

## 5. Depreciation, Provisions and Reserves

### Learning Objectives

After studying this lesson you will be able to :

- State the meaning and concept of depreciation;
- Explain the causes of depreciation.
- Explain the methods of charging depreciation;
- Show the Accounting Treatment of Depreciation;
- State the meaning of Provision and Reserve;
- Differentiate between Provision and Reserve.

### Teaching Methods :

Teachers are advised to use various examples from daily life in order to clear the concept of depreciation.

‘Provision for Depreciation Account’ is to be taught through various exercises solved by both the Accounting Treatment of Depreciation, i.e. Charging Depreciation in Asset Account and Charging Depreciation in Provision for Depreciation Account.

Journal entries for creating Provision for Depreciation are also to be explained.

### Depreciation : An Introduction

Suppose you have purchased a car. After some time you noticed that if you want to sell this car, its value is less than its cost price. Similarly value of all fixed assets are decreased due to passage of time and some other reasons. **The reduction in value of fixed assets is known as depreciation.**

**Expenditure on fixed assets of the business like furniture, fixtures and fittings of the shop, motor vans, machines and equipments are neither expenditure on purchase of goods nor expenses.**

**Expenditure** of this nature give service to the business for **many years** and thus called Capital Expenditure. Would you like to deduct the expenditure on the fixed assets from the profit of any one year ? It would be wrong to do so since their benefit is enjoyed by the business for more than one year. The correct thing will be to distribute their cost over the years of their useful life to the business. The portion of the cost of fixed assets charged each year as expense is known as depreciation.

### Depreciation : Concept

Business enterprises require fixed assets for their business operations such as furniture and fixtures, office equipments, plant and machinery, motor vehicles, land and building etc. In the process of converting **Raw material into finished products, the fixed assets depreciate in value over a period of time, i.e. its**

**useful life. Depreciation is a part of the cost of a fixed asset which has expired:**

- On account of usage;
- Lapse of time.
- Obsolescence
- Accident

In other words, **the process of allocation of the cost of a fixed asset over its useful life is known as depreciation**

**Need or objectives of providing Depreciation :**

**1. Ascertaining true profit or loss :**

(i) The true profit or loss of an enterprise can be ascertained when all costs incurred for the purpose of earning revenues have been debited to the profit and loss account.

(ii) Fall in the value of assets used in business operations is a part of the cost and should be shown in the profit and loss account of concerned accounting period.

(iii) Keeping this in view, depreciation must be debited to profit & loss account, since loss in value of fixed assets is also an expense like other expenses.

**2. Presentation of True and Fair value of assets :**

If depreciation is not provided, the value of assets shown in Balance sheet will not present the true and fair value of assets because assets are shown at the cost price but actual value is less than cost price of the assets.

**3. To ascertain the accurate cost of the production :**

Depreciation is **an item of expense**, the correct cost of production cannot be calculated unless it is also taken into consideration. Hence, depreciation must be provided to ascertain the correct cost of production.

**4. Computation of correct income tax :**

(i) Income tax of an enterprise is determined after charging all the costs of production.

(ii) If depreciation is not charged, the profits will be higher and the income tax will also be higher.

(iii) If depreciation is charged, Tax liability is reduced.

**5. Provision of funds and replacement of assets :**

Depreciation is a non cash expense. So that amount of depreciation charged to profit and loss accounts is retained in business every year. These funds are available for replacement of the assets when its useful life is over.

**Methods of providing depreciation :**

**1. Straight line method :**

(i) This method is also known as **'original cost method'**

(ii) Under this method, depreciation is charged at **fixed percentage** on the original cost of the asset, throughout its estimated life.

(iii) Under this method the amount of **depreciation is uniform from year to year**. That is why this method is also known as '**Fixed Installment Method**' or '**Equal Installment Method**'.

(iv) The annual amount of depreciation can be easily calculated by the following formula :

$$\text{Annual Depreciation} = \frac{\text{Original cost} - \text{Estimated scrap value}}{\text{Estimated life}}$$

**For example :**

A firm purchases a machine for ₹ 2,25,000 on April 1, 2011. The expected life of this machine is 5 years. After 5 years the scrap of this machine would be realized ₹ 25,000. Under straight line method, the amount of depreciation can be calculated as under.

$$\text{Annual Depreciation} = \frac{2,25,000 - 25,000}{5} = ₹ 40,000$$

Hence, ₹ 40,000 will be charged each year as depreciation on this machine

## **2. Diminishing balance method :**

Under this method, depreciation is charged as a **fixed percentage** on the **book value** of the asset every year. In first year the depreciation will be charged at the end of the year, on the total cost of the asset.

**For example :**

A machine is purchased for ₹ 20,000 on April 1, 2008. It is decided to charge depreciation on this machine @ 10% p.a. on diminishing balance method. The amounts of depreciation for first four years are as under :

Year	Book Value (₹)	Depreciation @ 10% (₹)
2008-09	20,000	2,000
2010-10	20,000--2,000=18,000	1,800
2010-11	18,000--1,800=16,200	1,620
2011-12	16,200--1,620=14,580	1,458

Hence, in this method, **rate of depreciation is same** but **amount of depreciation goes on decreasing every year**. Therefore, this method is also known as 'Written Down Value Method' and 'Reducing Installment Method'.

## **Illustration 1.**

On January 1, 2008, a firm bought a machine for ₹ 90,000 and spend ₹ 6,000 on its installation and ₹ 4,000 on its carriage. It is decided to charge depreciation @ 10% on straight line method. Books are closed on December 31, each year.

Show Machinery Account for the year 2008 to 2010.

**Solution**

Dr. Machinery Account				Cr.			
Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2008				2008			
Jan. 1	To Bank A/c		90,000	Dec 31	By Depreciation A/c		10,000
Jan. 1	To Cash A/c		6,000	Dec 31	By Balance c/d		90,000
Jan. 1	To Cash A/c		4,000				
			1,00,000				1,00,000
2009				2009			
Jan. 1	To Balance b/d		90,000	Dec 31	By Depreciation A/c		10,000
				Dec 31	By Balance c/d		80,000
			90,000				90,000
2010				2010			
Jan 1	To Balance b/d		80,000	Dec 31	By Depreciation A/c		10,000
				Dec 31	By Balance c/d		70,000
			80,000				80,000

**Illustration 2**

On the basis of information given in Illustration 1, show Machinery Account for the year 2008 to 2010 if depreciation is charged @ 10% on diminishing balance method.

**Solution :**

Dr. Machinery Account				Cr.			
Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2008				2008			
Jan. 1	To Bank A/c		90,000	Dec 31	By Depreciation A/c		10,000
Jan. 1	To Cash A/c		6,000	Dec 31	By Balance c/d		90,000
Jan. 1	To Cash A/c		4,000				
			1,00,000				1,00,000
2009				2009			
Jan. 1	To Balance b/d		90,000	Dec 31	By Depreciation A/c		9,000
				Dec 31	By Balance c/d		81,000
			90,000				90,000
2010				2010			
Jan 1	To Balance b/d		81,000	Dec 31	By Depreciation A/c		8,100
				Dec 31	By Balance c/d		72,900
			81,000				81,000

**Illustration 3**

On April, 1, 2008 Prakash & Sons bought furniture costing ₹ 60,000. On July, 1, 2010. Furniture was sold for ₹ 30,000

Prepare Furniture Account assuming depreciation was charged @ 10% per annum on March 31 each year.

**Solution :**

**Machinery Account**

Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2008				2009			
Apr. 1	To Bank A/c		60,000	Mar.31	By Depreciation A/c		6,000
				Mar.31	By Balance c/d		54,000
			60,000				60,000
2009				2010			
Apr. 1	To Balance b/d		54,000	Mar.31	By Depreciation A/c		6,000
				Mar.31	By Balance c/d		48,000
			54,000				54,000
2010				2010			
Apr. 1	To Balance b/d		48,000	Jul. 1	By Bank A/c		30,100
				Jul. 1	By Depreciation A/c		1,500
				Jul. 1	By Loss on Sale of Machinery		16,500
			48,000				48,000

On the basis of information given in Illustration 3, prepare Furniture Account assuming depreciation was charged @ 15% per annum on reducing installment method.

**Solution :**

**Machinery Account**

Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2008				2009			
Apr. 1	To Bank A/c		60,000	Mar. 31	By Depreciation A/c		9,000
				Mar. 31	By Balance c/d		51,000
			60,000				60,000
2009				2010			
Apr. 1	To Balance b/d		51,000	Mar. 31	By Depreciation A/c		7,650
				Mar. 31	By Balance c/d		43,350
			51,000				51,000

2010			2010		
Apr. 1	To Balance b/d	43,350	Jul. 1	By Bank A/c	30,000
			Jul. 1	By Depreciation A/c	1,626
			Jul. 1	By Loss on Sale of Machinery	11,724
		43,350			43,350

#### CREATION OF PROVISION FOR DEPRECIATION ACCOUNT:

There is another treatment for charging Depreciation. In this treatment, Provision for Depreciation Account is opened and depreciation charged in this account instead of Asset Account. Following Journal entries are passed at the end of each accounting period.

Date	Particulars	L.F	Dr. (₹)	Cr. (₹)
	Depreciation Account Dr. To Provision for Depreciation Account			
	Profit and Loss Account Dr. To Depreciation Account			

In this treatment the balance of Asset Account remains same throughout its useful life. Provision for Depreciation is shown in the liabilities side of Balance Sheet.

#### Illustration 5

Krishna lifestyle limited purchased a machine for ₹ 1,25,000 including installation cost on January 1, 2008. On October 1, 2010, machine was sold for ₹ 50,000. Depreciation was provided @ 20% p.a. on Fixed Installment method and accounts are closed on December 31 each year.

Show the Machinery Account and Provision for Depreciation Account for the year 2008 to 2010.

**Solution :**

#### Machinery Account

Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2008				2008			
Jan. 1	To Bank A/c		1,25,000	Dec. 31	By Balance c/d		1,25,000
2009				2009			
Jan. 1	To Balance b/d		1,25,000	Dec. 31	By Balance c/d		1,25,000
2010				2010			
Jan. 1	To Balance b/d		1,25,000	Oct. 1	By Provision for Dep. A/c		68,750
				Oct. 1	By Bank A/c		50,000
				Oct. 1	By Loss on Sale of Machinery		6,250
			1,25,000				1,25,000



### Provision for Depreciation Account

Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2008				2008			
Dec.31	To Balance c/d		25,000	Dec.31	By Depreciation A/c		25,000
2009				2009			
Dec.31	To Balance c/d		50,000	Jan. 1	By Balance b/d		25,000
				Dec.31	By Depreciation A/c		25,000
			50,000				50,000
2010				2010			
Oct. 1	To Machinery A/c		68,750	Jan. 1	By Balance b/d		50,000
			68,750	Oct. 1	By Depreciation A/c		18,750
							68,750

#### Important Point :

Total Depreciation charged on Machine : 25,000+25,000+18,750 = 68,750

#### Illustration 6

On the basis of information given in Illustration 5, show the Machinery Account and Provision for Depreciation is provided @ 20% p.a. on Written Down Value Method.

#### Solution :

#### Machinery Account

Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2008				2008			
Jan. 1	To Bank A/c		1,25,000	Dec.31	By Balance c/d		1,25,000
2009				2009			
Jan. 1	To Balance b/d		1,25,000	Dec. 31	By Balance c/d		1,25,000
2010				2010			
Jan. 1	To Balance b/d		1,25,000	Dec. 31	By Provision for Dep. A/c		57,000
				Oct. 1	By Bank A/c		50,000
				Oct. 1	By Loss on Sale of Machinery A/c		18,000
			1,25,000				1,25,000

**Provision of Depreciation Account**

Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2008 Dec.31	To Balance c/d		25,000	2008 Dec. 31	By Depreciation A/c		25,000
2009 Dec.31	To Balance c/d		45,000	2009 Jan. 1	By Balance b/d		25,000
			45,000	2009 Dec. 31	By Depreciation A/c		20,000
2010 Oct. 01	To Machinery A/c		57,000	2010 Jan. 1	By Balance b/d		45,000
				2010 Oct. 1	By Depreciation A/c		12,000
			57,000				57,000

**Important Point :**

Total Depreciation is charged on Machine : 25000+20,000+12,000 = 57,000

**Illustration 7**

A Company purchased a machine for ₹ 40,000 on January 1, 2010. On July 1, 2011 it was sold for ₹13000. The company charges depreciation @ 10% p.a. on straight line method.

Show Machinery Account, Provision for Depreciation Account and Machinery Disposal account if books are closed on Decemeber 31 each year.

**Solution :**

**Machinery Account**

Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2010 Jan.1	To Cash A/c		40,000	2010 Dec. 31	By Balance c/d		40,000
2011 Jan.1	To Balanceb/d		40,000	2011 July 1	By Machinery Disposal A/c		40,000

**Provision for Depreciation Account**

Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2010 Dec.31	To Balance c/d		4,000	2010 Dec.31	By Depreciation A/c		4,000
2011 Dec.31	To Machinery Disposal A/c		6,000	2011 Jan.1	By Balance b/d		4,000
			6,000	2011 July 1	By Depreciation A/c		2,000
							6,000



### Machinery Disposal Account

Dr.

Cr.

Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2011 July 1	To Machinery A/c		40,000	2011 July 1	By Prov. For Dep. A/c		6,000
				July 1	By Cash A/c		13,000
				July 1	By Loss on Sale of Machinery A/c		21,000
			40,000				40,000

#### Important Point :

Total Depreciation charged on Machine :  $4,000 + 2,000 = 6,000$

#### Illustration 8 :

On July 1, 2008, Porwal Auto Limited purchased Furniture for ₹ 1,00,000 and spent ₹ 4,000 towards its installation. On April 1, 2009, the Furniture was disposed off for ₹ 59,820 and on the same day furniture costing ₹ 1,60,000 were purchased. Show the Furniture Account, Provision for Depreciation Account and Furniture Disposal Account for the year 2008, 2009 and 2010 if the rate of Depreciation is 15% per annum by Diminishing Balance method.

### Furniture Account

Dr.

Cr.

Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2008 July 1	To Bank A/c		1,00,000	2008 Dec.31	By Balance c/d		1,04,000
	To Cash A/c		4,000				
			1,04,000				1,04,000
2009 Jan. 1	To Balance b/d		1,04,000	2009 Apr. 1	By Furniture Disposal A/c		1,04,000
Apr. 1	To Bank A/c		1,60,000	Dec. 31	By Balance c/d		1,60,000
			2,64,000				2,64,000
2010 Jan 1	To Balance b/d		1,60,000	2010 Dec 31	By Balance c/d		1,60,000

**Provision for Depreciation Account**

Dr.				Cr.			
Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2008 Dec.31	To Balance c/d		7,800	2008 Dec.31	By Depreciation A/c		7,800
2009 Apr.31	To Furniture Disposal A/c		11,408	2011 Jan. 1	By Balance b/d		7,800
	To Balance c/d		18,000	Apr. 1	By Depreciation A/c		3,608
			29,408	Dec. 31	By Depreciation A/c		18,000
2010 Dec.31	To Balance c/d		39,300				29,408
			39,300	Jan 1	By Balance b/d		18,000
				Dec.31	By Depreciation A/c		21,300
							39,300

**Furniture Disposal Account**

Dr.				Cr.			
Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2009 Apr. 1	To Furniture A/c		1,04,000	2009 Apr. 1	By Prov. For Dep. A/c		11,408
				Apr. 1	By Bank A/c		59,820
				Apr. 1	By Los on ale of Furniture A/c		32,772
			1,04,000				1,04,000

**Important Point :**

Total Depreciation charged on Machine sold : ₹ 7,800+ ₹ 3,608 = ₹ 11,408

**Illustration 9 :**

A machine was purchased on 1st January, 2008 for ₹ 1,00,000. On 1st July 2010, machinery purchased on 1st January, 2008 was sold for ₹ 60,000 at 20% profit on book value.

The following balances appear in the books of the Co. as on 1st January 2010 :

	₹
Machinery Account	5,00,000
Provision for Depreciation Account	1,50,000

You are required to prepare the machinery A/c and provision for depreciation A/c for the year 2010.

**Note :** Depreciation is charged @ 20% per annum on Fixed Installment Method.

**Solution**

**Machinery Account**

Dr.				Cr.			
Date	Particulars	J.F	Amount ₹	Date	Particulars	J.F	Amount ₹
2010				2010			
Jan.1	To Balance b/d		5,00,000	July 1	By Bank A/c		60,000
July 1	To Profit on Sale of Machinery A/c		10,000	July 1	By Provision for Depreciation A/c		50,000
				Dec.31	By Balance c/d		4,00,000
			5,10,000				5,10,000

**Provision for Depreciation Account**

Dr.				Cr.			
Date	Particulars	J.F	₹	Date	Particulars	J.F	₹
2010				2010			
Jul.1	To Machinery Account		50,000	Jan. 1	By Balance b/d		1,50,000
Dec.31	To Balance c/d		1,90,000	July 1	By Depreciation A/c (Machinery Sold)		10,000
				Dec.31	By Depreciation A/c		80,000
			2,40,000				2,40,000

**Working Note :**

1. Calculation of Depreciation on Machinery sold :

	₹
Depreciation for the year 2008	
(₹ 1,00,000 x $\frac{20}{100}$ )	20,000
Depreciation for the year 2009	20,000
Depreciation for the year 2010 (5 months)	10,000
	<u>50,000</u>

2. Profit on Sale of Machinery :

$$(\text{₹ } 60,000 \times \frac{20}{120}) = \text{₹ } 10,000$$

**Provisions :**

1. Provision is to be made in **respect of a liability**, which is **certain** to be incurred, but its **accurate amount is not known**.

2. A provision is created to meet a known depletion or diminution in the value of asset.

3. It is charged in the **Profit and loss Account on estimate basis**. It should be clearly understood that if the amount of a known liability can be determined with reasonable accuracy, it can not be a provision.

**Note :** Provision is a charge against profits it means provision has to be made irrespective of business enterprise is earning enough profit or loss.

**Examples of Provisions :**

1. Provision for Depreciation of assets.
2. Provision for Repairs and Renewals of assets.
3. Provision for Taxation.
4. Provision for Discount on Debtors.
5. Provision for Bad and doubtful Debts.

**Reserves :**

- Reserves are the amount set aside **out of profits**. It is an **appropriation of profits and not a charge on the profits**. The amount of profit retained is used in the business when difficult time comes.
- Since reserves are neither expenses nor losses, so these are not charged to Profit & Loss Account rather these are debited to Profit & Loss Appropriation Account which is prepared after Profit and Loss Account.
- Reserves are also known as '**Ploughing Back of Profits**'. Reserves are created for **strengthening the financial positions of the business enterprise**. Examples are General Reserve, Dividend Equalization Reserve etc.
- If the amount of **reserve is invested outside** the business then, it is called '**Reserve Fund**'.
- **Creation of reserve does not reduce the net profit but only reduces the divisible profits.**

## **Types of Reserve**

### **General Reserve :**

Specific reserves are those reserves which are created **for a specific purpose and can be utilized only for that purpose**. Dividend Equalization Reserve and 'Reserve for Replacement of Asset' are the examples of Specific Reserve.

### **General Reserve :**

If the purpose of creating the reserve is to meet any **unforeseen contingency (Liability which is not known)** in future, the reserve is called 'General Reserve'. These are retained for strengthening the financial position of the enterprise.

### **Specific Reserve :**

Specific reserves are those reserves which are created **for a specific purpose and can be utilized only for that purpose**. 'Dividend Equalization Reserve' and 'Reserve for Replacement of Asset' are the examples of Specific Reserve.

### **Capital Reserve :**

In addition to the normal profits, capital profits are also earned in the business from many sources. Reserves created out of capital profits which are,

1. **Not of recurring nature**
2. **Not readily available for distribution as dividend among the shareholders.**
3. These reserve can be **utilized for writing off capital losses.**

### **Capital Reserves may be created out of such profits as :**

- I. Profit on sale of any fixed asset.
- II. Profit from forfeiture of shares,
- III. Profit prior to incorporation of company.
- IV. Profit on redemption of debentures

### **Secret Reserve :**

A secret reserve is created by undervaluing the fixed assets. Existence of secret reserve

1. Reduce the profits of the business enterprise and
2. Reduces its tax liability.
3. Secret reserve is secret in the sense that it is not known to the outsiders.
4. Such reserves are created by showing the assets at a lower amount and liabilities at a higher amount.

**Difference between Provisions and Reserve**

Basis	Provision	Reserve
1. Meaning	It is created to meet a known liability.	It is created to strengthen the financial position of business enterprise.
2. Charge or Appropriation	Provisions are charge against profits.	Reserve is an appropriation of profit.
3. Objective	The objective is to provide for known liability but cannot be calculated accurately.	It is created to strengthen the financial position and to meet unforeseen liability.
4. Effect on Profit	It is debited to the Profit & Loss Account. Hence, profit is reduced.	It is debited to Profit and Loss Appropriation Account. Reserve reduces divisible profits
5. Creation	Provisions are to be created even if there are insufficient profit only.	Reserve is created out of adequate profits only.
6. Mode of creation	Provision are created by debiting the Profit & loss account.	It is created through Profit & Loss Appropriation Account.
7. Investment	It cannot be invested outside the business.	Reserve can be invested outside the business.
8. Necessity	Creation of provision is necessary as per law.	Its creation is not necessary. It is created as a matter of prudence.

**Points to Remember :**

1. Fixed assets are those assets which are used for many years.
2. Depreciation means reduction in value of tangible fixed assets.
3. Through accounting treatment of depreciation we can distribute the total cost of fixed assets over the years of their useful life.
4. There are two main methods of charging depreciation : Straight Line Method and Diminishing Balance Method.



5. Depreciation is charged on fixed assets only and at the end of accounting period.
6. In Straight Line Method, depreciation is charged on original cost and the amount of depreciation remains same year after year.
7. In Diminishing Balance Method the amount of depreciation is reducing year after year because depreciation is charged on opening balance of the asset in every year.
8. In Straight Line Method, the book value of asset can be reduced to zero but in Diminishing Balance Method, the book value of asset can not be reduced to zero.
9. Provisions are made for known liabilities which can not be calculated accurately.
10. Reserves are created for strengthening the financial position of enterprise but can be created if adequate profits are available.