Unit 5: Accounting for Property, Plant and Equipment 4 LHs

- Concept, features and types of property, plant and equipment.
- Acquisition cost of property, plant and equipment.
- Depreciation of property, plant and equipment:
- Straight line method, diminishing balance method, and unit of activity method.
- Choice of depreciation method; Disposal of property, plant and equipment.
- Impact of depreciation on profit measurement.
- Intangible assets: concept and types.
- Capital versus Revenue: concept and types.

Concept, features and types of property, plant and equipment.

Concept of property, plant and equipment(fixed assets):

Property, plant and equipment are those types of assets which are used by the business for more than one year for the purpose of generating revenues. It is also called as long lived assets or Fixed assets. Long lived assets are usually classified into two subcategories, which are:

Tangible fixed assets (Depreciable Assets)are those types of fixed assets which have certain physical form. Land and building, plant and machinery, furniture etc. are the different examples of tangible fixed assets. On the other,

Intangible fixed assets (Non depreciable assets) are those types of fixed assets which do not have any physical form but have certain financial values and also use to contribute in generating revenues to the business as the tangible fixed assets use to do. Goodwill, trademarks, patent rights etc. are the different examples of intangible fixed assets.

The cost of a fixed asset is usually depreciated (for tangible assets) or amortized (for intangible assets) over the expected useful life of the asset. This is done in order to match the ongoing use of the asset with the economic benefits derived from it.

Features of property, plant and equipment:

The features of fixed assets are as follows:

- Provides future benefits
- Capital expenditure
- Useful life
- Depreciation or amortization
- Both tangible and intangible

Acquisition cost of property, plant and equipment:

Acquisition cost refers to the all of the cost that are normal and necessary to acquire (purchase) an assets This amount is considered to be the book value of an asset. These amount increases the cost price of an assets and are to be included while calculating annual depreciation. Mainly cost of acquisition include the following items:

- Purchase price
- Tax paid at the time of purchase
- Freight, Transportations , transit insurance, and handling costs;
- Installation/ erection charge, layout such as special foundations for the plant.

Journal entry for acquisition of assets:

Assets a/c Dr.

To Bank/ Cash a/c

Depreciation of property, plant and equipment:

Meaning and Definition

Depreciation is the reduction in the value of fixed assets due to regular use in business. It is a gradual decline in the value of fixed assets. Depreciation is charged only in fixed assets. No depreciation is possible on current assets. It is charged on all the Tangible fixed assets like plant, machinery, computer, furniture, building etc. But the depreciation is not charged on land. The value of land is not depreciated but it is always appreciated. Depreciation on the one hand is loss and on another hand it is a fund created for future replacement of the old assets.

Depreciation many be defined as the permanent decrease in the value of assets due to use and or the laps of the time."

Reasons for Charging Depreciation

Due to various reasons or causes depreciation is charged which are as follows:

1. **Wear and Tear:**
2. **Efflux of Time:**
3. **Obsolescence:**
4. **Damages or accident:**
5. **Exhaustion:**
6. **Decrease in Market value:**

FACTORS DETERMINING DEPRECIATION

a. **Cost Price (**cost of acquisition)
b. **Estimated Working Life:**
c. **Scrap Value:**
d. **Interest on Capital:**
e. **Repairs and maintenance expenditure:**

Advantages for providing Depreciation

1. **For calculate of true results of operation:**
2. **For presentation of true and fair view of financial position:**
3. **For calculation of true cost of production:**
4. **For calculations of tax liability**

METHODS OF DEPRECIATION

We have several method of charging depreciation on fixed assets. But the choice of depreciation methods depends upon the requirement and policy of organization itself. The most common methods of providing depreciation are mentioned below:

i. **Straight Line Method(SLM)**

Under this method, annual depreciation is to be calculated from original cost of assets. Depreciation for all the year will be same in this method. It is also called **fixed installment method and original cost method**. If the company used straight line method of charging depreciation ,Then book value of assets at the end of it's life will be assumed to be zero.

In this method depreciation can be calculate as under:

a) On the basis of estimated working life of assets

$$\text{Annual Depreciation} = \frac{\text{Cost Price - Scrap Value}}{\text{Life}}$$

b) On the basis of percentage rate of depreciation

$$\text{Annual depreciation} = \text{Original value} \times \text{Rate of Depreciation}$$

$$\text{Rate of depreciation per year} = \frac{\text{Annual depreciation}}{\text{Original cost price of assets}} \times 100\%$$

Depreciation Schedule

Year	Acquisition cost	Depreciation expenses	Accumulated depreciation	Book value (Cost-Acc.Dep.)
1	xxx	Xxx	xxx	xxx
2	xxx	xxx	xxx	xxx
3	xxx	xxx	xxx	xxx
4	xxx	xxx	xxx	xxx

Accounting treatment of Depreciation

The following accounting treatment will be made:

i) Preparation of journal entries

ii) Preparation of fixed assets ledger account

iii) Preparation of depreciation account

Journal entries:

S.No.	Transactions	Journal Entries
1	Purchase of an assets (at the date of assets purchase)	Assets a/c .... Dr To Bank a/c or cash a/c or Account payable/c [For assets purchased]
2	Annual Depreciation Charging (at the end of each year)	Depreciation a/c .... Dr To Assets a/c or accumulated depreciation a/c [For depreciation charged]
3	Transfer of depreciation to P/L a/c(at the end of each year)	Profit and loss a/c .... Dr To Depreciation a/ c [for Depreciation transferred to P/ L a/c]
4	Sale of an asset(at the date of assets sale)	Bank a/c or Cash a/c .... Dr To Asset a/c [For assets sold]
5	Sale of an asset at a profit(at the date of assets sale)	Assets a/c .... Dr To Profit and Loss a/c [For assets sold at profit]
6	Sale of an asset at a loss(at the date of assets sale)	Profit and loss a/c .... Dr To Assets a/c [For assets sold at loss]

ii. Diminishing Balance Method(DBM)

Under this method, the early depreciation is charged on book value of assets. The amount of depreciation will decreases with the passage of time. This method is also called written down value method or residual value method. If rate of depreciation is not mentioned, it is calculated using the following formula

$$\text{Rate} = 1 - \sqrt[n]{\frac{s}{c}}$$

Where, n = Estimated life of assets

s = Residual or scrap value

C = Original cost of assets

iii. unit of activity method

The units of activity method of depreciation is unique in that a plant assets useful life is expressed in the total units that are expected to be produced or the asset's total activity during its life. The asset's cost is then allocated to the accounting periods based on the plant asset's usage, units produced, activity, etc. The following formula is used for calculating depreciation expense under activity method of depreciation:

$$\text{Depreciation expense} = \frac{\text{Cost Price}}{\text{Total estimated life time activity of the asset}} \times \text{Actual activity performed during the period}$$

Choice of depreciation method

•Depreciation allows a business to deduct the cost of an asset over time rather than all at once. For financial reporting purposes, your small business may choose one of several methods to depreciate an asset. Based on generally accepted accounting principles, you should select the method that best matches the depreciation expense to the revenue the asset helps to generate. The best method for a business depends on size and industry, accounting needs, and types of assets purchased.

- Consider whether you will use an asset an equal amount each period continually throughout its useful life. If so, select the straight-line depreciation method, which allocates an equal portion of an asset’s cost to depreciation expense each period.
- Decide whether you will use an asset more in the early years of its life than in the later years. Then it will be better to use written down value method, which allocates a greater amount of depreciation expense to the early years of an asset’s life. The amount of depreciation expense decreases each year with this method.
- If an asset generates a measurable quantity of output each period in units such as pages printed or machine hours used. Then it will be better to use units-of-activity method, which allocates depreciation on a per-unit basis each period.

Disposal of property, plant and equipment

There are a number of reasons, it includes the asset is no longer needed or is obsolete, the asset is too costly to maintain or upgrade, and the company is seeking to improve its financial position by selling off non-core assets.

Dispose of plant assets which are no longer useful to them. There are three ways in which plant assets are disposed.

- Sales
- Retirement
- Exchange

Whatever the disposal method, the co. must determine the book value of the plant assets at the time of disposal. Book value is the difference between the original cost of plant assets and the accumulated depreciation to date.

Sales of assets:

- In a disposal by sale, the book value is compared to sale value of plant assets.
- If sales amount value is greater than book value then the difference amount is known as profit on sale of assets.
- If sales amount is less than book value then the difference amount is known as loss on sale

Cash/bank a/c dr.
P/L account (If loss on sale of plant) a/c dr.
Accumulated depreciation – assets a/c dr.
To Assets account
To P/L account (If profit on sale of plant)

(for record of sale of plant on loss)

Retirement of Assets

Some assets are retired by the Co. at the end of their useful life rather than sold. In retirement of assets no cash is received.

Accumulated depreciation a/c dr.
Loss on retirement a/c dr.
to Assets account
(for record of retirement of assets)

Exchange of Plant assets

Some the company exchange its existing assets by new one. The existing assets will credited and the new assets will be debited. The company should pay certain amount of cash while purchasing new assets by surrendering existing assets then the amount of cash should be credited.

New assets a/c dr
To Old assets
To Bank
(for record of exchange of assets)

Impact of depreciation on profit measurement

A depreciation expense has a direct effect on the profit that appears on a company's income statement. The larger the depreciation expense in a given year, the lower the company's reported net income – its profit. However, because depreciation is a non-cash expense, the expense doesn't change the company's cash flow.

▪ Intangible assets: concept and types.

An intangible asset is one that is not physical in nature. Since intangible assets have no shape or form, they cannot be held or manipulated. Common types of intangible assets include brands, goodwill, and intellectual property.
Intangibles may arise from various sources:
- Government grants such as patents, copyrights franchises, trademarks .
- Acquisition of another business in which the purchase price includes a payment for good will.
- Private monopolistic arrangements arising from contractual agreements, such as franchises and leases.

TYPE OF INTANGIBLE ASSETS

Patents

A patent is an exclusive right that enables the recipient to manufacture sell or otherwise control an invention for a period of 20 years form the date of grants.

Research and Development Costs (R/D)

Research and Development cost is not intangible cost but this expenditure lead to patents, copyrights and new products. Many companies spend huge amount on Research and Development in an ongoing effort to develop new product or process.

Copy rights

Copy rights is exclusive right given to the owner to reproduce and sell an artistic or published work.

Trademarks and Trade Names

A trademark or names is a work, phrase, or symbol that distinguishes or identifies a particular enterprise or product e.g. Coca Cola, Pepsi, Hero Hondas, Maruti Suzuki.

Franchises and Licenses

A Franchise is a contractual arrangement under the Franchiser under which the Franchiser grants the Franchisee the right to sell certain products, to render specific services, or to use certain trade marks or names, usually within a designated geographic area. E.g. McDonald, KFC, Pizza Hut.

Goodwill

The largest intangible asset that appears on a company B/S is goodwill. Goodwill represents the value of all favorable attributes that related that related to a business enterprise. These include exceptional management, desirable location, good customer relations, skilled employees, high quality products, fair pricing policies etc.

Capital versus Revenue: concept and types.

All business transactions are classified into two types, mainly: Capital, and Revenue items. When the items have long term effects on business for more than one year they are called capital items and when the items have short term effects on the business they are called revenue items in the business.

The distinction between capital items and revenue items is important because capital items are mentioned while entering the entry in the Balance Sheet and revenue items are transferred into the Trading and Profit and Loss Account (Income Statement).

Classification of Capital and Revenue Items:

a.Capital Expenditure :

Capital expenditure is incurred to accrued an assets that will benefit the business more than one accounting period. It is of non-recurring (repeating) nature of expenditure. It helps in increasing production volume or decreasing cost of production. Capital expenditure volume or decreasing cost of production. Capital expenditures are shown on the asset side of balance sheet.

b.Revenue expenditure :

The expenditures which are incurred to meet the running expenses of business are called revenue expenditure. The benefit from such expenditure expires within a year. Revenue expenditure is incurred to maintain the capital assets in a good condition and to carryout the normal course of business. These expenditures are shown in debit side of trading and P/L account(Income statement).

Deferred revenue expenditure:

Advertising for lunch new product ,Preliminary expenses, Underwriting commission ,Brokerage charge etc.

C. Capital income or receipts

Capital Receipt is the amount received as fixed assets, investments, loans, issues of shares(owners capital), and compensations from the accidents of assets. Capital income should be shown in the balance sheet.

d. Revenue income or receipts :

The receipts or the income that arises from a day to day business activities are called revenue receipts. These are shown in the income statement. These generally include the amount received through routine incomes, sales of goods, and fees received from the services provided by the business

e. Capital Profit/ loss :

The profit/loss earned by the business from the sale of fixed assets, from sale of shares and debentures in known as capital profit/loss.

f. Revenue profit/loss:

Revenue profits are normally earned by business i.e. profit earn by sale of goods or service provide.

g. Capital Reserve

Capital reserve is that reserve, which is made out of capital profits. The profits which are not earned by the company in normal course of business are called capital profits. This reserve will not be available for distribution as dividend to the shareholders.

h. Revenue Reserve

The reserve created out of revenue profit which is available to distribute as dividend to shareholders is called revenue reserve. There are two types of revenue reserve:

i. **General reserve:** It is also called free reserve. A general reserve is created as a part of net profit for strengthening final position of business organization. General reserve should be recorded in retained earnings statement and liability side of balance sheet.

ii. **Specific reserve:** These reserves are created for specific purpose for meeting a known liability for making reserve for loss. Special reserve should be utilized in the same purpose for which it was created it is shown in liability side of balance sheet and Retained earning statement . Example of special reserve are :

a. Sinking Fund/Depreciation fund b. Dividend equalization fund

c. Research and development fund d. Staff Welfare fund etc.