

**MASINDE MULIRO OF SCIENCE AND TECHNOLOGY**  
**DEPARTMENT OF CIVIL AND STRUCTURAL ENGINEERING**  
**CSE 321 SOIL MECHANICS II**

**CAT TWO**

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Analyze the stability of the cantilever retaining wall shown in the figure. The approximate parameters for the retained soil are  $c = 0$ ,  $\phi = 35^\circ$  and  $\gamma = 16 \text{ kN/m}^3$ . The unit weight concrete is  $24 \text{ kN/m}^3$ . The water table is below the base of the wall. Take  $\delta = 27^\circ$  on the base of the wall. Allowable bearing capacity of the soil below the base is  $300 \text{ kN/m}^2$  and the retaining wall height is  $6 \text{ m}$ .

