

Unit-4

CAPITAL & CAPITAL BUDGETING

Capital: - Capital mean the entrepreneur is taking amount for start business. It refers to money as well as money's worth it is the difference between assets and liabilities.

Significance and need of capital:-

1. **For promotion of business:** - every business enterprise owes its existence to capital in order to investigate the business opportunities assemble the requisite resources and promote the enterprise in operation capital is required.

2. **For expansion growth diversification of business:-**the successful operation of the business enterprise. Its growth expansion and diversification is possible with the sufficient introduction of capital.

3. **For replacement of assets:-**the expansion, growth and diversification of business require machines, plants tools equipment and other fixed assets. Acquisition of assets requires huge amount of capital.

4. **for conducting businesses operations smoothly:-** the routine day to day business operations requires sufficient working capital without working capital the enterprise cannot operate smoothly.

5. **for payment of the tax:-**the enterprise needs capital and funds for payment of direct and indirect taxes. Without sufficient funds taxes cannot be paid.

6. **for meeting contingencies:-**future is always uncertain any miss happening can occur at any moment. As such there must be sufficient funds with the enterprise to meet the emerging contingencies.

7. **for liquidation of business:-** in case of liquidation of business assets are sold or auctioned and liabilities are paid the process requires sufficient funds it shows that capital is required even if the business is liquidated.

1. TYPES OF CAPITAL:-

1. Fixed capital 2. Working capital

1. Fixed capital:-the amount needed to purchase fixed assets such as land, furniture, building which are required to earn income for the business is called fixed capital. It is required to start any business activity.

Fixed assets can be divided into three types namely tangible fixed assets, intangible fixed assets and financial fixed assets. Any asset having physical existence is known as tangible assets. Ex. plant and machinery equipment, furniture, land and building etc. intangible assets are non-physical resources such as patents, copyrights, trademarks etc. whereas financial assets are investments in shares, foreign currency deposits, government bonds etc.

Determinants' of fixed capital:-

1. Nature of business: - the amount of fixed capital requirements changes from industry to industry,. In case of manufacturing firms. Large amount of fixed capital is needed and in case of trading, financial and banking firm less amount of fixed capital is required.

2. Size of business:-normally a large size of firm requires more fixed capital than that of small size firm. For example a manufacturing company such as steel factory may require relatively large finance. Organization when compared to a service.

3. Production technique:-in case of automated technique of production more amount of fixed capital is required. Whereas in simple technique, less amount of fixed capital is required.

2. Working capital:-working capital refers to the amount of funds needed to cover the cost of operating of the business firm .ex:-purchase of raw material, payment of wages, day to day expenses. Working capital is regarded as the life blood of a business. a study of working capital is a major importance to internal and external analysis because of its close relationship with the current day to day operations of a business.

Types of working capital:-

1. Fixed working capital
2. Variable working capital

1. Fixed working capital:-the minimum amount which is required continuously to carry out business activity is referred as fixed working capital. It represents the current assets required on a continuing basis for the entire year. It grows with the size of business. Fixed working capital is permanently needed; hence it should be financed out of term funds.

2. Variable working capital:-variable working capital refers to the amount required to meet seasonal demand and special exigencies. The variable working capitals fluctuate from time to time on the basis of seasonal trends. It represents additional current assets required at different time during the operating year. Temporary working capital is generally financed from short term sources.

Determinants of working capital:-

- 1. Nature of business:-**the working capital requirement depends on nature of business in case of public utilities like electricity, water and railways the need working capital. Since they do not maintain large inventory. But in case of trading and financial firms more amount of working capital is needed.
- 2. Size of business:-**generally large size business requires more amount of working capital whereas for small scale business normally working capital requirement will be less.
- 3. Manufacturing process:-**if the manufacturing process is larger more amount of working capital is required .since it will take a long time to convert raw materials into cash, whereas if the manufacturing process is shorter less working capital is required.
- 4. Seasonal variations:-**in buy seasons large amount of working capital is required because there will be heavy demand in that season and they need to maintain big inventories. In black season less working capital is required because of low demand in that season.
- 5. Working capital cycle:-**this working capital cycle refers to the time taken to convert raw materials into cash. if the time taken to complete the operating cycle is more the working capital required will also more and vice versa.
- 6. Credit policy:-**working capital also depends on credit policy of the business i.e. whether the firm purchases and sells its products on credit basis or on cash basis.
- 7. Velocity of turnover:-**those business firms which can sell their products quickly. Require a lesser amount of working capital. Whereas firms which have capital intensive nature require more amounts of working capital.
- 8. Availability of raw materials: -** if the raw materials are easily available and the load time is less.The working capital needs will be less.
- 9. Consistent performance: -** the business firms which are enjoying regular and increasing profits.Need less amount of working capital
- 10 .Inflation level:-**during the period of rising price level, the business firms have to maintain a large amount of working capital.

3. Sources of capital

On the basis of period of use finance may also be classified into long-term and short-term finance.

Long term finance:- it is usually required for more than five years. It is needed for long-term or even permanent capital investment. It is invested in fixed assets. Therefore, it is collected through shares and long-term debentures. It is used for the establishment of a business unit or for its expansion.

Source of Issue long-term finance: - the following are the main sources of long-term finance.

1. Issue of shares
2. Issue of debentures
3. Retained earnings
4. Loans from specialized financial institutions.
5. Leasing

Short term finance:- such financial requirements are usually for a period of one year or less than that. It is required to meet the variable, seasonal or temporary needs of working capital. In other words, it is used to meet the day-to-day expenses in the conduct of the business.

1. Bank credit
2. Customer advances
3. Trade credit
4. Installment credit

4. Capital budgeting

Capital budgeting may be defined as the decision making process by which a firm evaluates the purchase of major fixed assets. It involves firms' decision to invest its current funds for addition, disposition, modification and replacement of fixed assets.

Capital budgeting is the long term planning to make and finance proposed capital outlays. It is the process of evaluating the relative worth of long term investment proposals on the

basis of their respective profitability. The capital budgeting decision involve long term planning for selecting as well as financing the investment proposals.

Features of capital budgeting:-

- 1. Growth:** - the effects of capital budgeting decision extend into the future and have to be endured for a longer period than the consequence of the current operating expenditure. A firm decision to invest in long term assets has a decisive influence on the rate and the direction of growths.
- 2. Risk:** - A long term commitment of funds may also change the risk complexity of the firm. If the adoption of the investment increases average gain but causes frequent fluctuation in its earnings the firm will become more risky thus capital budgeting decisions shape the basic risk character of the firm.
- 3. Funding:** - capital budgeting decisions generally involve large amount of funds which make it necessary for the firm to plan its investment programmes very carefully and make an advance arrangement for processing finance internally or externally.
- 4. Irreversibility:** - most capital budgeting decisions are irreversible. Investment decisions once made cannot be reversed but at a substantial loss.
- 5. Complexity:** - another important feature of capital budgeting decision is that it is the most difficult decision to make it is really a complex problem to correctly estimate the future cash flow of an investment.

Importance of capital budgeting:-

- 1. Involvement of heavy funds:** - capital budgeting decisions involve large capital outlays in such cases the firm should carefully plan its investment programmes. Incorrect decision can damage the survival of the firm.
- 2. Long term influence:** - they have a major impact on the firms in the future and will be felt by the firm over a longer period. As a result it has a considerable influence on the growth of the firm.
- 3. Capital budgeting decisions are irreversible:** - it is difficult to reverse capital investment decisions because it is very difficult to find a market for the capital assets.
- 4. Most difficult in making:** - these decisions require an assessment of future events which are uncertain it is really a difficult task to estimate that probable future events benefits and costs accurately.

5. Techniques or methods of capital budgeting:-

The methods or techniques of capital budgeting can be classified as.

1. Payback period method
2. Average or accounting rate of return (ARR) method.
3. Net present value (NPV) method.
4. Internal rate of return (IRR) method.

1. Payback period method:-under payback method the decision to accept or reject a proposal is based on its payback period .it is refers to the period with in which the original cost of the projectis recovered. It is calculate use for the formulas.

1. It annual cash flow is constant.

$$\text{Payback period} = \frac{\text{Cost of the project}}{\text{Annual cash inflows}}$$

2. It annual cash flows is not constant.

$$\text{Payback period} = \text{Lower year} + \frac{\text{Cost of the project- AACI Lower year}}{\text{AACI of after lower year-AACI of lower year}}$$

2. Average or accounting rate of return (ARR) method:-accounting rate of return refers to the ratio of annual profit after taxes to the average investment. Accounting rate of return is also called average rate of return. Is calculate use for the formula.

$$\text{Average rate of return (ARR)} = \frac{\text{Average annual profit after taxes}}{\text{Average investment}}$$

3. Net present value method (NPV):-the NPV method is a process of calculating the present value of cash inflows and cash outflows of an investment .proposals using the cost of capital (or) rate of return as the appropriate discounting rate and net present value can be determined by subtracting the present value of cash outflows.

Net present value = present value cash inflows – project value

In case of one proposal the project will be accepted if present value of cash inflows is greater than the present value of cash outflow i.e. if NPV is positive otherwise it is rejected.

In case of more than one proposal those proposals should be selected where NPV is positive and highest otherwise it is rejected.

4. Internal rate of return method (IRR):- the internal rate of return is that rate at which the sum of discounted cash inflows equals equal to the sum of discounted cash out flows. In other words

It is that rate of return which equals the present value of cash inflows to the present value of cash outflows. in other words it is that rate which equates NPV to Zero.

In case of one proposal if the IRR is greater than the minimum rate of return should be selected otherwise it is rejected.

In case of more than one proposal .that proposals should be selected whose IRR is highest.

Formula for IRR Method.

$$IRR = L + \frac{P1-C}{P1-P2} \times D$$

5. Problems in capital budgeting:-

1. Payback period method
2. Average or accounting rate of return (ARR) method.
3. Net present value (NPV) method.
4. Internal rate of return (IRR) method.

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$$\text{Average rate of return (ARR)} = \frac{\text{Average annual profit after taxes}}{\text{Average investment}}$$

Problem:- 1the proposals in respect of the following two projects are to be examined using.

1. Pay back method 2.avarage rate of return method.

Initial (starting) investment for both projects Rs.20,000

Estimated cash in flows

Year	Project-1	Project-2
1	12500	11750
2	12500	11250
3	12500	12500
4	12500	13500

Solution:-

Project-1. Payback period annual cash flow is constant.

$$\text{Payback period} = \frac{\text{Cost of the project}}{\text{Annual cash inflows}}$$

$$\text{Payback period} = \frac{20000}{12500} = 1.6 \text{ years}$$

$$\text{Average rate of return (ARR)} = \frac{\text{Average annual profit after taxes}}{\text{Average investment}} \times 100$$

$$\text{Average annual profit after tax} = \frac{\text{Total profit after taxes}}{\text{Total number of years}}$$

$$\text{Total profit} = 12500 + 12500 + 12500 + 12500 = 50000$$

$$\text{Number of years} = 4$$

$$\text{Average annual profit after tax} = \frac{50000}{4} = 12500$$

$$\text{Average Investment} = \frac{\text{Investment}}{2} = \frac{20000}{2}$$

$$\text{Average Investment} = \frac{20000}{2} = 10000$$

$$\text{Average rate of return (ARR)} = \frac{12500}{10000} \times 100 = 125\%$$

Project-2 payback period.

Annual cash flows are not constant.

Cost of the project- AACI Lower year

$$\text{Payback period} = \text{Lower year} + \frac{\text{AACI of after lower year} - \text{AACI of lower year}}{\text{AACI of after lower year} - \text{AACI of lower year}}$$

Year	Annual cash in flow	Accumulative annual cash inflows(AACI)
<u>1</u>	11750	11750 – lower year
2	12250	24000- AACI after lower year
3	12250	36500
4	13750	50000

Total = 50000

$$\text{Payback period} = 1 + \frac{20000 - 11750}{24000 - 11750}$$

$$= 1 + \frac{8250}{12250} = 1.67 \text{ years}$$

$$\text{Average rate of return (ARR)} = \frac{\text{Average annual profit after taxes}}{\text{Average investment}} \times 100$$

$$\text{Average annual profit after tax} = \frac{\text{Total profit after taxes}}{\text{Total number of years}}$$

$$\text{Average annual profit after tax} = \frac{50000}{4} = 12500$$

$$\text{Average Investment} = \frac{\text{Investment}}{2}$$

$$\text{Average Investment} = \frac{20000}{2} = 10000$$

$$\text{Average rate of return (ARR)} = \frac{12500}{10000} \times 100 = 125\%$$

3. Net present value method (NPV):- The NPV method is a process of calculating the present value of cash inflows and cash outflows of an investment proposals using the cost of capital (or) rate of return as the appropriate discounting rate.

Net present value = present value cash inflows - project value

Problem:-1. consider the following two investments alternative each costing Rs 9,00,000. the details of cash inflows are as follows

Year	Project-1	Project-2
1	3,00,000	6,00,000
2	5,00,000	4,00,000
3	6,00,000	3,00,000

The cost of capital is 10% per year which project will you choose under NPV method.

Solution:-

Net present value method –project-1

Year	Cash inflows present	Present value Of Rs1 at 10%	Present value (2x3)
1	3,00,000	0.909	2,72,700
2	5,00,000	0.826	4,13,000
3	6,00,000	0.751	4,50,000

Total present value of cash inflows 11,36,300

Net present value = total present value of cash inflows - project cost

$$= 11,36,300 - 9,00,000$$

$$= 2,36,300.$$

Net present value method –project-2

Year	Cash inflows present	Present value Of Rs1 at 10%	Present value (2x3)
1	6,00,000	0.909	5,45,400
2	4,00,000	0.826	3,30,400
3	3,00,000	0.751	2,25,300

Total present value of cash inflows 11, 01,100

Net present value = total present value of cash inflows - project cost

$$= 11, 01,100 - 9, 00,000$$

$$= 2, 01,100.$$

4. Internal rate of return (IRR):-

Steps for calculation of internal rate of return (IRR)

1. Have to calculate two times net present value
2. One time have to come positive of net present value
3. Another time have to come negative of net present value
4. Discount rate has to take approximate rates. each time.

Formula for IRR Method.

$$P1 - C$$

$$IRR = L + \frac{P1 - C}{P1 - P2} \times D$$

L = Lower rate of discount

P1 = Total Present Value at lower discount rate

P2 = Total Present Value at higher discount rate

C = cash out lay (or) investment

D = Difference in rate of discount.

Problem 1: - the following data you calculate internal rate of return (IRR) Cost of project Rs 11000

Cash inflows year	Rs.
1	6000
2	2000
3.	1000
4	5000

Solution:-

Calculate the net present value

Year	Cash inflows	Present value Of Rs 1 at 10%	Present value (2x3)
1	6000	0.909	5454
2	2000	0.826	1652
3	1000	0.751	751
4	5000	0.683	3415

Total present cash inflows = 11272

Net present value = total present cash inflows – project cost

= 11272 - 11000

= 272 (positive)

Calculate the net present value

Year	Cash inflows	Present value Of Rs 1 at 12%	Present value (2x3)
1	6000	0.893	5358
2	2000	0.797	1594
3	1000	0.712	712
4	5000	0.636	3180

Total present cash inflows = 10844

Net present value = total present cash inflows – project cost

= 10844 - 11000 = - 156 (negative)

P1-C

IRR = L + $\frac{P1-C}{P1-P2} \times D$

P1-P2

L = 10, P1 = 11272, C = 11000, P2 = 10844, D = 2

11272 - 11000

IRR = 10 + $\frac{11272-10844}{11272-10844} \times 2$

11272 - 10844

272

= 10 + $\frac{428}{428} \times 2$

428

= 10 + 0.635 × 2

= 10 + 1.27 = 11.27

Problem1. :-examine following three project proposals and evaluate them based on
1) payback period 2) average rate of returns (ARR).

Project – A B C

Investment's 10,00,000 10,00,000 10,00,000

Annual cash inflow

Year	A	B	C
1	400000	500000	300000
2	500000	600000	200000
3	200000	200000	400000
4	100000	100000	200000

Solution:

Project- A payback period.

Cost of the project- AACI Lower year

Payback period = Lower year + $\frac{\text{AACI of after lower year} - \text{AACI of lower year}}{\text{AACI of after lower year} - \text{AACI of lower year}}$

Year	Annual cash in flow	Accumulative annual cash inflows(AACI)
1	400000	400000
2	500000	900000- lower year
3	200000	1100000 AACI after lower year
4	100000	1200000

Total = 1200000

Payback period = 2 + $\frac{100000 - 900000}{1100000 - 900000}$

= 2 + $\frac{100000}{200000}$ = 2.5 years

Average annual profit after taxes

2).Average rate of return (ARR) = $\frac{\text{Average annual profit after taxes}}{\text{Average investment}} \times 100$

Average annual profit after tax= $\frac{1200000}{4}$

= 300000

$$\begin{aligned} \text{Average Investment} &= \frac{\text{Investment}}{2} \\ &= \frac{100000}{2} = 500000 \\ \text{Average rate of return (ARR)} &= \frac{300000}{500000} \times 100 = 60\% \end{aligned}$$

Project-B payback period.

$$\text{Payback period} = \text{Lower year} + \frac{\text{Cost of the project- AACI Lower year}}{\text{AACI of after lower year-AACI of lower year}}$$

Year	Annual cash in flow	Accumulative annual cash inflows(AACI)
1	500000	500000- lower year
2	600000	1100000 AACI after lower year
3	200000	1300000
4	100000	1400000

Total = 1400000

$$\begin{aligned} \text{Payback period} &= 1 + \frac{1000000 - 500000}{1100000 - 500000} \\ &= 1 + \frac{500000}{600000} = 1.83 \text{ years} \end{aligned}$$

$$2). \text{Average rate of return (ARR)} = \frac{\text{Average annual profit after taxes}}{\text{Average investment}} \times 100$$

$$\begin{aligned} \text{Average annual profit after tax} &= \frac{1400000}{4} \\ &= 350000 \end{aligned}$$

$$\begin{aligned} \text{Average Investment} &= \frac{\text{Investment}}{2} \end{aligned}$$

$$\text{Average Investment} = \frac{100000}{2} = 500000$$

$$\text{Average rate of return (ARR)} = \frac{350000}{500000} \times 100 = 70\%$$

Project- C payback period.

$$\text{Payback period} = \text{Lower year} + \frac{\text{Cost of the project- AACI Lower year}}{\text{AACI of after lower year-AACI of lower year}}$$

Year	Annual cash in flow	Accumulative annual cash inflows(AACI)
1	300000	300000
2	200000	500000
3	400000	900000- lower year
4	200000	1100000-AACI after lower year

$$\text{Total} = 1100000$$

$$\text{Payback period} = 3 + \frac{100000 - 900000}{1100000 - 900000}$$

$$= 3 + \frac{100000}{200000} = 3.5 \text{ years}$$

$$2). \text{Average rate of return (ARR)} = \frac{\text{Average annual profit after taxes}}{\text{Average investment}} \times 100$$

$$\text{Average annual profit after tax} = \frac{1100000}{4} = 275000$$

$$\text{Average Investment} = \frac{\text{Investment}}{2}$$

$$\text{Average Investment} = \frac{100000}{2} = 500000$$

$$\text{Average rate of return (ARR)} = \frac{275000}{500000} \times 100 = 55\%$$

Problem 3:-XYZ.Co is considering the purchase of machine. Two machines A and B each costing Rs.50,000 is available. Earnings after taxes are expected to be under.

Year	1	2	3	4	5
Machine-A	5000	15000	20000	30000	20000
Machine-B	15000	20000	25000	15000	10000

Estimate the two alternatives according to use

- a) Payback period method b) average rate of returns method c) net present value method. a discount rate of 10% is to be

Machine- A payback period.

$$\text{Payback period} = \text{Lower year} + \frac{\text{Cost of the project} - \text{AACI Lower year}}{\text{AACI of after lower year} - \text{AACI of lower year}}$$

Year	Annual cash in flow	Accumulative annual cash inflows(AACI)
1	5000	5000
2	15000	20000
3	20000	40000- lower year
4	30000	70000-AACI after lower year
5	20000	90000

Total = 90000

$$\begin{aligned} \text{Payback period} &= 3 + \frac{50000 - 40000}{70000 - 40000} \\ &= 3 + \frac{10000}{30000} = 3.33 \text{ years} \end{aligned}$$

$$2). \text{Average rate of return (ARR)} = \frac{\text{Average annual profit after taxes}}{\text{Average investment}} \times 100$$

90000

$$\text{Average annual profit after tax} = \frac{5}{5} = 18000$$

$$\text{Average Investment} = \frac{\text{Investment}}{2}$$

$$\text{Average Investment} = \frac{50000}{2} = 25000$$

$$\text{Average rate of return (ARR)} = \frac{18000}{25000} \times 100 = 72\%$$

Machine- B payback period.

$$\text{Payback period} = \text{Lower year} + \frac{\text{Cost of the project} - \text{AACI Lower year}}{\text{AACI of after lower year} - \text{AACI of lower year}}$$

Year	Annual cash in flow	Accumulative annual cash inflows(AACI)
1	15000	1 5000
2	20000	35000 –Lower year
3	25000	60000- AACI after lower year
4	15000	75000
5	10000	85000

Total = 85000

$$\begin{aligned} \text{Payback period} &= 2 + \frac{50000 - 35000}{60000 - 35000} \\ &= 2 + \frac{15000}{25000} = 2.6 \text{ years} \end{aligned}$$

$$\begin{aligned} \text{2).Average rate of return (ARR)} &= \frac{\text{Average annual profit after taxes}}{\text{Average investment}} \times 100 \\ &= \frac{17000}{85000} \times 100 \end{aligned}$$

$$\begin{aligned} \text{Average annual profit after tax} &= \frac{85000}{5} \\ &= 17000 \end{aligned}$$

$$\text{Average Investment} = \frac{\text{Investment}}{2}$$

$$\text{Average Investment} = \frac{50000}{2} = 25000$$

$$\text{Average rate of return (ARR)} = \frac{17000}{25000} \times 100 = 68\%$$

Machine-A

Calculate the net present value

Year	Cash inflows	Present value Of Rs 1 at 10%	Present value (2x3)
1	5000	0.909	4545
2	15000	0.826	12390
3	20000	0.751	15020
4	30000	0.683	20490
4	20000	0.621	12420

Total present cash inflows = 64865

Net present value = total present cash inflows – project cost
 = 64865 - 50000
 = 14865

Machine-B

Calculate the net present value

Year	Cash inflows	Present value Of Rs 1 at 10%	Present value (2x3)
1	15000	0.909	13635
2	20000	0.826	16520
3	25000	0.751	18775
4	15000	0.683	10245
5	10000	0.621	6210

Total present cash inflows = 65385

Net present value = total present cash inflows – project cost
 = 65385 - 50000 = 15385

Problem: - 1. the following data you calculate internal rate of return (IRR)

Cost of project Rs 10000

Cash inflows year	Rs.
1	1000
2	1000
3.	2000
4	10000

Solution:-

Calculate the net present value

Year	Cash inflows	Present value Of Rs 1 at 10%	Present value (2x3)
1	1000	0.909	909
2	1000	0.826	826
3	2000	0.751	1502
4	10000	0.683	6830

Total present cash inflows = 10067

Net present value = total present cash inflows – project cost
 = 10067 - 10000 = 67(positive)

Calculate the net present value

Year	Cash inflows	Present value Of Rs 1 at 15%	Present value (2x3)
1	1000	0.870	870
2	1000	0.756	756
3	2000	0.658	1316
4	10000	0.572	5720

Total present cash inflows = 8662

Net present value = total present cash inflows – project cost
 = 8662 - 10000 = - 1338 (negative)

P1-C

IRR = L + ----- x D

P1-P2

L = 10, P1 = 10067, C = 10000, P2 = 8662, D = 5

$$R = 10 + \frac{10067 - 10000}{10067 - 8662} \times 5$$

$$= 10 + \frac{67}{1405} \times 5$$

$$= 10 + \frac{335}{1405}$$

$$= 10 + 0.24$$

$$= 10.24\%$$

Problem: -2

Project cost Rs 110000. Cash inflows

year1	6000
year2	20000
Year 3	10000
year4	50000

Calculate the internal rate of return.

(April 2022)

Solution:-

Calculate the net present value

Year	Cash inflows	Present value Of Rs 1 at 10%	Present value (2x3)
1	60000	0.909	54540
2	20000	0.826	16520
3	10000	0.751	7510
4	50000	0.683	34150

Total present cash inflows = 135210

$$\begin{aligned}
 \text{Net present value} &= \text{total present cash inflows} - \text{project cost} \\
 &= 135210 - 110000 \\
 &= 25210 (\text{positive})
 \end{aligned}$$

Calculate the net present value

Year	Cash inflows	Present value Of Rs 1 at 15%	Present value (2x3)
1	60000	0.870	52200
2	20000	0.756	15120
3	10000	0.658	6580
4	50000	0.572	28600

Total present cash inflows = 102500

$$\begin{aligned}
 \text{Net present value} &= \text{total present cash inflows} - \text{project cost} \\
 &= 102500 - 110000 = -7500 (\text{negative})
 \end{aligned}$$

P1-C

$$\text{IRR} = L + \frac{P1 - P2}{P1 - C} \times D$$

P1-P2

$$L = 10, \quad P1 = 135210, \quad C = 110000, \quad P2 = 102500, \quad D = 5$$

$$\begin{aligned}
 R &= 10 + \frac{135210 - 110000}{135210 - 102500} \times 5 \\
 &= 10 + \frac{25210}{32710} \times 5 \\
 &= 10 + \frac{126050}{32710} \\
 &= 10 + 3.5 \\
 &= 13.5\%
 \end{aligned}$$

Easy questions

1. What is capital? Explain the types and significance of capital.
2. What factors determine the working capital requirements of a company?
3. What are the sources of long term and short term finance?
4. Explain various types of capital budgeting methods?
- 5 . what is capital budgeting and features, its importance.

Short questions.

- a. Define capital budgeting
- b. What is NPV?
- c. What do you understand by working capital cycle?
- d. What are the various types of capital?
- e. What is fixed capital?
- f. What is working capital?
- g. What do you mean by accounting rate of return?
- h. write the features of capital budgeting.