

DEPRECIATION, PROVISIONS AND RESERVES

DEPRECIATION

★ Meaning:

The term "Depreciation" represents loss or diminution or decrease or decline in the value of a fixed asset. The decline in the value of an asset occurs due to wear and tear, obsolescence, effluxion of time or permanent fall in market value. The word "Depreciation" has been derived from the Latin word '*Depretum*'. 'De' means decline and 'pretum' means price. Therefore, '*Depretum*' means decline in price.

In every business, there are certain assets of a fixed nature which are required for the purpose of business operations. Examples of such assets are Building, Plant and Machinery, Furniture, Motor Vehicles, Office equipment such as Computer, Typewriter, Photocopier machine etc. These assets have a definite span of life. After the expiry of the life assets will lose their usefulness for the business. The fall in the value and utility of such assets due to expiry of time, constant use and also due to obsolescence is termed as depreciation. It also arises because of normal wear and tear.

In accounting, depreciation is the process of allocating the net cost of fixed assets over its estimated useful life. Net cost of Fixed Assets means Cost Price less Scrap value or residual value.

Definitions :

The term 'depreciation' has been defined by different authorities as under:

According to *R. N. Carter* "Depreciation is the gradual and permanent decrease in the value of an asset from any cause."

According to *William Pickles* "Depreciation may be defined as the permanent and continuing diminution in the quality, quantity or the value of an asset."

According to *Spicer & Peglar* "Depreciation is the measure of the exhaustion of the effective life of an asset from any cause during a given period."

According to *J. R. Batliboi* "It is a matter of common knowledge that all fixed assets such as plant, machinery, building, furniture etc. gradually diminish in value as they get older and become 'worn' out by constant use in the business."

Special features/characteristics of Depreciation :

Following are the Special features or characteristics of Depreciation:

- (i) Depreciation refers to a permanent, gradual and continuous decrease in the value of a fixed asset and it continues till the end of the useful life of the asset.

- (ii) Depreciation is a charge against profit (i.e., revenue earned) for a particular accounting period.
- (iii) Depreciation is always computed in a systematic and rational manner since it is not a sudden loss.
- (iv) Depreciation is a process of allocation of expired cost and not of valuation of fixed assets.
- (v) Whatever method for calculating depreciation is followed, the exact amount can never be ascertained. It can simply be estimated.
- (vi) The decrease in the value of fixed assets on account of depreciation is of a permanent nature. Once the value of an asset is reduced due to depreciation, it cannot be restored to its original cost.
- (vii) Depreciation decreases only the book value of the asset.
- (viii) Depreciation has no relation with the market value.
- (ix) The term depreciation is used only in respect of tangible fixed assets.
- (x) Total amount of depreciation charged cannot exceed the book value of the asset.
- (xi) Depreciation has no relation with the amount spent for repairs and maintenance of a particular asset.

Causes of Depreciation :

The value of an asset may decline due to a number of reasons. These are discussed as under:

- (1) **Constant Use :** Due to the constant use of an asset, wear and tear is caused and as a results their value decreases. For example, use of machine in a factory. As on account of constant use , the value of the machine decreases, it will not fetch the same price at which it was purchased, if the machine is sold by the business.
- (2) **Expiry (Effluxion) of Time :** The value of majority of assets decreases with the passage of time even if they are not being put to use in the business. Natural forces such as rain, winds, weather etc. contribute to the deterioration of their values. Again, after purchasing an asset such as Machinery, Motor car, Furniture etc., if a business firm wants to dispose them off after say two years, although the assets were not put to use, they will not fetch the same price at which these were originally acquired only because some time has expired or elapsed since the assets were purchased.
- (3) **Expiry of Legal Rights :** There are certain assets over which legal right to use them is acquired for a fixed period. For example, Lease of Land, Mines, Quarry, Patent right etc. The right to use such asset is generally acquired for a fixed period by making lump some payment. For instance, if a lease of land has been obtained for 20 years for ₹ 4,00,000, it will lose $\frac{1}{20}$ th, i.e., ₹ 20,000 of its value each year whether it is utilised or not. At the end of 20th year total amount paid for acquiring the lease right will have to be written off because after the expiry of 20 years, the land will again belong to the original owner.

(4) **Obsolescence:** Due to new inventions and improvement in existing technologies, the old assets become obsolete (out dated) and may have to be discarded (replaced) even if the asset can be used. For example, Computers of older versions become obsolete as and when new versions are invented. Again, in a competitive market it is not possible for a manufacturing business to survive if it does not move ahead with time and the improved technology because persisting with the old technology may prove to be costly.

(5) **Accident:** Sometimes, assets may be damaged or destroyed on account of abnormal reasons such as accident, flood, earthquake, fire etc. For example, a machine may be damaged or destroyed due to fire, flood, earthquake etc. or a vehicle may be damaged due to accident. In such a case it will be necessary to depreciate the value of such assets accordingly.

(6) **Depletion :** Depletion means the decrease in the existing quantity. The decrease in the value of wasting assets such as mines, oil-wells etc. occurs due to their constant extraction. Therefore, it will be necessary to provide for depreciation on such assets on account of such depletion.

Need, importance or objects of providing depreciation:

Depreciation on fixed assets are provided on account of certain necessities or keeping in view certain objects. Following are the objects or need for providing depreciation:

(a) **To ascertain the true profit or loss:** The true profit of a business can be ascertained only when all costs incurred for the purpose of earning revenue have been charged against revenue. As the assets are used in earning revenues, the depreciation in the value of an asset is charged to Profit and Loss Account in order to arrive at the true profit any other, such as wages, salary, rent etc. Unless the depreciation is charged against revenue, true profit or loss of a business cannot be ascertained

(b) **To show the 'true and fair view' of the financial position:** If the depreciation is not charged, the assets will be shown in the Balance Sheet at an amount which is in excess of their true values. As such, the Balance Sheet will not present the 'true and fair view' of the financial position of a business. Therefore, in order to present the 'true and fair view' of the financial position of a business, it is important to provide for depreciation.

(c) **To ascertain the accurate cost of production:** As depreciation is also an item of expenses, the correct cost of production cannot be calculated unless it is also taken into account. Sale price is determined on the basis of cost of production and, hence, if the depreciation is not included in cost of production, the sale price will be fixed at a lower rate and this will lead to reduced profits.

(d) **To provide funds for replacement of assets:** Depreciation though debited to Profit & Loss Account, is not paid in cash like other expenses. Hence, the amount

of cash equivalent of depreciation is retained in the business and is used to provide fund for the replacement of fixed assets after the expiry of their estimated useful life.

(e) **To reduce income-tax liability** : Depreciation is an allowable expenditure under the income-tax law. If the depreciation is not charged, the net profit shown by Profit & Loss Account will exceed the actual profits and as a result the income-tax liability will be more than what it should have actually been. Therefore, in order to reduce the payment of income-tax liability, it is necessary to provide depreciation.

(f) **Other Objectives** : If the depreciation is not charged, the net profit shown by Profit & Loss Account will exceed the actual profits and as a result:

(I) Employees may demand an increase in wages and bonus.

(II) It may also result in extravagance.

(III) It may lead to increase in competition in that type of business because the prospective entrepreneurs may find this type of business to be profitable and thereby increase the competition.

★ Factors to be considered for determining the amount of Depreciation:

Although it is impossible to calculate the actual amount of depreciation for a particular period, following factors are considered for determining the amount of depreciation:

(a) **The Cost of the Asset**: The cost of a fixed asset is determined after adding all expenses incurred for bringing the assets to usable condition. Expenses such as freight, transit insurance and installation costs etc. incurred for a particular asset are examples of expenses which are incurred for bringing the assets to usable condition. For example, a machine is purchased for ₹ 80,000 and ₹ 6,000 have been spent on packing, ₹ 3,000 as freight and ₹ 1,000 for wages for installation, the cost of the machine will be ₹ $(80,000 + 6,000 + 3,000 + 1,000) = ₹ 90,000$.

(b) **Estimated Useful Life of the Asset** : Useful life of an asset is estimated in terms of number of years for which the assets can be effectively used for business operations. For example, if a machine is expected to work for 15 years but is likely to become obsolete after 10 years on account of availability of a better type of machine with improved technology, its useful life will be considered as only 10 years for the purpose of calculation of depreciation.

(c) **Estimated Scrap Value** : Scrap value means the amount which can be realised from the sale of the asset after the expiry of its useful life. In other words, it is the estimated sale value of the asset at the end of their useful life. It is also known as residual value or break-up value. It is considered while determining the amount of depreciation to be charged annually on an asset. For example, a machine is purchased for ₹ 70,000 and ₹ 3,000 are spent on its freight and ₹ 2,000 for installation. It is estimated that its useful life will be 10 years at the end of which period it will have a scrap value of ₹ 5,000. Total depreciation in this case will be ₹ 70,000 (i.e., ₹ 70,000 + ₹ 3,000 + ₹ 2,000 - ₹ 5,000).

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However, this Standard applies to property, plant and equipment used to develop or maintain the assets described in (a) and (b) above.

Methods of Providing or Charging Depreciation:

The term 'Methods of Providing or Charging depreciation' refers to the procedure to be followed for calculating the amount of depreciation to be provided on a particular asset. There are various methods for providing depreciation. Each of the different methods is suitable for different assets depending upon the nature and type of the asset and also on the size and nature of the business organisation. Various methods of providing depreciation are as under :

1. Straight Line Method or Original Cost Method or Fixed Instalment Method.
2. Diminishing Balance Method or Reducing Instalment or Written Down Value Method.
3. Annuity Method.
4. Depreciation Fund Method.
5. Insurance Policy Method.
6. Revaluation Method.
7. Depletion Method.
8. Machine Hour Rate Method.

First two methods i.e. Straight Line Method and Written Down Value Method of providing depreciation are discussed below.

1. Straight Line Method or Fixed Instalment:

Straight Line Method or Fixed Instalment method is a method of providing depreciation under which depreciation is charged at a fixed percentage on the original cost of the asset. This method is also known as Original Cost Method or Equal instalment method. Under this method the amount of depreciation for a particular

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asset remains same from year to year. The amount of depreciation is calculated by deducting the scrap value from the original cost of the asset and then dividing the remaining balance by the number of years of estimated life. The depreciation so calculated and charged annually reduces the original cost of the Asset to zero, or its scrap value, as the case may be at the end of its estimated life.

In examination problems, where the rate of depreciation is not stated, the amount of depreciation is calculated by the following formula:

$$\text{Yearly Depreciation} = \frac{\text{Cost of machine} - \text{Scrap value}}{\text{Expected life of the asset}}$$

For example, if the Original cost of the asset is ₹ 1,50,000 and its estimated life be 10 years, the scrap value being ₹ 10,000. The depreciation to be written off will be = $\frac{₹ (1,50,000 - 10,000)}{10} = \frac{₹ 1,40,000}{10} = ₹ 14,000$ every year

Merits of Fixed Instalments Method :

- (1) **Simplicity:** Calculation of depreciation under this method is very simple and as such the method is widely popular.
- (2) **Equality of Depreciation Burden :** Under this method, equal amount of depreciation is debited to the Profit and Loss Account of each year. Hence, the burden of depreciation on each year's net profit is equal.
- (3) **Assets can be completely written off :** Under this method, the book value of an asset can be reduced to zero, which is not possible under some other methods.
- (4) **Knowledge of Original Cost and Upto-date depreciation :** Under this method, the original cost of the asset is shown in the Balance Sheet and the upto-date depreciation is shown as a deduction from it. As such, the information of Original Cost of the asset and its upto-date depreciation is available at any time.

Demerits:

- (1) **Difficulty in Computation:** When there are different machines having different life-spans, the computation of depreciation becomes complicated because the depreciation on each machine is required to be calculated separately.
- (2) **Unequal charge against income:** Amount of expenses on repairs go on increasing year by year as the asset becomes older but as the equal depreciation is charged under this method each year, the total burden charged to Profit and Loss Account in respect of depreciation and repairs put together will not be equal each year. The total burden will be lesser in earlier years and heavier during the later year.
- (3) **Undue pressure in later years:** It is a well-known fact that the efficiency and usefulness of a machine is more in the earlier years in comparison to later years. As such, more depreciation should be charged in earlier year in comparison to the later years, whereas, depreciation remains constant from to year under this method.

2. Reducing Instalment Method:

Reducing Instalment Method or Diminishing Balance Method of charging depreciation is a method under which a fixed rate or percentage of depreciation is charged each year on the diminishing value of the asset till the amount is reduced to its scrap value. Diminishing value of the asset means the value appearing in the asset account after charging the depreciation of earlier year. For example, the original cost of an asset is ₹ 20,000 and the rate of depreciation is 10%, the diminishing value at the end of 1st year will be (₹ 20,000 – 10% of ₹ 20,000) ₹18,000 and the diminishing value after 2nd year will be (₹ 18,000 – 10% of ₹ 18,000) ₹16,200.

Under this method, depreciation is calculated on balance of the asset as appearing at the beginning of each year. For example, depreciation for 2020 will be calculated on the balance of the asset at the beginning of 2020 and the depreciation for 2021 will be charged on the balance of the asset at the beginning of 2021 and so on. Depreciation under this method for the first year will be ₹ 2,000 and for the 2nd year, it will be ₹ 1,800. Under this method, as the value of asset goes on diminishing year after year, the amount of depreciation charged every year also goes on diminishing although the rate of the depreciation remains fixed. This method is also known as 'Written down value method' or 'Reducing balance Method'

Merits :

- (1) **Easy Calculation** : It is easy to calculate the depreciation under this method, even if some new assets are purchased year after year. Different assets are grouped for the purpose of providing depreciation.
- (2) **Equal charge against income** : In this method, the total burden on Profit & Loss Account in respect of depreciation and repairs put together remains almost equal year after year. This is so because in the initial years depreciation is more in comparison to repair charges whereas, in the later years, as the asset gets older, the amount of depreciation goes on decreasing while the expenses on repairs go on increasing, thus keeping the combined charges of depreciation and repairs almost uniform.
- (3) **No undue pressure in later years** : The efficiency and usefulness of a machine is more in the earlier years than in later years. Hence, the depreciation in first few years should be more in comparison to the later years. This is ensured by adopting the diminishing balance method.
- (4) **Balance of asset is never written off to zero** : This method ensures that the asset is never reduced to zero so that some depreciation, however small, is debited to Profit & Loss Account so long as the asset remains in use.
- (5) **Permitted under Income Tax Laws** : This method of providing depreciation is permissible under Income Tax Laws.

Demerits :

(1) **Asset cannot be completely written off :** Under this method, the value of an asset, even if it becomes obsolete and useless, cannot be reduced to zero. Some balance, however small, will remain in the Asset account.

(2) **Omission of Interest Factor :** As with the original cost method, this method also does not take into consideration the loss of interest on the amount invested in the asset.

(3) **Difficulty in determining the rate of depreciation :** Under this method, the rate of providing depreciation cannot be easily decided. The rate is generally kept higher because it takes a very long time to write an asset down to its scrap value. If the rate of depreciation is kept lower, the asset may become obsolete earlier.

(4) **Knowledge of Original Cost and upto-date depreciation not possible :**

Under this method, the original cost of various assets is not shown in the Balance Sheet. Sometimes, the assets are grouped in such a way that it becomes difficult to know their specific identity. The residue balance of some assets may continue in the Balance Sheet even after they have been actually scrapped.

Suitability :

This method is very suitable in case of assets which :

- (a) have a comparatively long life; and
- (b) require considerable repairs in the later years when the assets become older, such as building, plant, etc.

Meaning of Book value:

Book value of an asset means the value or the amount which appears in the account of that asset in the ledger. Where the depreciation is charged to the asset account, the book value is the written down value. Again, where the depreciation is not charged to the asset account, the book value is equal to the original cost.

Distinction between Fixed Instalment method and Reducing Instalment method:

Points of distinction	Fixed Instalment Method	Reducing Instalment Method
1. Amount of Depreciation	The amount of depreciation remains same for every year.	The amount of depreciation goes on decreasing every year.

Points of distinction	Fixed Instalment Method	Reducing Instalment Method
2. Basis of calculation	Depreciation is calculated on the original cost of the asset.	Depreciation is calculated on the diminishing balance of the asset each year.
3. Book Value	Book value of the asset is reduced to zero under this method.	Book value of the asset never becomes zero under this method.
4. Effect on Profit and Loss	Total amount of depreciation and repairs goes on increasing each year. Therefore, the combined effect on Profit and Loss Account is unequal in each year under this method.	Total amount of depreciation and repairs become almost equal each year. Therefore, the combined effect on the Profit and Loss Account is almost equal under this method.
5. Suitability	This method is suitable for assets of lesser value such as patents, furniture and fixtures etc.	This method is suitable for assets having longer life and more value such as Building, Plant and Machinery etc.

NOTE

It may be noted that the entries for charging depreciation, providing depreciation, Disposal of Assets etc. under various situations under Diminishing Balance System will be the same as in the case of Straight Line Method. The only difference lies in the procedure for calculation of amount of depreciation