## Chapter 5

# Depreciation

**CHAPTER OVERVIEW**

| (1) | (2) | (3) |
|---|---|---|
| **Basic** | **Methods of Depreciation** | **Related Matters** |
| 1. Assets eligible for Depr<br>2. Depreciation<br>3. Purposes of Depreciation<br>4. Depreciation vs fluctuation<br>5. Depreciable Amount<br>6. Cost of Asset<br>7. Factors for Depreciation<br>8. Quantum of Depreciation<br>9. Component wise Charge | 1. Straight Line Method (SLM)<br>2. Written Down value (WDV) Method<br>3. Sum of Digits Method<br>4. Machine Hour Method<br>5. Production Units Method<br>6. Depletion Method | 1. Change in Method of Depreciation<br>2. Review and Revision in Useful Life and Method of Depreciation<br>3. Revaluation of Assets<br>4. Profit/Loss on Sale/Disposal of Fixed Assets<br>5. Provision for Repairs and Renewals |

## 1. Basic Terms

### 1.1 Assets eligible for Depreciation

| | |
|---|---|
| As per **A/cing Standard-10,** Property, Plant And Equipment (PPE) are - | 1. Tangible Items that are held for –<br>(a) use in the production or supply of goods services,<br>(b) Rental to others, or } and<br>(c) Administrative Purposes,<br>2. Tangible Items that are expected to be used more that 12 Months.<br>**Note:** Items such as Spare Parts, Stand-By & Servicing Equipment are treated as **PPE**, if they meet the definition above. Otherwise, they are treated as Inventory. |

**Note :** PPE is referred to as Fixed Assets in common parlance.

### 1.2 Depreciation

1. **Meaning:** It is the systematic allocation of the Depreciable Amount of an Asset over its Useful Life. So, depreciation is

| A Measure of - | Arising from- |
|---|---|
| (a) Natural wear and tear,<br>(b) Consumption, or<br>(c) Other loss of value of Depreciable Asset. | (a) use,<br>(b) Effluxion of time, or<br>(c) Obsolescence through technology & market changes. |

2. **Effect:** Depreciation refers to a reduction / loss in the utility of a Depreciable Asset.

3. **Nature**: Depreciation is a non-cash expenditure (i.e. it does not result in any cash outflow).
4. **Depreciation vs Amortisation**: Depreciation includes amortization of assets whose useful life is predetermined. [Note : The term "**Depreciation"** is used in respect of **Tangible Fixed Assets,** and the term **"Amortisation"** is used in respect of **Intangible Assets** like Patents, Copyrights, etc.]

5. **Types:** Depreciation may be classified as under –

| Type | Internal Depreciation | External Depreciation |
|---|---|---|
| Loss in utility or value due to | Natural Wear and Tear | Accident or Obsolescence |

## 1.3 Purpose of Depreciation

**Purposes:** The main purposes of providing depreciation are –

1. **To keep intact, the capital invested in Fixed Assets:** This purpose is achieved by retailing in the business, the amount of depreciation charged in the Profit and Loss Account.
2. **To ascertain true cost of production:** The depletion of asset value due to usage should be charged in the accounts for determination of the true Cost of Production. This is done by charging depreciation.
3. **To determine profit or loss for the year**: Profits can be properly ascertained only after writing off the expense represented by the loss in value of Fixed Assets arising on their use.
4. **To present a true and fair value of Firm's assets** in the Balance Sheet on a going concern basis – Original Cost of assets decreases due to many factors and hence assets cannot be presented at their original costs. The amount of accumulated depreciation is deducted from there to reflect in the Balance sheet, a true and fair value of the Fixed Assets.
5. **To provide fund for replacement of the Fixed Assets:** As the amount of depreciation charged in the P & L A/c is retained in the business (and not distributed as dividend), it goes in accumulating and eventually provides funds for replacement of Fixed Assets when their useful life is over.

## 1.5 Depreciable Amount

**'Depreciable Amount'**is determined as under –

| Particulars | Rs. |
|---|---|
| Cost of an Asset, or other Amount substituted for Cost in the Financial Statements | XXX |
| **Less** : Estimated Residual Value | XX |
| **Depreciable Amount** | XXXX |

**Example**: An item of Machinery was purchased by Anu Ltd for Rs. 18 Lakhs. It can be sold for Rs. 13.50 Lakhs currently, or for Rs. 2 Lakhs after 8 years, which is the useful life of the asset. The Depreciable Amount of the machinery will be Rs. 18 Lakhs – Rs. 2 Lakhs = Rs. 16 Lakhs. The current sale price is irrelevant.

## 1.6 Cost of Asset (PPE)

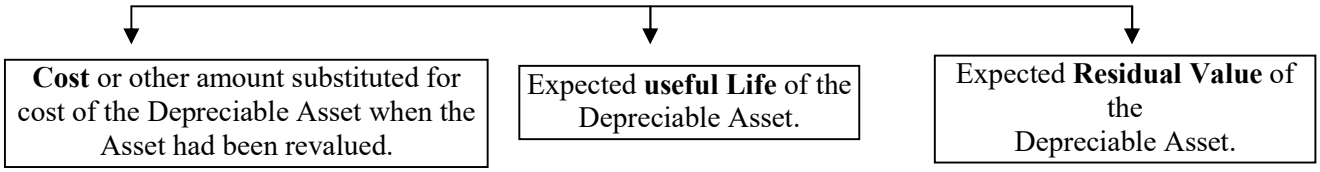
Principles relating to cost of an Asset (PPE) are given below –

| Aspect | Description | |
|---|---|---|
| **Cost** | 1. Amount of Cash / Cash Equivalents paid, or<br>2. Fair Value of the other consideration given<br>} to acquire an Asset at the time of its Acquisition or construction or<br>3. Amount attributed to that Asset when initially recognized as per other AS. | |
| **Items included in Cost** | 1. Purchase Price **Add** Import Duties and Non-Refundable Purchase Taxes Less Taxes Less Trade Discount and<br>2. Any Costs directly attributable to bringing the Assets to the location and condition necessary for it to be capable of operating in the manner intended by Management.<br>Initial Estimate of Decommissioning, Restoration and similar Liability, i.e. the cost of dismantling, removing the item and restoring the site on which it is located, the obligation for which an Enterprise incurs either – (a) when the item is acquired, or (b) as a consequence of having use the item during a particular period for purpose other than to produce Inventories during that period. | |
| **Inclusions in Directly Attributable Costs** | 1. Costs of Employee Benefits arising directly from the construction or acquisition of the item of PPE,<br>2. Costs of Site Preparation,<br>3. Initial Delivery and Handling Costs,<br>4. Installation and Assembly Costs,<br>5. Costs of testing whether the Asset is functioning properly Less Net Proceeds from selling any items produced while bringing the Asset to that location and condition (e.g. Samples produced when testing Equipment), and<br>6. Professional Fees. | |
| **Items not Include in Cost** | 1. Costs of opening a New Facility or Business, such as, Inauguration Costs,<br>2. Costs of introducing a New Product or Service (inducing Costs of Advertising and Promotional Activities),<br>3. Costs of conducting business in a new location or with a new class of customer (including costs of Staff Training), and<br>4. Administration and other General Overhead Costs. | |
| **Incidental Operations** | 1. Incidental Operations are not necessary to bring an item to the location and condition necessary for it to be capable of operating in the manner intended by Management.<br>2. Incidental Operations may occur before or during Construction/Development, e.g. Income earned through using a Building Site as a Car Park until construction starts.<br>3. Such items are recognized in Statement of P & L and included in their respective classifications of Income and Expense. They are not included as Cost of PPE. | |
| **Self-Constructed Asset** | **Situation** | **Cost Recognition (See Note 1)** |
| | Self – Constructed Asset | Same Principles as for an Acquired Asset |
| | Enterprise makes similar Assets for sale in the normal course of business | Same Principle as the cost of constructing an Asset for sale as per AS-2 |
| | Recognition of Interest in the Carrying Amount of a self – Constructed Item of PPE | Same Principles as per AS-16, Borrowing Costs |

**Note** : Internal Profits, Cost of abnormal Amounts of Wasted Material, Labour, etc. are excluded in recognizing cost of self-constructed assets.

## 1.7 Factors for Depreciation ( Nov.2020, 5 Marks)

Assessment of depreciation and the amount of depreciation are usually based on the following three factors –




These factors are explained as follows –

1. **Cost** : Refer Previous Para
2. **'Useful Life'** is either –
   (a) Period over which a depreciable asset is expected to be used by the Enterprise, or
   (b) Number of production or similar units expected to be obtained from the use of the asset by the Enterprise.

| Situation | Useful Life |
|---|---|
| Ajay Ltd has purchased a new machinery for Rs. 5,00,000. The Company expects to use the Asset for a period of five years. | Useful Life = Five years |
| Vijay Ltd has acquired a machinery for Rs. 8,00,000. The machine is usable for the production of a special product only upto 32,00,000 units. The company plans to achieve this total production over a period of ten or twelve years. | Useful Life = 32,00,000 units |

**Note :**

- Useful Life is always **shorter** than the physical life of an asset.
- Determination of the Useful Life of a depreciable asset is a matter of estimation and is normally based on various factors including experience with similar types of assets.

3. **Residual Value** is the amount likely to be obtained by the disposal of the Fixed Asset at the end of its Useful Life. The following points are to be noted in this regard –
   (a) If Residual Value of an asset is insignificant, it is normally regarded as **Nil.**
   (b) If Residual Value is significant, it is estimated either – (i) at the time of acquisition/installation, or (ii) at the time of subsequent revaluation of the asset.
   (c) Residual Value is estimated on the basis of Realisable Value of similar assets, which have reached the end of their useful lives and have operated under conditions similar to those in which the asset will be used.

## 1.9 Component – wise Computation of Depreciation

Companies Act, as well as Accounting Standard – 10 on Property, Plant and Equipment (PE) requires Depreciation to be charged on a component-wise basis, explained as under –

1. **Basic Principle** : Each part of an item of PPE with a cost that is significant in relation to the total cost of the item should be depreciated separately.
2. **Treatment of Parts :**

| Part of Item of PPE | Calculation of Depreciation |
|---|---|
| Part with a cost, significant in relation to Total Cost of The PE item. **Example:** airframe & Engines of an<br><br>Aircraft, whether owned/subject to lease | Amount initially recognized in respect of such Item is allocated to the significant parts & depreciated separately. |
| Two significant Parts of a PPE item, having the same useful life and Depreciation Method. | Such Parts may be grouped in determining the Depreciation charge. |
| Significant Parts of a PPE are depreciated separately, and the Remainder consisting of the Parts that are individually insignificant. | Approximation Techniques that faithfully represents its consumption pattern and/or useful life, may be used. |
| Parts of PPE that do not have a significant cost in relation to the Total Cost of the PPE | These may be depreciated separately, if the enterprise chooses so. |
| Separable Assets (i.e. Land & Buildings) in which Buildings have a limited useful life and land has n unlimited useful life | Accounted separately, even if they are acquired together.<br><br>**Land:** not Depreciated.<br><br>**Buildings :** Depreciated. [**Note** : Increase in value of the Land on which a Building stands does not affect the determination of the Depreciable Amount of the Building.] |
| In case Land itself having limited useful life, e.g. Quarries and Sites used for landfill | It is depreciated in a manner that reflects the benefits to be derived from it. |
| Cost of Land includes the costs of site Dismantlement, Removal and Restoration | That portion of Land Asset is depreciated over the period of benefits obtained by incurring those costs. |

## 2. Methods of computing Depreciation

### 2.1 Methods for Depreciation

1. **Methods Available :** The following methods are available for computing and allocating the depreciable amount of an asset over its useful life –
   (a) Straight Line Method or Fixed Instalment Method,
   (b) Reducing Balance Method or written down value (WDV) Method,
   (c) Sum of Year Digits Method
   (d) Machine Hour Method
   (e) Production Units Method,
   (f) Depletion Method

   **Note:** Of the above, the first 2 methods viz. Straight Line and Reducing Balance Method are widely used.

2. **Selection of method** : The choice of a method is based on –

(a) The type of assets,
(b) Nature of its use, and
(c) Circumstances prevailing in the business.

**Note :**

- Depreciable Assets not having any material value are fully depreciated in the year in which they are acquired.
- The Income Tax Rules prescribe the WDV method (i.e. Reducing Balance method), except in the case of an undertaking engaged in generation and distribution of power.

## 2.2 Straight Line Method (SLM) or Fixed Instalment Method.

| | | |
|---|---|---|
| **1. Meaning** | (a) Under this method, an equal or constant amount of depreciation is written off from the Depreciable Asset, every year.<br>(b) At the end of the useful life of the asset, the cost of the asset will be NIL or equal to its Residual Value/Scrap Value. | |
| **2. Formula** | $\text{Straight Line Depreciation} = \frac{\text{(Cost Less Residual Value)}}{\text{Useful Life}}$ | $\text{SLM Deprn Rate} = \frac{\text{SLM Depreciation}}{\text{Cost of Asset}} * 100$ |
| **3. Merits** | (a) Easy to understand, simple to use, and gives accurate results in most cases. | |
| **4. Demerits** | (a) As the life of the asset increase, its maintenance cost also increases. So, total expenditure to P & L A/c, i.e. Depreciation + Maintenance, will not be uniform in all years.<br>(b) Value of the asset may be extinguished, whereas the asset may be physically available. | |
| **5. Example** | Arvind Ltd. Purchased a machine costing Rs. 75 Lakhs, having a useful life of 7 years. Its estimated Residual value is Rs. 5 Laksh.<br>• Depreciation under Straight Line Method = (75 - 5) ÷ 7 = Rs. **10 Lakhs per annum.**<br>• SLM Depreciation Rate = 10 ÷ 75 = **13.33%** | |

## 2.3 Reducing Balance Method or Written Down Value (WDV) Method

| | |
|---|---|
| 1. Meaning | (a) Depreciation Amount for each year is computed by applying a fixed percentage on the Opening Balance of the Asset (i.e. Diminishing Balance of the Asset.)<br>(b) Reducing Balance refers to the Written Down value of the Asset, i.e. value of the asset as reduced by the depreciation upto the previous year.<br>(c) Depreciation Rate is computed such that at the end of the useful life of the asset, the cost of the asset will be equal to its Residual value / Scrap value / Break – up value. |

| | |
|---|---|
| **2. Formula** | WDV Depreciation Rate = $1 - \sqrt[n]{\frac{\text{Residual, value}}{\text{Cost. Asset}}}$, where n = Useful Life. |
| **3. Merits** | (a) Annual Charge of depreciation reduces from year to years, such that the total expenditure to P & L A/c, i.e. Depreciation + Maintenance, will be **uniform** in all years.<br>(b) The value of the asset will never be extinguished, as it happens in SLM Method.<br>(c) Simple to use, and most **suited** for plant, Machinery, Fixtures, etc. |
| **4. Demerits** | (a) There is a danger that depreciation rate may be taken too low, in which case, the full depreciation may not be provided within the useful life of the asset.<br>(b) If similar assets are grouped (i.e. called Block of Assets) and depreciation rate is applied on the WDV of the entire Block, there is a possibility that the residue (balance) of the asset may lie in the Asset Block A/c even after the asset has been scrapped. [Note : This difficulty can be overcome by |

| | |
|---|---|
| | maintaining an asset – wise Plane & Depreciation Register.]Total of all digits of the life of the asset (in years) |
| **5. Example** | Arvind Ltd. Purchased a machine costing Rs. 5 Lakhs, and has ascertained its WDV rate as 16% p.a. The Depreciation amounts for the first five years will be as under - |

| **Particulars** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
|---|---|---|---|---|---|
| Cost/Opg WDV | 5,00,000 | 4,20,000 | 3,52,800 | 2,96,352 | 2,48,936 |
| (-) Depreciation | 5,00,000 × 16% = 80,000 | 4,20,000× 16% =67,200 | 3,52,800 × 16% =56,448 | 2,96,352 × 16% = 56,448 | 2,48,936× 16% = 39,830 |
| Closing WDV | 4,20,000 | 3,52,800 | 2,96,352 | 2,48,936 | 2,09,105 |

## 2.4 Sum of Digits of Years Method

| | |
|---|---|
| **1. Meaning** | In this method, the annual Depreciation is calculated by multiplying the original cost of the asset less its estimated scrap value by applying the formula - |
| **2. Formula** | Deprn p.a. = Depreciable Amt |
| **3. Example** | Arvind Ltd purchased a machine costing Rs. 78 Lakhs, having a useful life of 5 years, and estimated Scrap value Rs. 3 Lakhs. Depreciation amounts for the years will be – |

Here, Sum of digits = (1 + 2 + 3 + 4 + 5) = 15. [**Note**: This can also be calculated as [n × (n + 1)] ÷ 2]

| **Particulars** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
|---|---|---|---|---|---|
| Depreciation amount of the year | 75 × 5/15 = Rs. 25Lakhs | 75 × 4/15 = Rs. 20 Lakhs | 75 × 3/15 = Rs. 15 Lakhs | 75 × 2/15 = Rs. 10 Lakhs | 75 × 1/15 = Rs.5 Lakhs |

## 2.5 Machine Hour Method

| | |
|---|---|
| **1. Meaning** | In this method, Depreciation is computer based on the number of Machine Hours (rather than years). So, Depreciation Amount for each year is computed by applying the formula - |
| **2. Formula** | Deprn p.a. = Depreciable Amt. x $\frac{\text{No. of Machine Hours during the year}}{\text{Total Machine hours during the entire useful life}}$ |
| **3. Example** | Arvind Ltd purchased a machine costing Rs. 23 Lakhs, having a Scarp Value of Rs. 2,30,000. The machine has a useful life of 20,700 machine hours distributed as under –<br>• Years 1 to 3: 2,500 machine hours each,<br>• Years 4 to 6: 2000 machine hours each, and |

| | |
|---|---|
| | • Years 7 to 10: 1800 machine hours each,<br>In this case, Depreciation Amount will be computed as under - |

- Depreciable Amount = cost less Residual Value = Rs. 23,00,000 – Rs. 2,30,000 = Rs. 20,70,000
- Total Machine Hours = (3 × 2500) + (3 × 2000) + (4 × 1800) = 20,700 machine hours.
- Depreciation Amount for each of the years will be –

| Particulars | Year 1-3 | Year 4-6 | Year 7-10 |
|---|---|---|---|
| Depreciation amount | 20,70,000 × 2500 / 20700 = Rs. 2,50,000 p.a. | 20,70,000 × 2000 / 20700 = Rs. 2,00,000 p.a. | 20,70,000 × 1800 / 20700 = Rs. 1,18,000 **p.a.** |

## 2.6 Production Units Method of Depreciation

| | |
|---|---|
| **1. Meaning** | In this method, Depreciation is computer based on the production / output quantity. So, Depreciation Amount for each year is computed by applying the formula - |
| **2. Formula** | Deprn p.a. = Depreciable Amt. x $\frac{\text{Product Quantity for the current year}}{\text{Total Estimated Production Quantity from the Machine}}$ |
| **3. Example** | Arvind Ltd purchased a machine costing Rs. 25 Lakhs, having a Scarp Value of Rs. 5 Lakhs. The machine is expected to produce 10 lakh units of output in the following manner –<br>• Years 1 & 2 : 1,15,000 units each,<br>• Years 3 & 7 : 1,15,000 units each,<br>• Years 8 & 10 : 90,000 units each,<br>In this case, Depreciation Amount will be computed as under - |

- Depreciable Amount = Cost less Residual Value = Rs. 25,00,000 – Rs. 5,00, 000 = Rs. 20,00,000
- Total Production Qtty = (1, 15,000 × 2 yrs) + (1,00,000 × 5yrs) + (90,000 × 3 yrs) = 10,000 units.
- Depreciation Amount for each of the years will be –

| Year 1-2 | Year 3-7 | Year 8-10 |
|---|---|---|
| Rs. 20 Lakhs × 115000/10,00,000 = Rs. 2,30,000 p.a. | Rs. 20 Lakhs × 100000/10,00,000 = Rs. 2,00,000 p.a. | Rs. 20 Lakhs × 90000/10,00,000 = Rs. 1,80,000 p.a. |

## 2.7 Depletion Method of Depreciation

| | |
|---|---|
| **1. Meaning** | (a) Depletion means reduction or exhaustion.<br>(b) This method is used in the case of exhaustive (wasting) assets .Mines, Quarries, Oil well, etc. Containing only a certain estimated quantity of resources / products.<br>(c) For charging depreciation on such item the life of the Assets (lease period ) is not very important because it can be used ( Mineral can be extracted ) only till it contains minerals.<br>(d) Depreciation amount for each year is computed by applying the formula - |
| **2. Formula** | Deprn p.a. = Depreciable Amt × $\frac{\text{Quantity of Mineral/oil extracted during current year}}{\text{Total Estimated Quantity from the Mine/Quarry/Well}}$ |
| **3. Example** | Arvind Ltd took a quarry on lease by paying Rs. 75 Lakhs. As per technical estimate, the total quantity of mineral deposit is 1, 00,000 tonnes. The extraction pattern is given |

| | |
|---|---|
| | below –<br>• Years 1 : 6,000 tonnes,<br>• Years 2 to 5 : 15,000 tonnes each, and<br>• Years 6 & 7 : 17,000 tonnes each.<br>In this case, Depreciation Amount will be computed as under - |

| Year 1 | Year 2-5 | Year 6-7 |
|---|---|---|
| Rs. 75 Lakhs × 6,000/1,00,000 = Rs. 4,45,000 | Rs. 75 Lakhs × 15,000/1,00,000 = Rs. 11,25,000 p.a. | Rs. 75 Lakhs × 17,000/1,00,000 = Rs. 12,75,000 p.a. |

### 2.10 Suitability of different methods of Depreciation

| Method | Suitability |
|---|---|
| 1. Straight Line Method | Used for assets of specified useful life, e.g. Machinery, Building, Furniture. |
| 2. WDV Method | Use commonly for Machinery, Plant, Fixtures, etc. |
| 3. Sum of Digits Method | Used as a variation of WDV Method. |
| 4. Machine Hour Method | Use for Machines whose lifetime can be measured in terms of hours of operation (and not in terms of years) |
| 5. Production Units Method | Used for Machines producing product of uniform specifications. |
| 6. Depletion Method | Used in the case of Mines, Quarries, oil well, etc. containing only a certain quantity of product/output. |
| 7. Annuity Method | Used for writing off the amounts paid for long lease which involves considerable capital outlay. |

### 2.11 Accounting Entries for Depreciation

Depreciation can be recorded in the books of account, under 2 approaches, which are described below –

| Method | Method<br>Asset Credit Method | Method<br>Provision for Depreciation Method |
|---|---|---|
| 1. Journal Entry | (a) Depreciation A/c Dr.<br>To Fixed Asset A/c<br>(b) Profit and Loss A/c Dr.<br>To Depreciation A/c | Profit and Loss A/c Dr.<br>To Provision of Depreciation A/c |
| 2. Provision for Depreciation A/c | There is no provision for Depreciation Account at all. | Depreciation for each year is credited to provision for depreciation A/c, which shows the Accumulated Depreciation on the Asset. |
| 3. Effect on Assets A/c | Asset A/c is shown at Historical Cost less Depreciation. So, balance in Asset A/c is Reduced year after year. | Asset is shown in the books at Original Cost, Net Book Value = original cost **less** Accumulated Depreciation thereon. |

**Note :** The above schemes are applicable to SLM and WDV Methods. The same treatment is also application under – (a) Sum of Digits, (b) Machine Hours, (c) Production units, and (d) Depletion methods.

## 3. Related Matters

### 3.1 Change in Method of Depreciation

1. **Consistency :** The method of depreciation should be applied consistently to facilitate comparability of the results of operations of the enterprise from period to period.

2. **Conditions for change** : The method of depreciation can be changed only for –
   (a) Compliance with Statutory Requirements, or
   (b) Compliance with an Accounting Standard, or
   (c) Consideration that the change would result in a more appropriate preparation or presentation of the Financial Statements of the enterprise.

3. **Prospective Effect**: Change in method of depreciation is always applied with Prospective effect. Hence, depreciation is recalculated in accordance with the new method **from the date of change in method**.

4. **Disclosure** : A change in the method of charging depreciation is treated as a change in

## 3.2 Review and Revision of Useful Life & Deprn method

In relation to Depreciation, the following should be reviewed at least at each Financial year end, and any changes should be accounted for as a **change in an Accounting Estimate –**

| Review & Revision in | Change in an Accounting Estimate, if | Treatment |
|---|---|---|
| Residual value<br><br>and useful Life | Expectations differ from previous estimates. | Depreciable amount is adjusted. |
| Depreciation<br><br>Method applied | There has been a significant change in the expected pattern of consumption of the future economic benefits embodied in the Asset. | Depreciation Method should be changed to reflect the changed pattern. |

### Illustration 3 : Change in Estimated Useful Life – Impact on Depreciation

**Susmita Ltd has an asset purchased 3 years ago for Rs. 9,70,000. The residual value of the asset was estimated to be Rs. 10,000 after an estimated useful life to 8 years. The Company charges Straight Line Method of depreciation. Due to change in technology, the Company estimates that the asset will become obsolete in another 3 years time from now. How should depreciation be treated in view of revision in useful life?**

**Solution :**

1. Depreciable Value = Original Cost – Residual Value = Rs. 9,70,000 – Rs. 10,000 = Rs. 9,60,000
2. Depreciation amount per annum = Rs. 9,60,000 ÷ Rs. 8 years = Rs. 1,20,000
3. Present Book Value (i.e. after three years) = Rs. 9,70,000 – (Rs. 1,20,000 × yrs) = Rs. 6,10,000

4. Revised useful Life = 3 Years
5. Revised Depreciation amount per annum = Rs. 6,10,000 ÷ 3 years= Rs. 2, 03,333
6. Alternatively, considering residual value of Rs. 10,000 = (Rs. 6,10,000 – Rs. 10,000) ÷ 3 yrs. = Rs. 20,00,000

## 3.3 Revaluation of Assets

1. **Revaluation :** In case of Upward Revaluation, the amount of appreciation should be debited to the Asset (PPE) Account. In case of Downward Revaluation, the amount of reduction should be credited to be Asset (PPE) Account.

1. **Treatment :** Where the Depreciable Assets are revalued, the Provision for Depreciation should be based on - (a) the revalued amount, and (b) Estimate of the Useful Lives of such assets. The **Revaluation Reserve** should be credited for the amount of revaluation. The treatment as under -

| Situation | Treatment |
|---|---|
| (a) Upward Revaluation for First time | Directly credited to Owner's Interests under the heading "Revaluation Surplus" |
| (b) Upward Revaluation of an item previously revalued downwards | • Credit to **P & L to the extent of Reversal** of previous downward revaluation.<br>• Credit the remaining portion of "Revaluation Surplus". |
| (c) Downward Revaluation for First Time | Recognized (i.e. debited), in Profit of Loss. |
| (d) Downward revaluation of an Item previously revalued upwards | • Debited to Owner's Interests under the heading "Revaluation Surplus", to the extent of any Credit Balance in the Revaluation Surplus in respect of that Asset.<br>• Debit the remaining portion, if any, to **Profit or Loss.** |

## 3.4 Sale / Disposal of Assets, and Gain / Loss thereon

Sale/Disposal of Assets in dealt with in the following manner –

1. Ascertain Depreciation for the year (upto the date of disposal), and charge the same for that year.
2. Determine Net book value (or) written down value of the asset = cost less depreciation till date, including deprecation upto the date of disposal.
3. Compare Net book value of asset with its Disposal value and ascertain Profit/(Loss) on disposal.
4. Transfer the profit/(Loss) on disposal to the Profit and Loss Account.

**Note:** Where the Net Disposal Value of an Asset is less than the expense of disposal, it is not worthwhile to dispose off the Asset. In such cases, the Asset is just retired from active use (i.e. discarded without realizing any scarp value). So, the net Book value will be the amount of loss thereon, transferred to the P & l account.

## Illustration 4 : Straight Line Method – Asset Credit Method of Accounting

**From the following date, you are required to show the Fixed Asset and Depreciation Account.**

- **Cost of Machine = Rs. 75 Lakhs, Useful Life = 7 years. Estimated Residual Value = Rs. 5 Lakhs.**
- **The company adopts SLM Method of Depreciation.**
- **In the middle of the 5th year, the Machine was sold for Rs. 32,00,000.**

**Solution :** Depreciation under Straight Line Method = (75 - 5) ÷ 7 = Rs. 10 Lakhs per annum.

**1. Machinery A/c**

| Date | Particulars | Rs. | Date | Particulars | Rs. |
|---|---|---|---|---|---|
| Year 1 | | | Year 1 | | |
| Beginning | To Bank / Asset Vender A/c | 75,00,000 | End | By Depreciation A/c | 10,00,000 |
| | | | End | By Balance c/d | 65,00,000 |
| | **Total** | **75,00,000** | | **Total** | **75,00,000** |
| Year 2 | | | Years 2 | | |
| Beginning | To Balance b/d | 65,00,000 | End | By Depreciation A/c | 10,00,000 |
| | | | End | By Balance c/d | 55,00,000 |
| | **Total** | **65,00,000** | | **Total** | **65,00,000** |
| Year 3 | | | Years 3 | | |
| Beginning | To Balance b/d | 55,00,000 | End | By Depreciation A/c | 10,00,000 |
| | | | End | By Balance c/d | 45,00,000 |
| | **Total** | **55,00,000** | | **Total** | **55,00,000** |
| Year 4 | | | Years 4 | | |
| Beginning | To Balance b/d | 45,00,000 | End | By Depreciation A/c | 10,00,000 |
| | | | End | By Balance c/d | 35,00,000 |
| | **Total** | **45,00,000** | | **Total** | **45,00,000** |

| Date | Particulars | Rs. | Date | Particulars | Rs. |
|---|---|---|---|---|---|
| Year 5 | | | Year 5 | | |
| Beginning | To balance b/d | 35,00,000 | Middle | By Bank (Sale Proceeds) | 32,00,000 |
| End | To P & L A/c (Gain on Sale) | 2,00,000 | End | By Depreciation (for | 5,00,000 |

| | | | | | |
|---|---|---|---|---|---|
| | | | | half-yr) | |
| | **Total** | **37,00,000** | | **Total** | **37,00,000** |

**2. Depreciation Account**

| Date | Particulars | Rs. | Date | Particulars | Rs. |
|---|---|---|---|---|---|
| Year 1 End | To Machinery A/c | 10,00,000 | Year 1 End | By Profit & Loss A/c | 10,00,000 |
| Year 2 End | To Machinery A/c | 10,00,000 | Year 2 End | By Profit & Loss A/c | 10,00,000 |
| Year 3 End | To Machinery A/c | 10,00,000 | Year 3 End | By Profit & Loss A/c | 10,00,000 |
| Year 4 End | To Machinery A/c | 10,00,000 | Year 4 End | By Profit & Loss A/c | 10,00,000 |
| Year 5 End | To Machinery A/c | 5,00,000 | Year 5 End | By Profit & Loss A/c | 5,00,000 |

## Illustration 5 : Straight Line Method – Provision for Depreciation Method

**From the following date, you are required to show the Fixed Asset and Depreciation Account.**

- **Cost of Machine = Rs. 75 Lakhs, Useful life = 7 years. Estimated Residual Value = Rs. 5 Lakhs.**
- **The Company adopts SLM Method of Depreciation, and credits the same to Provision for Depreciation A/c.**
- **In the middle of the 5$^{th}$ year, the Machine was sold for Rs. 26,00,000.**

**Solution** : Depreciation under Straight Line Method = (75 – 5) ÷ 7 **Rs. 10 Lakhs annum.**

**1. Machinery A/c**

| Date | Particulars | Rs. | Date | Particulars | Rs. |
|---|---|---|---|---|---|
| Year 1 Begin | To Bank/Asset Vendor | 75,00,000 | Year 1 End | By Balance c/d | 75,00,000 |
| Year 2 Begin | To Bank b/d | 75,00,000 | Year 2 End | By Balance c/d | 75,00,000 |
| Year 3 Begin | k b/d | 75,00,000 | Year 3 End | By Balance c/d | 75,00,000 |
| Year 4 Begin | k b/d | 75,00,000 | Year 4 End | By Balance c/d | 75,00,000 |
| Year 5 Begin | k b/d | 75,00,000 | Year 5 End | By M/c Disposal A/c – tft | 75,00,000 |

**2. Provision for Depreciation A/c**

| Date | Particulars | Rs. | Date | Particulars | Rs. |
|---|---|---|---|---|---|
| Year 1<br>End | To balance c/d | 10,00,000 | Year 1<br>End | By Profit and Loss A/c | 10,00,000 |
| | **Total** | **10,00,000** | | **Total** | **10,00,000** |
| Year 2<br>Beginning | To balance c/d | 20,00,000 | Years 2<br>Beginning<br>End | By Balance b/d<br>By Profit and Loss A/c | 10,00,000<br>55,00,000 |
| | **Total** | **65,00,000** | | **Total** | **20,00,000** |
| Year 3<br>Beginning | To Balance c/d | 30,00,000 | Years 3<br>Beginning<br>End | By Balance b/d<br>By Profit and Loss A/c | 20,00,000<br>10,00,000 |
| | **Total** | **30,00,000** | | **Total** | **30,00,000** |
| Year 4<br>End | To Balance b/d | 45,00,000 | Years 4<br>Beginning<br>End | By Balance b/d<br>By Profit and Loss A/c | 30,00,000<br>10,00,000 |
| | **Total** | **40,00,000** | | **Total** | **40,00,000** |
| Year 5<br>End | To M/c Disposal A/c – tfr | 45,00,000 | Years 5<br>Beginning<br>End | By Balance b/d<br>By P&L A/c (dep for half-yr) | 40,00,000<br>5,00,000 |
| | **Total** | **45,00,000** | | **Total** | **45,00,000** |

**3. Machinery Disposal A/c**

| Date | Particulars | Rs. | Date | Particulars | Rs. |
|---|---|---|---|---|---|
| Year 5<br>End | To Machinery (Cost Tfr) | 75,00,000 | Year 5<br>Middle<br>End | By Bank (Sale Proceeds) | 26,00,000<br>45,00,000 |

| | | | | | |
|---|---|---|---|---|---|
| | | | End | By Provision for Deprn (tfr)<br>By P & L A/c (Loss on Sale) | 4,00,000 |
| | **Total** | **75,00,000** | | **Total** | **75,00,000** |

**Note :** When asset is sold, the cost of Asset and Accumulated Depreciation thereon is transferred to the Machinery Disposal A/c, and the net Profit/Loss on sale is transferred to P&L Account.

**Illustration 6 : WDV Method – Asset Credit Method of Accounting**

From the following date, you are required to show the Fixed Asset and Depreciation Account for 5 years.

- Cost of Machine = Rs. 5 Lakhs.
- Assume WDV Method of Depreciation and WDV Rate = 16%
- As the end of the fifth years, the asset is sold for Rs. 1,80,000.

**Solution : 1. Computation of Depreciation for each of the first 5 years is given below –**

| **Particulars** | **Year 1** | **Year 1** | **Year 1** | **Year 1** | **Year 1** |
|---|---|---|---|---|---|
| Cost/Opg WDV | 5,00,000 | 4,20,000 | 3,52,800 | 2,96,352 | 2,48,936 |
| (-) Depreciation | 5,00,000 × 16%<br>=<br>80,000 | 4,20,000 × 16%<br>=<br>67,200 | 3,52,800 × 16%<br>=<br>56,448 | 2,96,352 × 16%<br>=<br>47,416 | 2,48,936 × 16%<br>=<br>39,830 |
| Closing WDV | 4,20,000 | 3,52,800 | 2,96,352 | 2,48,936 | 2,09,105 |

| **Date** | **Particulars** | **Rs.** | **Date** | **Particulars** | **Rs.** |
|---|---|---|---|---|---|
| Year 1<br>Beginning | To Bank/Asset Vendor A/c | 5,00,000 | Year 1<br>End<br>End | By Depreciation A/c<br>By Balance c/d | 80,000<br>4,20,000 |
| | **Total** | **5,00,000** | | **Total** | **5,00,000** |
| Year 2<br>Beginning | To balance b/d | 4,20,000 | Year 2<br>End<br>End | By Depreciation A/c<br>By Balance c/d | 67,200<br>3,52,800 |

| | | | | | |
|---|---|---|---|---|---|
| | **Total** | **4,20,000** | | **Total** | **4,20,000** |
| Year 3<br>Beginning | To balance b/d | 3,52,800 | Year 3<br>End<br>End | By Depreciation A/c<br>By Balance c/d | 56,448<br>2,96,352 |
| | **Total** | **3,52,800** | | **Total** | **3,52,800** |
| Year 4<br>Beginning | To balance b/d | 2,96,352 | Year 4<br>End<br>End | By Depreciation A/c<br>By Balance c/d | 47,416<br>2,48,936 |
| | **Total** | **2,96,352** | | **Total** | **2,96,352** |
| Year 5<br>Beginning | To balance b/d | 2,48,936 | Year 5<br>End<br>End<br>End | By Depreciation A/c (full yr)<br>By Bank (sale Proceeds)<br>By P&L A/c (Loss on Sale) | 39,830<br>1,80,000<br>29,106 |
| | **Total** | **2,48,936** | | **Total** | **2,48,936** |

**3. Depreciation Account**

| Date | Particulars | Rs. | Date | Particulars | Rs. |
|---|---|---|---|---|---|
| Year 1 End | To Machinery A/c | 80,000 | Year 1 End | By Profit & Loss A/c | 80,000 |
| Year 2 End | To Machinery A/c | 67,200 | Year 2 End | By Profit & Loss A/c | 67,200 |
| Year 3 End | To Machinery A/c | 56,448 | Year 3 End | By Profit & Loss A/c | 56,448 |
| Year 4 End | To Machinery A/c | 10,00,000 | Year 4 End | By Profit & Loss A/c | 47,416 |
| Year 5 End | To Machinery A/c | 5,00,000 | Year 5 End | By Profit & Loss A/c | 39,830 |

Discuss the factors taken into consideration for calculation of depreciation. **(Nov. 2020, 5 Marks)**

**Ans. The elements relevant for deciding the rate / amount of depreciation are:**

- Cost of acquisition ( Cost necessary to put an assets into usable condition )
- The estimated life of the asset.
- Estimated scrap value at the end of its life.

**Amortization** **(Dec 2021, 1 marks)**

**Ans.**The word Amortisation refers to the economic deterioration by the expiration of intangible assets like goodwill, patents, copyrights, trademarks etc.

Depreciation is a non cash expense and does not result in any cash outflow. **(Nov. 20185, 2 Marks)**
**Ans**. **TRUE:** Depreciation is a non cash expenses and there is no outflow of cash in the business.

**PREVIOUS YEAR QUESTION**

**1.** A Plant & Machinery costing 10,00,000 is depreciated on straight line assuming 10 year working life and zero residual value, for four years, At the end of the fourth year, the machinery was revalued upwards by Rs. 40,000. The remaining useful life was reassessed at 8 years. Calculate Depreciation for the fifth year.

**[Nov. 2018, 4 Marks]**

**2.** A Firm purchased an old Machinery for Rs. 37,000 on 1st January, 2015 and spent Rs. 3,000 on its overhauling. On 1st July 2016, another machine was purchased for Rs. 10,000. On 1st July 2017, the machinery which was purchased on 1st January 2015, was sold for Rs. 28,000 and the same day a new machinery costing Rs. 25,000 was purchased. On 1st July, 2018, the machine which was purchased on 1st July, 2016 was sold for Rs. 2,000. Depreciation is charged @ 10% per annum on straight line method. The firm changed the method and adopted diminishing balance method with effect from 1st January, 2016 and the rate was increased to 15% per annum. The books are closed on 31st December every year. Prepare Machinery account for four years from 1st January, 2015.

**[May 2019,10 Marks]**

**3.** X purchased a machinery on 1st January 2017 for Rs. 4,80,000 and spent Rs.20,000 on its installation. On July 1, 2017 another machinery costing Rs. 2,00,000 was purchased. On 1st July, 2018 the machinery purchased on 1st January, 2017 having become scrapped and was sold for Rs. 2,90,000 and on the same date fresh machinery was purchased for Rs. 5,00,000. Depreciation is provided annually on 31st December at the rate of 10% p.a. on written down value. Prepare Machinery account for the years 2017 and 2018.

**[Nov. 2019, 4 Marks]**

**4.** M/s. Dayal Transport Company purchased 10 trucks @ Rs.50,00,000 each on 1st July 2017. On 1st October, 2019, one of the trucks is involved in an accident and is completely destroyed and Rs. 35,00,000 is received from the insurance in full settlement. On the same date, another truck is purchased by the company for the sum of Rs. 60,00,000. The company writes off 20% of the original cost per annum. The company observes the calendar year as its financial year. Give the motor truck account for two years ending 31st December, 2020.

**[Jan. 2021, 10 Marks]**

**5.** The balance of Machinery Account of a firm on 1st April, 2020 was Rs. 28,54,000. Out of this, a plant having book value of Rs. 2,16,000 as on 1st April, 2020 was sold on 1st July, 2020 for Rs. 82,000. On the same date a new plant was purchased for Rs. 4,58,000 and Rs. 22,000 was spent on its erection. On 1$^{st}$ November, 2020 a new machine was purchased for Rs. 5,60,000. Depreciation is written off @ 15% per annum under the diminishing balance method. Calculate the depreciation for the year ended 31st March, 2021.

**[July 2021, 4 Marks]**

**6.** On 1st January, 2019 Kohinoor Transport Company purchased a Bus for Rs. 8,00,000. On 1st July, 2020 this bus was damaged due to fire and was completely destroyed and Rs.6,00,000 were received by a cheque from the Insurance Company in full settlement on 1st October, 2020. On 1st July, 2020 another Bus was purchased by the company for Rs. 10,00,000. The Company charges Depreciation @ 20% per annum under the WDV Method. Calculate the amount of depreciation for the year ended 31st March, 2021 and gain or loss on the destroyed Bus.

**[Dec. 2021, 5 Marks]**

**7.** The Machinery Account of a Factory showed a balance of Rs. 95 Lakhs on 1st April, 2020. The Books of Account of the Factory are closed on 31st March every year and Depreciation is written off @ 10% per annum under the Diminishing Balance Method. On 1st September, 2020 a new machine was acquired at a cost of Rs. 14 Lakhs and Rs. 44,600 was incurred on the same day

as installation charges for erecting the machine. On 1st September, 2020 a machine which had cost Rs. 21,87,000 on 1st April, 2018 was sold for Rs. 3,75,000. Another machine which had cost Rs. 21,85,000 on 1st April, 2019 was scrapped on 1st September, 2020 and it realized nothing. Prepare the Plant and Machinery Account for the year ended 31st March, 202l. Allow the same rate of depreciation as in the past and calculate depreciation of the nearest multiple of a rupee. Also show all the necessary working notes.

**[June 2022, 10 Marks]**

**8.** A purchased a machinery for Rs. 1,30,000 on 1st April, 2019 and paid Rs.20,000 for freight &installation charges. On 1st October, 2021 another machine was purchased for Rs. 50,000 and sold old machinery for Rs. 1.00,000. The machine purchased on 1st October, 2021 was installed on 1st January, 2022. Under existing practice, the company is charging depreciation @20% p.a. on the original cost. However, from 1st April, 2021 it decided to adopt **WDV** method and charge depreciation @15% p.a. You are required to prepare Machinery Account from 1st April, 2019 to 31st March, 2022.

**[Dec. 2022, 4 Marks]**

**9.** The following balances appear in the books of Dheeraj Enterprises

| | Rs |
|---|---|
| Machine account as on 1-4-2021 | 12,00,000 |
| Provision for depreciation account as on 1-4-2021 | 4,65,000 |

On 1st October 2021 the Machinery which was purchase on 1st April ,2018 for Rs 2,00,000 was sold for Rs 1,10,000 and on the same date another Machinery was purchase for Rs 4,80,000. The firm has been charging depreciation @ 10% p.a. on written down value of the Machinery every year. Prepare the Machinery account, Provision for Depreciation account and Machinery disposal account for the year ending 31st March 2022. **(JUNE 2023, 10 Marks)**