



**DEPARTMENT OF CIVIL ENGINEERING**

**Hydraulics and Open Channel Flow**

**Class Test 1 (30 marks)**

1. What should be the cross section of efficient trapezoidal shape concrete lined canal to carry a discharge of  $250 \text{ m}^3/\text{s}$ . The channel slope is 0.0004 and Manning's  $n$  is 0.014. Take side slope 1:1.
2. A trapezoidal channel with a base of 6 m and side slope of 2H: 1V conveys water at  $17 \text{ m}^3/\text{s}$  with a depth of 1.5 m. Is the flow situation subcritical or supercritical?
3. A rectangular channel carries a certain flow for which the alternate depths are found to be 3m and 1 m. What shall be the critical depth in m for this flow.