Name: KEY Id#

ISE 307, Term 153

ENGINEERING ECONOMIC ANALYSIS

Quiz# 2

 Date: Monday, August 8, 2016

#

# **Q1.** The accompanying table shows a cash flow for a company along with CPI:

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Cash | CPI | Inflation Rate |
| 0 | 100,000 | 180 |  |
| 1 | 115,000 | 184 | =(184/180)-1=2.22% |
| 2 | 128,000 | 189 | =(189/184)-1=2.72% |
| 3 | 145,000 | 196 | =(196/189)-1=3.70% |

# Assuming that year 0 is the base period, determine the inflation rate for each period, and calculate the average inflation rate over the three years.

Average inflation rate over the three years = (196/180)1/3 – 1= 2.88%

# What will be the equivalent cash of year 3 stated in terms of year 1 cash?

# = 145,000 (1.037)-1(1.0272)-1 = 136,122.4

# **Q2.** The average starting salary for engineers was $8,000 a year in 1985. John, a mechanical engineer, got an offer for $48,000 a year in 2012. Knowing that the CPIs for 1985 and 2012 are 36.87 and 205.43, respectively, what is John's real salary in terms of constant 1985 dollars?

 f' = (205.43/36.87)1/27 – 1 = 0.065686

 John's real salary in terms of constant 1985 dollars = 48,000 (1+0.065686)-27 = $8,614.91

**Q3.** Consider the following two mutually exclusive investment projects:



At an interest rate of 12%, which project would you recommend choosing?



Select project A.