



# ISRA UNIVERSITY

Islamabad Campus

Department of Electrical Engineering

Program: B.E. (Electrical)

Semester - Fall 2015

HS-321 Engineering Economics & Management

Assignment – 1

Marks: 10

Due Date: 04/04/2016

Handout Date: 28/03/2016

Question # 1:

XYZ limited spent 550,000 in equal amounts over two years developing a new product, launched after the two years. It will sell for 1000 each. Sales are expected of 100, 150, 300, 450, 600 units after launch. The company can achieve an investment return of 10% on capital after inflation.

Calculate simple payback period and discounted cash flow.

Period	Year	Cash Flow	PVF	Present Value
1	0	-275,000	1	-275,000
2	0	-275,000	0.91	-250,250
3	1	100,000	0.83	83,000
4	2	150,000	0.75	112,500
5	3	300,000	0.68	204,000
6	4	450,000	0.62	279,000
7	5	600,000	0.56	336,000
<b>Total</b>	-	<b>1050,000</b>	-	<b>489250</b>

According to simple payback period of investment is = 3 years approx

According to discounted cash flow payback period is around 3.7 years approx

Discounted cash flow calculates more realistic value

**Good Luck**