Name: Id#

ISE 307, Term 153

ENGINEERING ECONOMIC ANALYSIS

Quiz# 3

Date: Monday, August 15, 2016

# 

# **Q1.** The owner of a business is considering investing $80,000 in new equipment. He estimates that the net cash flows will be $8,000 during the first year and will increase by $2,000 per year each year thereafter. The equipment is estimated to have a 10-year service life and a net salvage value at the end of this time of $10,000. The firm's interest rate is 15%.

1. Determine the annual capital cost (ownership cost) for the equipment.
2. Determine the equivalent annual savings (revenues).
3. Determine whether this investment is wise.

# **Q2.** Consider the following investment projects:

|  |  |  |
| --- | --- | --- |
| *n* | Project 1 | Project 2 |
| 0 | -$1,200 | -$2,000 |
| 1 | 800 | 1,500 |
| 2 | 900 | 1,100 |
| IRR | 26.13% | 20.60% |

Determine the range of MARR for which Project 2 would be preferred over Project 1.