



ISRA UNIVERSITY

Islamabad Campus

Department of Electrical Engineering

Program: B.E. (Electrical)

Semester – Spring 2016

HS-321 Engineering Economics & Management

Quiz – 1

Marks: 10

Handout Date: 21/03/2016

Question # 1:

XYZ limited spent 840k developing a new product. The money were spent in 3 years time, 300k each for first two years and remaining 240k in third year. The product launched after the three years. It will sell for 1500 each. Sales are expected of 130, 180, 250, 450, 570 units after launch. The company can achieve an investment return of 20% on capital after inflation.

Period	Year	Cash Flow	PVF	Present Value
1	0	-300,000	1	-300,000
2	0	-300,000	0.83	-249,000
3	0	-240,000	0.69	-165,600
4	1	195,000	0.58	113,100
5	2	270,000	0.48	129,600
6	3	375,000	0.40	150,000
7	4	675,000	0.33	222,750
8	5	855,000	0.28	239,400
Total	-	1530,000	-	140,250

According to simple payback period of investment is = 3 years as 3 years cash flow equals 840k which was the investment.

According to discounted cash flow payback period is around 5 years as 5 years present value equals 854,850

Discounted cash flow calculates more realistic value