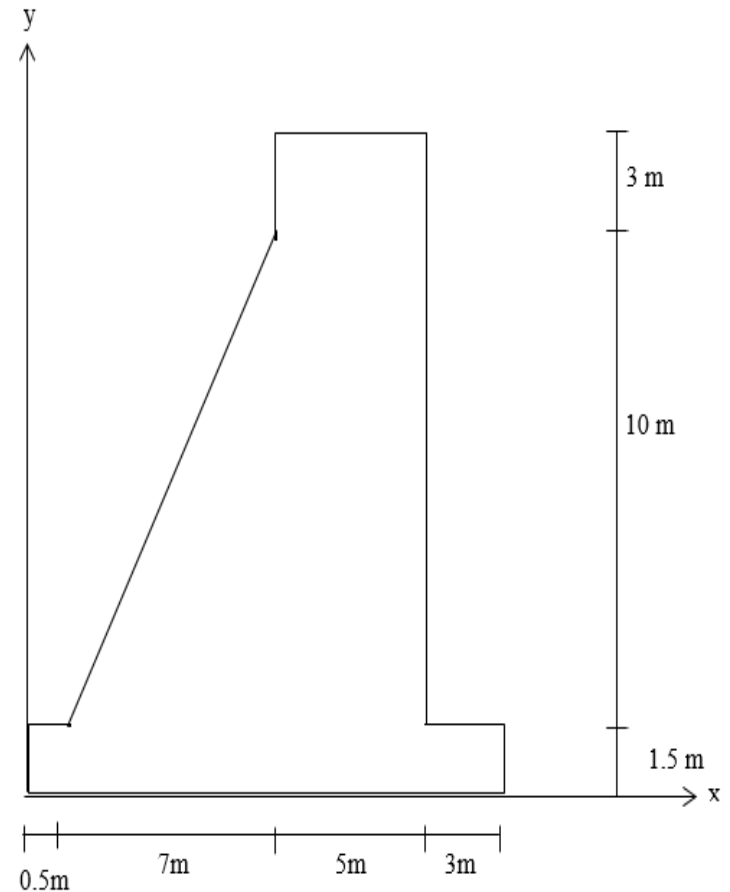b)   Determine the moment of inertia I_x and I_y about the centroid axes

Figure Q1

Figure Q2 shows the cross section of reservoir structure to impound the water during humid season in preventing from the flood disaster. Based on this structure:

a)   Determine the centroid *(x, y)* of the structure

b)   Determine the moment of inertia Ix and Iy about the centroid axes.

c)   Determine a new centroid *(x, y)* if the width of **CD** is changed to 100 m. The length of **AB** and **BC** are constant. Compare your finding based on these two structure design.
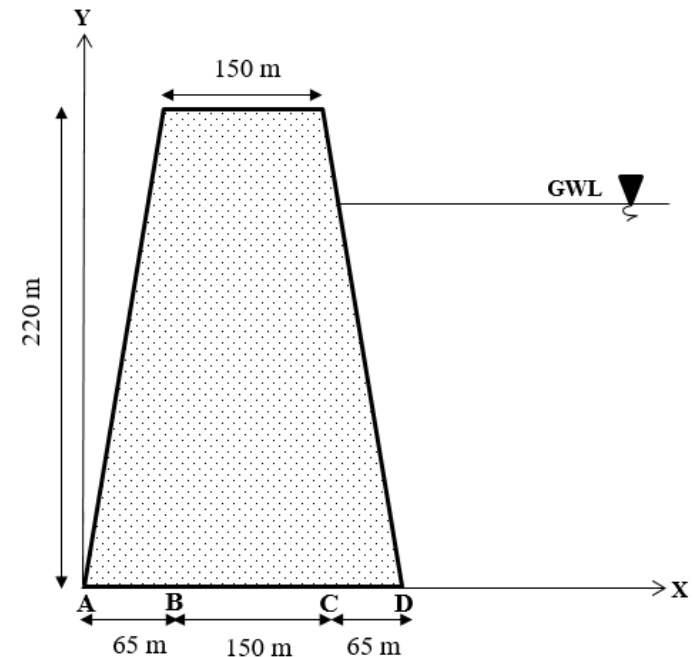

Figure Q2