

## CHAPTER-16

### DEPRECIATION

**Meaning-** In every business there are certain assets of a fixed nature that are needed for the concert of business operations. Some examples of such assets are g Plan and Machinery, Motor Vehicles, Furniture, Office equipment etc. These assets have a definition span of life after the expiry of which the assets will lose their usefulness for the business operations. Fall in the value and utility of such assets due to their constant use and expiry of time is termed as depreciation. In other words, the process of allocation of the cost of a fixed asset over its useful life is known as depreciation.

#### Special features or Characteristics of Depreciation:

1. Depreciation is decline in the value of fixed assets (except la
2. Such fall is of a permanent nature. Once the value of an asset depreciation, it cannot be restored to its original cost.
3. Depreciation is a gradual and continuing process because the value of the assets with decline either by their constant use or obsolescence due to expiry of time.
4. Depreciation is not the process of valuation of asset but process of allocation of the cost of an asset to its effective span of life.
5. It decrease only the book value of the assets, not the market value.
6. The term depreciation is used only in respect of tangible fixed assets. The term is not used for wasting assets such as mines, oil-wells etc.
7. It is a non-cash expense. It does not involve any cash outflow

**Causes of Depreciation** - Main causes of depreciation are as follows

- (i) **By Constant Use** :- Due to the constant use of fixed assets in business operations wear and tear arise in them which results in the reduction of their values.
- (ii) **By Expiry 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.
- (iii) **By Expiry of Legal Rights** :- There are certain assets which have a definite span of life such as Lease. For example, if a lease has been obtained for 20 years for Rs. 3500000 it will lose 1/20th, *i.e.* Rs. 25,000 of its value each year whether utilised or not so that at the end of 20th year its value is reduced to zero.
- (iv) **By Obsolescence** :- Quite often, due to new inventions and improved techniques the old assets become obsolete and may have to be discarded even if they can be put to use physically.

- (v) **By Accident** - Sometimes a machine may be destroyed due to fire, earthquake, flood etc. or a vehicle may be damaged due to accident.
- (vi) **By Depletion** - Depletion is the decrease in the value of wasting assets such as mines, oil-wells etc. due to their constant working.
- (vii) **By Permanent fall in Market Price**- Though; the fluctuations in the market value of fixed assets are not recorded because such assets are not meant for resale but for use in the business, sometimes the fall in the value of certain fixed assets is treated as depreciation such as permanent fall in the value of investments.

### **Need, Importance or Objects of Providing Depreciation**

(1) **For ascertaining the true profit or loss** - The true profit of a business can be ascertained only when all costs incurred for the purpose of earning revenues have been debited to the Profit and Loss Account. As the Assets are used in earning revenues, the depreciation in the value of an asset is as much an expense as any other, such as wages, salary, rent etc.

(2) **For showing the true and fair view of the financial position**- If the depreciation is not charged, the asset 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.

(3) **To ascertain the accurate cost of production** -As depreciation is also an n of expense, the correct cost of production cannot be calculated unless it is also ken into account. Sale price chargeable from customers is determined on the basis of st of production and hence if the depreciation is not included in Cost of Production, he sale price will be fixed at lower rates and this in turn will lead to reduced profits.

(4) **To provide funds for replacement of assets** : - Depreciation though debited Profit & Loss Account is not paid in cash like other expenses. Hence, the amount of depreciation is retained in the business and is used for the replacement of fixed assets after the expiry of their estimated span of life.

(5) **To prevent the distribution of profits out of capital** - If the depreciation is not charged, the profit shown by the Profit and Loss Account will be in excess of the actual profits. Such an excess profit may be wholly withdrawn by the proprietor or may be distributed among the shareholders as dividend. Hence, the amount of dividend distributed will also include the amount of depreciation which is actually a part of Capital.

(6) **For avoiding over payment of Income Tax**-expense for tax purposes. If depreciation is not debited to Profit and Loss Account, the net profit shown by it will be in excess of actual profits. Hence, we will also have to Depreciation is a deductible pay more income tax.

(7) **Other Objectives** -If the 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.

**Factors determining the amount of Depreciation-** It is impossible to calculate the actual and true amount of depreciation. It can only be estimated by keeping the following factors into consideration

(1) **Total Cost of the Asset**-The cost of a fixed asset is determined after adding all expenses incurred for bringing the asset to usable condition, such as freight, transit insurance and installation costs etc.

(2) **Estimated Useful Life of Asset** -Useful life of an asset is estimated in terms of number of years, it can be effectively used for business operations. For example, if a machine can work for 25 years but is likely to become obsolete in 15 years on account of availability of a better type of machine due to improved technology, its useful life will be considered as only 15 years.

(3) **Estimated Scrap Value**- It is the estimated sale value of the asset at the end of its useful life. It is also known as residual value or break-up value. For example, a machine is purchased for Rs.60,000 and Rs.4,000 are spent on its freight and Rs.1,000 for installation. It is estimated that its serviceable life will be 10 years at the end of which period it will have a scrap value of Rs.8,000. Depreciation in this case will be calculated on Rs.57,000 (*i.e.*, Rs.60,000 + Rs.4,000 +Rs.1000-Rs.8000)

Depreciation charged on this machine will be  $57,000/10 = 5,700$  every year.

**Methods of providing or Allocating Depreciation**-Various methods have been devised for providing depreciation Different methods are suitable for different assets depending upon the nature and type of the asset. These methods are enumerated as under:

1. **Straight Line Method**
2. **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**

The first two methods are discussed below

**(1) Straight Line Method** - This method is also termed as Original Cost Method' because under this method depreciation is charged at a fixed percentage on the original cost of the asset. The

amount of depreciation remains equal from year to year and as such the method is also known as 'Equal Instalment Method' or Fixed Instalment Method'. Under this method, the amount of depreciation is calculated by deducting the scrap value from the original cost of the asset and then by dividing the remaining balance by the number of years of its estimated life. The depreciation so calculated and charged annually will reduce the original cost of the asset to zero, or its scrap value, as the case may be, at the end of its estimated life. Under this method, the amount of depreciation is calculated by the following formula:

$$\text{Yearly Depreciation} = \frac{\text{Original Cost of the Asset} - \text{Estimated Scrap Value}}{\text{Estimated Life of the Asset}}$$

### **Merits of Straight Line 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 net scrap value or zero value, which is not possible under some other methods.
- (4) **Knowledge of Original Cost and Up-to-date depreciation** - Under this method, the original cost of the asset is shown in the Balance Sheet and the up-to-date depreciation is shown as a direct deduction from it. As such, the information of Original Cost of the asset and its up-to-date depreciation is available at any time. Various assets also maintain their separate identity under this method.

### **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 will have to be calculated separately.
- (2) **Unequal charge against income:** Repair charges 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 lighter in earlier years and heavier during the later years.
- (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 years in comparison to the later years, whereas, depreciation remains constant from year to year under this method.

- (4) **Omission of Interest Factor:** This method does not take into consideration the loss of interest on the amount invested in the asset. The amount would have earned interest, had it been invested outside the business.
- (5) **Unrealistic to write off the Value of asset to Zero:** Sometimes, even after the value of an asset is reduced to zero in the books, it continues to be used in the business in actual practice.
- (6) **Difficulty in the determination of scrap value:** It is quite difficult to assess the true scrap value of the asset after a long period, say 15 or 20 years from the date of its installation.

**Accounting Treatment**

**Following entries are passed in this method**

**(i) Entry for purchase of Assets**

|                         |            |
|-------------------------|------------|
| <b>Assets A/c</b>       | <b>Dr.</b> |
| <b>To Bank / Vendor</b> |            |

**(ii) Entry providing depreciation at the end of each year**

|                         |            |
|-------------------------|------------|
| <b>Depreciation A/c</b> | <b>Dr.</b> |
| <b>To Assets A/c</b>    |            |

**(iii) Entry the amount realised on sale of Asset -**

|                      |            |
|----------------------|------------|
| <b>Bank A/c</b>      | <b>Dr.</b> |
| <b>To Assets A/c</b> |            |

**(iv) Entry in case of loss on sale of Asset**

|   |            |
|---|------------|
| <b>Profit &amp; Loss A/c Statement of profit &amp; loss</b> | <b>Dr.</b> |
| <b>To Asset A/c</b>   |            |

**(v) Entry in case of profit on sale of Asset**

|  |            |
|--|------------|
| <b>Asset A/c</b>   | <b>Dr.</b> |
| <b>To Profit &amp; Loss A/c Statement of profit &amp; loss A/c</b> |            |

**(2) Written Down Value Method-** Under this method, as the value of asset goes on diminishing year after year, the amount of depreciation charged every year also goes on declining.

#### 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 charge 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) Approved method by Income Tax Authorities -** This method of providing depreciation is permissible under Income Tax regulations.

#### 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 and some balance, however small, would continue on 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.

**Distinction between the two methods-**

| <b>S.No.</b> | <b>Basic of Distinction</b>  | <b>Straight Line or Original Cost Method</b>   | <b>Written Down Value Method</b>  |
|--------------|--|--|---|
| 1.           | <b>Amount of depreciation</b>                                      | Equal depreciation is charged every year   | Depreciation goes on decreasing year after year.  |
| 2.           | <b>Basis of calculation of depreciation</b>                        | Depreciation is charged on the original cost of the asset.   | Depreciation is charged on the reducing balance of the asset.   |
| 3.           | <b>Zero level</b>  | The book value of the asset can be reduced to zero.  | The book value of the asset can never be reduced to zero  |
| 4.           | <b>Combined effect of depreciation and repairs on P&amp;L A/c.</b> | Combined burden on account of depreciation and repairs will be lighter in earlier year and heavier during the later years.                             | Combined burden on account of depreciation and repairs will be almost equal over different years.   |
| 5.           | <b>Rate of depreciation.</b>                                       | Rate of depreciation is kept low in comparison to Diminishing method   | Rate of depreciation is kept high in comparison to original cost method.  |
| 6.           | <b>Approval of Income Tax authorities</b>                          | This method is not approved Income Tax authorities authorities   | This method is approved Income Tax authorities authorities  |
| 7.           | <b>Suitability</b>   | It is suitable for assets in which repair charges are less and the possibility of obsolescence is less such as land building, patents, trademarks etc. | It is suitable for assets in which reacquire more repair expenses with passage of time and where possibility of obsolescence is more due to technological changes such as plant and machinery, vehicle, etc |

**VERY SHORT ANSWER QUESTIONS**

**1. What is Depreciation?**

Ans. Depreciation may be defined as the permanent and continuing diminution in the quality, quantity or the value of an asset.

**2. Name two causes of depreciation.**

Ans. (i) by constant use  
(ii) By expiry of time.

**3. Write two objectives of providing depreciation.**

Ans. (i) For ascertaining the true profit or loss by profit & loss account.  
(ii) For showing the true financial position by the balance sheet.

**4. Give two factors for determining the amount of depreciation?**

- Ans. (i) Total cost of the asset  
(ii) Estimated useful life of the asset.

**5. What is residual or Scrap value of the asset?**

Ans. It is the estimated sale value of the asset at the end of its useful life.

**6. what is Original Cost Method of providing depreciation?**

Ans. Under this method depreciation is charged at a fixed percentage on the original cost of the asset. The amount of depreciation remains equal from year to year and as such the method is also Known as 'Equal Instalment Method' or Fixed Instalment Method.'

**7. Give the formula to calculate annual depreciation as per 'Straight line method'.**

Ans. 
$$\frac{\text{Cost of Asset} - \text{Estimated Scrap Value}}{\text{Estimated Life of assets in Years}}$$

**8. Give two merits of providing depreciation by Original Cost Method.**

- Ans. (i) Under this method, calculation of depreciation is very simple.  
(ii) Under this method, the burden of depreciation on each year's net profit is equal.

**9. Give the main demerit of providing depreciation by Original Cost Method.**

Ans. Since repair charges go on increasing year by year, the total burden charged to Profit & Loss Account in respect of depreciation and repairs put together will be lighter in earlier years and heavier during later years.

**10. What is Written Down Value Method of providing depreciation?**

Ans. Under this method, depreciation is calculated on the written down value of the asset and as the value of asset goes on diminishing year after year, the amount of depreciation charged every year also goes on declining.

**11. Give two merits of providing depreciation by Written Down Value Method.**

- Ans. (i) In this method, the total burden on Profit & Loss Account in respect of depreciation and repairs put together remains almost equal year after year.  
(ii) This method is approved by Income Tax Authorities.

**12. Give two demerits of providing depreciation by Written Down Value Method.**

- Ans. (i) Asset cannot be written off to zero.  
(ii) Difficulty in determining rate of depreciation.

**13. Give two points of distinction between Original Cost Method and Written Down Value Method of providing depreciation.**

Ans.

| Basis of Distinction       | Original Cost Method                                | Written Down Value Method                                 |
|----------------------------|---|---|
| 1. Amount of depreciation. | Equal depreciation is charged every year.           | Depreciation goes on decreasing year after year.          |
| 2. Zero level.             | The book value of the asset can be reduced to zero. | The book value of the asset can never be reduced to zero. |

**14. what is Depreciable Cost?**

Ans. Depreciable Cost = Cost of Asset- Scrap Value.

**OBJECTIVE TYPE QUESTIONS**

**(A) Fill in the blanks:**

- (i) Depreciation represents a.....in the value of fixed assets.
- (ii) Estimated sale value of an asset after its working life is called.....
- (iii) .....cannot be correctly calculated unless depreciation on fixed assets is duly provided as a business expense.
- (iv) Discarding the old Plant& Machinery due to new inventions is called.....
- (v) Under the Fixed Instalment Method, depreciation is calculated on ..... of the asset.
- (vi) Under The Written Down Value method.....remain constant whereas the amount of depreciation goes on.....from year to year.
- (vii) The..... method equalises the burden on each year's Profit & Loss Account for depreciation and repairs put together.
- (viii) At the time of charging depreciation, asset account is.....and depreciation account is.....
- (ix) Under fixed instalment method, depreciation is calculated by deducting the.....value from the .....cost of the asset.
- (x) Under.....method, the value of an asset, even if it becomes obsolete and useless, cannot be reduce to.....

[Ans. (i) Fall, diminution, reduction or decrease; (ii) Scrap value; (iii) Net Profits (iv) Obsolescence; (v) Original Cost; (vi) Rate of depreciation, decreasing (vii) Diminishing balance; (viii) Credit; Debited; (ix) Scrap, Original; (x) Diminishing Balance, Zero.]

**(B) State whether the following statement are true or false:**

- 1. Depreciation is the process of apportionment of the cost of the asset over its useful life.
- 2. Depreciation decreases only the book value of the asset, not the market value.
- 3. written down value method is followed so that the total burden on Profit and Loss Account in respect of depreciation and repairs put together remains almost equal each year.
- 4. Under diminishing balance method, depreciation is charged on the cost price of fixed asset.

5. Under diminishing balance method, depreciation is charged on the original cost of the asset minus estimated Scrap value.
  6. Depreciation is provided only on fixed assets except land.
  7. The main objective of providing depreciation is to calculate true profit.
  8. Depreciation is the process of valuation of an asset.
  9. Depreciation cannot be provided in case of loss in a financial year.
  10. Depreciation is the decline in the market value of tangible fixed assets.
  11. In diminishing balance method of depreciation, the rate percent of depreciation gets reduced every year.
  12. There is no difference between written down value method and diminishing balance method of depreciation.
  13. In case of diminishing balance method, the asset gets reduced to zero level.
  14. It is not necessary to provide depreciation on plant and machinery when its market value is higher than its book value.
  15. Depreciation is a non-cash expenditure.
  16. Providing depreciation reduces the amount of profit available for dividend.
  17. Providing depreciation is credited to a 'Provision for Depreciation' account, the fixed asset appears always at cost price in the books.
- [Ans. True. 1, 2, 3, 6, 7, 12, 15, 16, 18.]

**(C) Choose the Best Alternate:**

1. Depreciation is provided on:
  - (a) Current Assets
  - (b) Intangible Assets
  - (c) Fixed Assets
  - (d) Fictitious Assets
  
2. Which of the following is not a feature of written down value method of depreciation?
  - (a) The book value of the asset becomes zero at any one point of time
  - (b) The depreciation is calculated on the book value of assets and not on the cost
  - (c) The amount of depreciation charged on a specific asset reduces every year.
  - (d) There is no need to estimate the residual value and estimated life at the time of deciding the amount of depreciation
  
3. Which of the following best describes the "Depreciation"?
  - (a) Valuation of fixed asset at the end of the year
  - (b) Verification of assets
  - (c) Allocation of cost of fixed assets over its useful life
  - (d) Decreasing the market value of asset
  
4. Amortisation refers to writing off.....
  - (a) Depleting Assets

- (b) Wasting Assets
- (c) Intangible Assets
- (d) Fictitious Assets

5. Depreciation is calculated from the date of.....

- (a) Purchases of asset
- (b) Receipt of asset at business premises
- (c) Asset put to use
- (d) Asset installed

[Ans.

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1.(c) | 2.(a) | 3.(c) | 4.(c) | 5.(c) |
|-------|-------|-------|-------|-------|