"DEPRECIATION is the gradual and permanent decrease in the value of an asset from any cause" – R.N.Carter

Depreciation refers to the gradual reduction in the value of fixed assets due to usage and passage of time.

It is influenced by the Going Concern of the accounting concept.

Depreciation Methods:

- ✓ Straight line or Fixed instalment method or Original cost method
- ✓ Written down value method or Diminishing balance method
- ✓ Sum of years of digits method
- ✓ Machine hour rate method
- ✓ Depletion method
- ✓ Annuity method
- ✓ Revaluation method
- ✓ Sinking fund method
- ✓ Insurance policy method

Straight Line method:

- ❖ Fixed % charged on original cost
- ❖ Depreciation amount remains equal every year.

$$\text{Amount of depreciation per year} = \frac{\text{Original cost of the asset} - \text{Estimated scrap value}}{\text{Estimated useful life of the asset in years}}$$

$$\text{Rate of depreciation} = \frac{\text{Amount of depreciation per year}}{\text{Original cost}} \times 100$$

Written down value method:

- ❖ Fixed % charged on written down value (book value) of the asset.
- ❖ Depreciation amount goes on decreasing year after year.
- ❖ Also called as diminishing balance or reducing installment method. E.g.

On 1.1.2012, a firm purchased a machine at a cost of ` 1,00,000. Depreciation charged at 10% p.a. on written down value method for the five years is as follows:

Cost of the asset on 1.1.2012	` 1,00,000
Less: Depreciation for 2012 at 10% on 1,00,000	` 10,000
Written down value on 1.1.2013	` 90,000
Less: Depreciation for 2013 at 10% on 90,000	` 9,000
Written down value on 1.1.2014	` 81,000
Less: Depreciation for 2014 at 10% on 81,000	` 8,100
Written down value on 1.1.2015	` 72,900
Less: Depreciation for 2015 at 10% on 72,900	` 7,290

Written down value on 1.1.2016	` 65,610
Less: Depreciation for 2016 at 10% on 65,610	` 6,561
Written down value on 1.1.2017	` 59,049
Less: Depreciation for 2017 at 10% on 59,049	` 5,905

CHARACTERISTICS of depreciation:

- ❖ Process of allocation of cost of depreciable asset (capital expenditure) to revenue expenditure or to profit and loss account over the useful life of the asset.
- ❖ It is the process of allocation of cost and not the process of valuation.
- ❖ It is a decrease in the book value of the asset and not the market value of the asset.
- ❖ It is a gradual and continuous decrease in the book value of asset over its useful life.
- ❖ It is calculated only for tangible depreciable fixed assets and not provided on intangible and wasting assets.

Allocation of acquisition cost of natural resources such as mineral deposits, oil well, coal, timber is called **depletion**.

Allocation of acquisition cost of intangible fixed assets such as goodwill, patents, copyrights, trademarks, and intellectual property rights is called **amortization.**

Sum of years of digits method:

$$\text{Amount of depreciation} = \frac{\left[\begin{array}{c}\text{Total number of years of remaining}\\ \text{life of the asset}\\ \text{(including the current year)}\end{array}\right]\left[\text{Original cost - Scrap value}\right]}{\text{Sum of all the digits of all years from 1 to the life of the asset in years}}$$

Machine hour rate method:

- ❖ Depends upon the working hours of the machine
- ❖ Depreciation is found directly in proportion to the actual use of the asset.
- ❖ Life of the asset is estimated in hours and not in years.

<u>Depletion method:</u> It means exhaustion of natural resources (i.e. quantitative reduction in the contents). Applicable to those assets that gets exhausted due to extraction and exploitation.

$$\text{Rate of depreciation per unit} = \frac{\text{Original cost}}{\text{Life of the asset in quantities of output}}$$

$$\text{Amount of depreciation} = \text{Units of output during the year} \times \text{Rate of depreciation per unit}$$

<u>Annuity method:</u>

Both the original cost of the asset and the amount of interest is taken into account. To calculate the amount of depreciation, annuity factor from annuity table is used.

OBJECTIVES of providing depreciation:

- To find out the true profit or loss
- To present the true and fair value of financial position
- To facilitate replacement of fixed assets
- To avail tax benefits
- To comply with legal requirements

CAUSES of depreciation:

- ❖ Wear and tear
- ❖ Efflux of time
- ❖ Obsolescence
- ❖ Inadequacy for the purpose
- ❖ Lack of maintenance
- ❖ Abnormal factors

Factors determining the depreciation:

- Actual cost of the asset (acquisition or construction cost)
- Estimated useful life of the asset
- Scrap value (or residual value) of the asset
- ❖ Other factors (legal, technological)

Sinking Fund method:

- ❖ Used to provide enough funds to replace an asset at the end of its working life.
- ❖ Depreciation amount is transferred to depreciation fund and invested in safe securities with a certain rate of interest.

Insurance Policy method:

- ❖ An insurance policy is taken for an amount equal to the cost of replacement of asset.
- ❖ Depreciation is paid by way of insurance premium every year to the insurance company.

Methods of recording depreciation

(i) Charging depreciation to asset account
(ii) Charging depreciation to provision for depreciation account

<u>Merits</u> of Straight line method:
Simple, Easy, Assets can be written-off completely, suitable for assets having fixed working life.
<u>De-merits</u>: Ignores actual use of asset, ignores interest factor, difficulty in finding scrap value, the total charge on the asset will be more when it becomes older and less productive.

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