**CAPITAL INVESTMENT DECISIONS**

1. Work out Pay Back period and Discounted Pay Back period for the following : -

**PROPOSAL 1 PROPOSAL 2**

Rs. Rs.

Initial Investment 110000 80000

Life of the Machine 4 Years 5 Years

Scrap value 5000 6000

Net Profit

Year 1 69000 37000

Year 2 14000 11000

Year 3 33000 45000

Year 4 49000 22000

Year 5 ---- 76000

Income Tax applicable - 25 %

The cost of capital to be considered for the appraisal is 12 % p.a

Present Value of Re. 1 at 12% p.a at the end of

Year 1 - 0.893 ; Year 2 - 0.797 ; Year 3 - 0.712 ; Year 4 - 0.635 ; Year 5 - 0.567

1. A manufacturing company is presented with two investment proposals the details of which is as below :-

**PROPOSAL ‘I ‘ PROPOSAL’II’**

Rs. Rs.

Initial Investment 100000 120000

Life of the Machine 4 Years 5 Years

Scrap value 10000 20000

Working capital required 10000 40000

Net Profit

Year 1 32000 44000

Year 2 55000 10000

Year 3 17000 75000

Year 4 30000 20000

Year 5 ---- 40000

Income Tax applicable - 30 % ; Cost of capital is 10 % p.a

Find out the best proposal out of the above under Net Present Value and also calculate Discounted Payback Period of both the proposals .

Present Value of Re. 1 at 10% p.a at the end of

Year 1 - 0.909 ; Year 2 – 0.826 ; Year 3 – 0.751; Year 4 - 0.683 ; Year 5 - 0.621

4. A business firm which is poised for diversification has been offered two alternates by

an agency the details of which is given below :-

**ALTERNATIVE “A” ALTERNATIVE “B”**

Rs. Rs.

Initial Investment 120000 150000

Scrap value 20000 10000

Working capital required

at the end of Year 1 20000 18000

- do - Year 2 15000 25000

Net Profit

Year 1 50000 40000

Year 2 25000 18000

Year 3 40000 70000

Year 4 35000 20000

Year 5 ---- 50000

Income Tax applicable - 20 %

As a policy, the company would be interested in the alternate which yields the maximum returns as the cost of its funds is 12 % p.a

Recommend the best alternate of the above that will maximize the values of the firm. Also find out the Payback period of these options using present values.

1. M/s. Amrit Sales Ltd, is engaged in the business of making consumer durables. In a mission to expand its business the company intends to invest in either of the following proposals which would be more profitable.

Suggest the best one based on Net Present Value and also indicate the Payback

period (discounted) to enable the company for further action.

**OPTION ‘A ‘ OPTION’B**

Rs. Rs.

Initial Investment 12,00,000 15,00,000

Life of the Machine 5 Years 6 Years

Scrap value 1,00,000 1,20,000

Working capital required

– initial 50,000 1,00,000

II year beginning 3,00,000 2,00,000

Cash Profit

Year 1 4,90,000 3,70,000

Year 2 3,40,000 3,10,000

Year 3 5,30,000 6,20,000

Year 4 3,90,000 4,00,000

Year 5 1,00,000 2,00,000

Year 6 - 4,00,000

Income Tax applicable - 25 %

The cost of capital to be considered for the appraisal is 14 % p.a

Present Value of Re. 1 at 14% p.a at the end of

Year1-0.88; Year2- 0.77 ; Year3 - 0.67 ; Year4 - 0.59 ; Year5- 0.52 ;Year6 – 0.46

6.. M/s. Axis Ltd, has been offered the following investment proposals up and you

are required to suggest the best one based on NPV and also find out the

discounted payback period of both the proposals

**PROPOSAL 1 PROPOSAL 2**

Rs. Rs.

Initial Investment 110000 80000

Life of the Machine 4 Years 5 Years

Scrap value 5000 6000

Working capital required – I year end 15000 12000

**Cash flow**

Year 1 69000 37000

Year 2 14000 11000

Year 3 33000 45000

Year 4 49000 22000

Year 5 ---- 76000

Income Tax applicable - 25 %

The cost of capital to be considered for the appraisal is 13 % p.a

1. M/s. Indian Machinery Ltd, intends to replace its existing machine with a new one. Suggest the best one based on value maximization to the company.

**CHOICE I CHOICE II**

Rs. Rs.

Initial Outlay 80000 60000

Estimated Life 5 Years 4 Years

Scrap value 5000 8000

Working capital required 25000 10000

**Operating details (in Rs)**

**Year 1**

Sales 40000 12000

Expenses excl. Depreciation 29000 8000

**Year 2**

Sales 19000 22000

Expenses excl. Depreciation 9000 15000

**Year 3**

Sales 30000 40000

Expenses excl. Depreciation 10000 28000

**Year 4**

Sales 18000 39000

Expenses excl. Depreciation 12000 16000

**Year 5**

Sales 21000 ----

Expenses excl. Depreciation 14000

Income Tax applicable - 30 %

The cost of capital to be considered for the appraisal is 10 % p.a