Accouting statement

Summaries of financial activities are called financial statements , which can be prepared on a regular basis at the end of an accounting period. Usually , the minimum length of an accounting period is one month and the maximum length is one year .

The three basic financial statements are;

1. The income statement/ profit &loss account
2. Statement of owners equity
3. The balance sheet

The income statement / profit and loss account :

The income statement reveal the information about revenues expenses and the net income / net loss of the firm . an income statement , also known as a profit and loss statement , is a summary of a company's profit a loss that occurs during a particular period of time , generally one financial year. The income statement records and reports all the revenues occurring for the business during the financial year as well as operating expenses for the business. Income statement compares the periodical revenue and expenses occurring for the same period

Contents of the income statement

1. Name of the firm
2. Period of the time
3. Revenues
4. Expenses
5. Owners investment and withdrawal are not included in income statement
6. Net income is the difference between total revenue and total expenses

7. Revenues – expenses = net income
8. Expenses are listed in the orderof size beginning with the largest

Types of income statement

- ❖ The step form :

  The step form may be again of two types 1. Single step form 2. Multiple step form . in single step income statement , the revenue items are recorded first followed by expenses items. In the end, total of expenses is subtracted from the total revenues to get the net income or net loss are more than total revenue, we get a loss. In multiple step form income statement is better than the single step form as it treats operating revenue and non operating revenues differently
- ❖ The account form :

  In the account form the income statement is divided into two slides where on left side expenses are recorded and on right side income is recorded.

Unit 3

Investment alternative and economic balance

Economics of selecting alternates :

Introduction :

The principles and terminology is necessary for an understanding of the limitations of the approximately and assumptions usually made in actual engineering practice

A group of related problems involving specific applications of economics .

a. Two most important problems met in process engineering are the selecting of equipment or a process to perform a particular service
b. Determination of when a given piece of equipment , already in service , should be replaced because of obsolescence or high cost of operation .
c. One of the most logical methods for comparing the relative economics of different processes making the same product is to compare the uniform annual costs for each process.

d. If two plants produce 10,000 tons / year each , obviously the one with the lower annual costs will also make the product at the lower cost per pound.
e. The theoretical economic analysis thus consists of determining these annual costs allowing forthe time value (interest rate)of money
f. The basic relation for economic selection of alternatives is eq(2-4)

$$P = R\ (1+i)^n\text{-}1\ /\ i(1+i)^n$$

g. If R is used as a basis , the procedure is called the annual costs method , and a comparison is made of all the pertinent annual direct costs plus the capital recovery cost .
   If p is used the procedure is called the present worth method, and the cost is equal to the sum of the present worths of all the pertinent annual direct costs and capital recovery costs.
h. If the comparison is made on the basis of interest i earned on alternate investments where R is a periodic return obtain by an alternate apparatus for n period , the rate of return method is used .

i. In the pay out time method, a comparison is made of the number of period n that are required before a periodic saving or return R will equal to the original investment p at some interst rate ‘i

Annual cost method :

In this method a comparison is made of the annual cost of a service provided by the alternate installations . these costs consist of all the direct costs and fixed costs.

Present worth method :

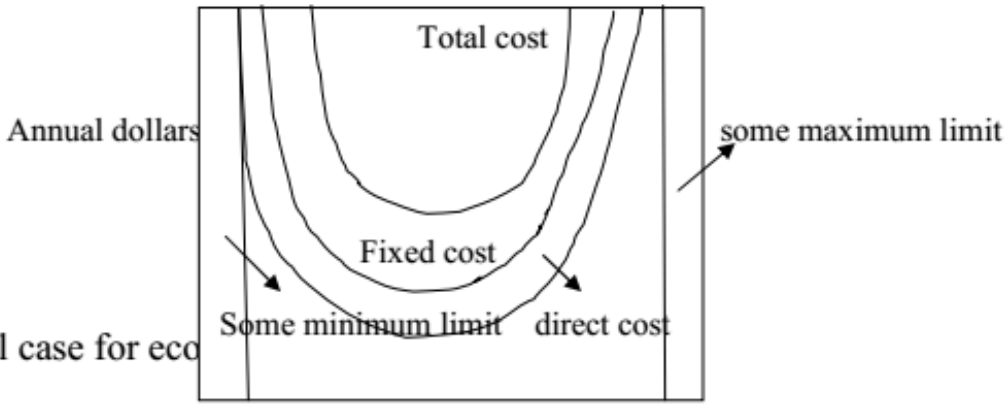
A series of uniform annual costs are known , they may be ready reduced to an equivalent present worth .

This method is more valuable than the annual cost method for certain conditions since it provides for estimating the comparative dollar

value at the present time equivalent to the annual cost for some fixed years of service by the two alternatives.

What is economic balance ?

- Economic balance is the design of equipment or the selection of operation condition whereby the increasing costs are balanced by the decreasing cost to give the greatest economic return
- There are numerous types of economic balance ; in design in operations , in calculation of recovery of minerals , in yield for chemical reactions etc .
- In general , economic balance requires an understanding of how the fixed costs vary with the common variable selected as a basis for the analysis



General case for eco

Where some independent variable can be related to the fixed costs and the direct costs , usually at some minimum limit for the variable , either the direct or the fixed costs will reach a high value. A similar situation usually occurs at some high value of the common variable.

In most , practical case the design or the nature of the operation is such that neither the fixed costs nor the direct costs individually covers the complete range from the maximum to the minimum limit of the common variable and therefore individual do not go through minimum.

What does pay back period measure?

Pay back period is popularly known as pay off or payout method . it is defined as the number of years required to recover the initial cash outlay invested in a project .

Computation of pay back period

→ If the annual cash inflow are constant or uniform , the payback period can be computed by dividing cash outlay by annual cash inflows

→ If the cash inflows are not uniform , the calculation of pay back period takes a cumulative form . in such a case the pay back period can be found out by adding up the figure of net cash inflows until the total is equal to initial investment . if there are two projects, the projects which has a shorter payback period , will be chosen

Merits :

⇒ It is easy to calculate and simple to understand

⇒ Executives prefer it whom like snap answers for selection the proposal

⇒ It is useful where the business is suffering from shortage of funds , as quick recovery is essential for repayment

⇒ It is useful for industrial subject to uncertainty , instability or rapid technological changes .

⇒ It is useful where profitability is not important

Demerits :

⇒ This method is delicate and rigid. A slight change in the operating cost will affect the cash inflows and the payback period

⇒ It does not take into account the life of the project , depreciation scrap value , invest factor etc

⇒ It completely ignores cash inflows after the pay back period

⇒ It gives more importance to liquidity as a goal of capital expenditure decisions , what is not just able