

# DEPRECIATION

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# CONTENTS

- ▶ **MEANING AND DEFINITIONS OF DEPRECIATION**
- ▶ **DEPRECIABLE ASSET**
- ▶ **CAUSES OF DEPRECIATION**
- ▶ **CHARACTERISTICS OF DEPRECIATION**
- ▶ **OBJECTIVES OF CHARGING DEPRECIATION**
- ▶ **FACTORS AFFECTING DEPRECIATION**
- ▶ **ACCOUNTING ENTRIES FOR DEPRECIATION**
- ▶ **DIFFERENCE BETWEEN DEPRECIATION ACCOUNT AND PROVISION FOR DEPRECIATION ACCOUNT**
- ▶ **METHODS OF PROVIDING DEPRECIATION**
- ▶ **STRAIGHT LINE METHOD- MERITS AND DEMERITS**
- ▶ **WRITTEN DOWN VALUE METHOD: MERITS AND DEMERITS**
- ▶ **DIFFERENCE BETWEEN BOTH METHODS**
- ▶ **ILLUSTRATIONS**

# DEPRECIATION - MEANING

Depreciation means fall in book value of fixed asset because of

- ▶ Usage or
- ▶ With efflux of time or
- ▶ Obsolescence or
- ▶ Accident

# DEFINITION

Depreciation is the gradual and permanent decrease in value of an asset from any cause.

----R. N. Carter

# DEFINITION

Depreciation represents loss or diminution in the value of an asset consequent upon wear and tear, obsolescence, effluxion of time or fall in market value.

-----J. R. Batliboi

# DEFINITION

**Institute of Chartered Accountants of India** in Accounting Standard (AS-6) defines the depreciation as, “a measure of the wearing out, consumption or other loss of a value of a depreciable asset arising from use, effluxion of time or obsolescence through technology and market changes.

# DEPRECIABLE ASSET

**AS-6** defines depreciable assets are assets which

- ▶ Are expected to be used during more than one accounting period
- ▶ Have a limited useful life
- ▶ Are held by an enterprise for use in production or supply of goods and services, for rental to others or for administrative purposes
- ▶ And not for the purpose of sale in ordinary course of business.

# CAUSES OF DEPRECIATION

PHYSICAL FEATURES

WEAR  
AND  
TEAR

PASSAGE OF  
TIME

NATURAL  
CALAMITIES

FUNCTIONAL FACTORS

OBSOLESCENCE

DEPLETION

EXPIRY OF  
LEGAL RIGHTS



# CHARACTERISTICS OF DEPRECIATION

- ▶ Depreciation refers to a permanent, gradual and continuous decrease in value of a fixed asset
- ▶ It reduces the book value of the asset and not the market value.
- ▶ It is process of allocation of expired cost.
- ▶ It is a non-cash expense.
- ▶ It is charged to revenue to find out net profits of the business.

# OBJECTIVES OF CHARGING DEPRECIATION

- ▶ To know correct profits
- ▶ To show the assets at their true value in Balance Sheet
- ▶ To generate funds for replacement of assets
- ▶ Statutory requirement
- ▶ To ascertain true cost of production
- ▶ Saving in income tax liability
- ▶ To maintain capital intact

# FACTORS AFFECTING DEPRECIATION

- ▶ Cost of asset
- ▶ Scrap value
- ▶ Estimated useful life
- ▶ Maintenance of asset
- ▶ Legal provision
- ▶ Rate of obsolescence

# ACCOUNTING ENTRIES FOR DEPRECIATION

▶ When provision for depreciation account is not maintained

(i) For charging depreciation on asset

Depreciation Account            Dr.

To Asset Account

(ii) For transferring depreciation charge to profit and loss account

Profit and Loss Account        Dr.

To Depreciation Account

# ACCOUNTING ENTRIES FOR DEPRECIATION

▶ When provision for depreciation account is maintained

(i) For charging depreciation

Depreciation Account                      Dr.

    To Provision for Depreciation Account

(ii) For transferring depreciation account to profit and loss account

Profit and Loss Account                  Dr.

    To Depreciation Account

# DIFFERENCE BETWEEN DEPRECIATION ACCOUNT AND PROVISION FOR DEPRECIATION ACCOUNT

BASIS OF DIFFERENCE	DEPRECIATION ACCOUNT	PROVISION FOR DEPRECIATION ACCOUNT
NATURE OF ACCOUNT	It is a nominal account.	Provision account is a liability which has to be used at the time of sale of asset.
TEMPORARY/PERMANENT	This is a temporary account and is closed in the same year while transferring to profit and loss account.	This is a permanent account and appears on the liability side of Balance Sheet till the asset is sold.
DEBIT/CREDIT BALANCE	It has debit balance.	It has credit balance.
WHEN OPENED	This account is opened when asset is to be shown in the Balance Sheet at its written down value.	This account is opened when asset is to be shown in the Balance Sheet at its cost.
CHARGE	It is a charge against the asset.	It is not a charge against the asset.

# METHODS OF PROVIDING DEPRECIATION

## **A. STRAIGHT LINE METHOD OR FIXED INSTALMENT METHOD**

It is also known as Original Cost method. Under this method, a fixed part of the original cost of the asset is written off each year till the value of the asset is reduced to zero or its estimated scrap value, if any.

# STRAIGHT LINE METHOD

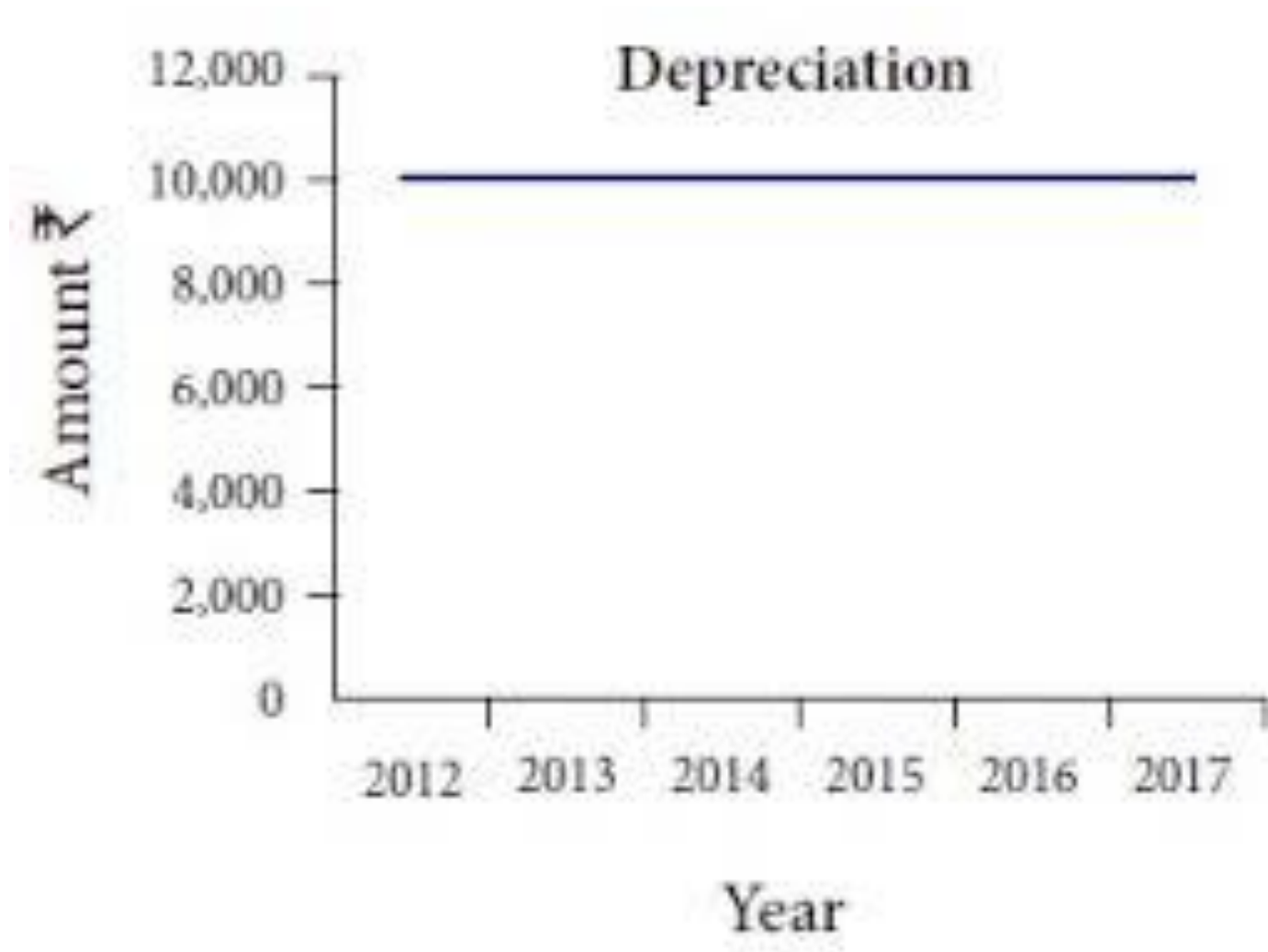
- ▶ The annual depreciation under this method can be calculated as follows

$$\text{Annual Depreciation} = (\text{Cost of Asset} + \text{Installation charges} - \text{Net Residual Value}) / \text{Useful Life}$$

- ▶ Rate of Depreciation =  $\text{Annual Depreciation} / \text{Cost of Asset} \times 100$



# GRAPHICAL REPRESENTATION



# MERITS OF STRAIGHT LINE METHOD

- ▶ **Uniformity-** One benefits of straight line method is uniformity in depreciation amount. This method charges fixed amount of depreciation every year. So it distributes depreciation uniformly till the life of the item.
- ▶ **Written Off Completely** Under this method, value of asset can be written off to zero at the expiry of its life. Book value of the depreciated asset will be equal to zero at the end of its commercial life.
- ▶ **Helps To Compare Profit** Straight line method charges equal amount of depreciation each year. So it helps to compare profits of different accounting years.

# DEMERITS OF STRAIGHT LINE METHOD

- ▶ The method is not recognised by Income tax authorities.
- ▶ It does not make any provision for the interest on capital invested in fixed assets.
- ▶ Since amount of depreciation remains constant year after year, the expenses incurred on account of repairs and maintenance increase gradually as the asset grows older and as such, Profit and Loss account in the later years incorporates more than its real share of expense.

## ILLUSTRATION 1

- ▶ ABC Ltd. acquires a machine on 1st July, 2007 at a cost of Rs. 2, 80,000 and spent Rs. 20,000 on its installation. The firm writes off depreciation at 10% of the original cost every year. The books are closed on 31st December every year. Prepare machinery A/c for 3 years.

**Solution:**

**Machinery A/c**

<b>Date</b>	<b>Particulars</b>	<b>(₹)</b>	<b>Date</b>	<b>Particulars</b>	<b>(₹)</b>
2006 July 1	To Bank	2,80,000	2006 Dec. 31	By Depreciation A/c	15,000
	To Bank (installation Exps.)	20,000		By Balance c/d	2,85,000
		3,00,000			3,00,000
2007 Jan. 1	To balance b/d	2,85,000	2007 Dec. 31	By Depreciation A/c	30,000
			Dec. 31	By balance c/d	2,55,000
		2,85,000			2,85,000
2008 Jan. 1	To balance b/d	2,55,000	2008 Dec. 31	By Depreciation A/c	30,000
			Dec. 31	By balance c/d	2,25,000
		2,55,000			2,55,000

## ILLUSTRATION 2

Rubal Ltd. purchased a machine costing Rs. 3,00,000 on 1st April, 2000 and an additional machine on 1st Oct., 2000 costing Rs. 2,00,000 and on 1 July, 2001 costing Rs. 1,00,000.

On 1st Jan. 2002, one third of Machine purchased on 1st April, 2000 was sold at Rs. 30,000.

Prepare machine A/c for 3 years, it is given that depreciation is charged @ 10% p.a. on straight line method.

**Solution:**

**Machine A/c**

2000	Particulars	(₹)	1998	Particulars	(₹)
April 1	To Bank	3,00,000	Dec. 31	By Depreciation (22,500 + 5,000)	27,500
Oct. 1	To Bank	2,00,000	Dec. 31	By Balance c/d	4,72,500
		5,00,000			5,00,000
2001			2001		
Jan. 1	To balance b/d	4,72,500	Dec. 31	By Depreciation (30000 + 20000 + 5000)	55,000
July 1	To Bank A/c	1,00,000	Dec. 31	By balance c/d	5,17,500
		5,72,500			5,72,500
2002			2002		
Jan. 1	To balance b/d	5,17,500	Jan. 1	By Bank	30,000
				By P&L A/c (loss)	52,500
			Dec. 31	By Depreciation	50,000
				By Balance c/d	3,85,000
		5,17,500			5,17,500

## B. DIMINISHING BALANCE METHOD

- ▶ The method is also known as written down or reducing balance method.
- ▶ Under this method, a fixed percentage is written off every year on the written down value of the asset till the amount is reduced to its scrap value.
- ▶ Depreciation is gradually diminished or decreased under this method.



# RATE OF DEPRECIATION

$$\text{Depreciation Rate} = 100 \left( 1 - n \sqrt{\frac{S}{C}} \right) \text{ where } n = \text{number of years}$$

**S = Salvage value**

**C = Cost of asset**

## EXAMPLE

If a plant costs Rs. 8,000 with an estimated salvage value of Rs. 1,000 at the end of third year of its useful life, the rate of depreciation will be calculated thus: if a plant costs Rs. 8,000 with an estimated salvage value of Rs. 1,000 at the end of third year of its useful life, the rate of depreciation will be calculated thus:

$$\begin{aligned}\text{Rate of Depreciation} &= 100 \left( 1 - 3 \sqrt{\frac{1000}{8000}} \right) \\ &= 50\%\end{aligned}$$

# MERITS OF DIMINISHING BALANCE METHOD

- ▶ The method is recognised by Income Tax Act for charging depreciation.
- ▶ The more depreciation is charged in the initial years when machine needs no repairs or less repairs compared to later years when it needs more repairs. This matches higher cost with larger revenues resulting from increased production.
- ▶ This method is logical in the sense that as the asset grows older, the amount of depreciation also goes on decreasing.
- ▶ It recognizes the risk of obsolescence by charging the major part of depreciation in the early years of the life of the asset.

## DEMERITS OF DIMINISHING BALANCE METHOD

- ▶ The asset is never fully depreciated.
- ▶ It does not provide for replacement of the asset on the expiry of its useful life.
- ▶ It does not take into consideration the interest on capital invested in the asset.

## ILLUSTRATION 3

Y Ltd. Co. purchased a machine costing Rs. 3, 00,000 on 1st January, 2007. The depreciation is to be charged at 20% p.a. on Diminishing Balance method.

Write up Machinery A/c for first four years.

**Solution:****Machinery A/c**

2007	Particulars	(₹)	2007	Particulars	(₹)
Jan. 1	To Bank	3,00,000	Dec. 31	By Depreciation	60,000
			Dec. 31	By Balance c/d	2,40,000
		3,00,000			3,00,000
2008			2008		
Jan. 1	To balance	2,40,000	Dec. 31	By Depreciation	48,000
			Dec. 31	By balance c/d	1,92,000
		2,40,000			2,40,000
2009			2009		
Jan. 1	To balance b/d	1,92,000	Dec. 31	By Depreciation	38,400
			Dec. 31	By balance c/d	1,53,600
		1,92,000			1,92,000
2010			2010		
Jan. 1	To balance b/d	1,53,600	Dec. 31	By Depreciation	30,720
			Dec. 31	By Bal. c/d	1,22,880
		1,53,600			1,53,600

## ILLUSTRATION 4

Mr. X purchased a second hand machinery on 1.2.2003 for Rs. 50,000; paid Rs. 11,000 for its over-hauling and Rs. 5,000 for its installation which was completed by 31.3.2003. The company provides depreciation on its machinery at 15% on diminishing balance method from the date it was put to use and closes its books on 31st December every year. On 1.10.2004, a repair work was carried out on the machine and Rs. 5,000 were paid for the same. The machine was sold on 31.10.2005, for a sum of Rs. 11,000 and an amount of Rs. 1,000 was paid as dismantling charges.

Prepare machinery account from 2003 to 2005.



**Solution:**

**Dr.**

**Machinery Account**

**Cr.**

Date	Particulars	Amount (₹)	Date	Particulars	Amount (₹)
2003 Feb. 1	To Bank A/c	50,000	2003 Dec. 31	By Depreciation A/c (15% on ₹ 66,000) for 9 months)	7,425
Mar. 31	To Bank A/c [₹ 11,000 + ₹ 5,000]	16,000		By Balance c/d	58,575
2004		66,000	2004		66,000
Jan. 1	To Balance b/d	58,575	Dec. 31	By Depreciation A/c (15% on ₹ 55,875)	8,786
				By Balance c/d	49,789
2005		58,575	2005		58,575
Jan. 1	To Balance b/d	49,789	Oct. 31	By Depreciation A/c (15% on ₹ 49,789 for 10 months)	6,223
				By Bank A/c	10,000
				By Profit & Loss A/c (Loss) (Balancing fig.)	33,566
		49,789			49,789



# CHANGE IN THE METHOD OF DEPRECIATION

Consistency principle of accountancy requires that the accounting policies practiced should be same for all years and there should be no change from one to another. Hence, the same method is adopted throughout the period. But sometimes change of depreciation method becomes inevitable. Such a change may be introduced

- ▶ from the year of change or
- ▶ with retrospective effect.

# CHANGE IN THE METHOD OF DEPRECIATION

- ▶ In the first case, one has to find out the changed depreciation base at the beginning of the year and then depreciation for the year is calculated by the changed method on this changed base. But in the latter case, wherein change is to be effected with some back date, the value of asset is calculated by the new method on the date of change. It will become the basis of computation of depreciation for periods after the date of change.
- ▶ Furthermore, in order to adjust depreciation for past periods due to change of method, depreciation should be calculated for the past period of asset by using both the existing method and changed method and the difference is adjusted in the current year's asset account by giving debit or credit to profit and loss account.

## ILLUSTRATION 5

Y Ltd. company purchased a second hand machinery on 1st January, 2009 for Rs. 3,70,000 and immediately spent Rs. 20,000 on its repairs and Rs. 10,000 for installation. On 1st July, 2010, it purchased another machine for Rs. 1, 00,000.

On 1st July, 2011, it sold off the first machine for Rs. 2, 50,000 and bought another for Rs. 3, 00,000 Depreciation was provided on the machine @ 10% on original cost annually on 31st December. With effect from 1st January, 2012, the company changed the method of providing Depreciation and adopted the W.D. V. method and rate of Depreciation was 15% p.a.

Prepare machinery A/c for 4 years.

**Solution:**

**Machinery A/c**

Date	Particulars	Amount (₹)	Date	Particulars	Amount (₹)
2009			2009		
Jan. 1	To Bank	3,70,000	Dec. 31	By Dep. A/c	40,000
	To Bank	30,000	Dec. 31	By Balance c/d	3,60,000
		4,00,000			4,00,000
2010			2010		
Jan. 1	To Balance b/d	3,60,000	Dec. 31	By Dep. (40000 + 5000)	45,000
July 1	To Bank	1,00,000	Dec. 31	By Balance c/d	4,15,000
		4,60,000			4,60,000
2011			2011		
Jan. 1	To Balance b/d	4,15,000	July 1	By Depreciation	20,000
July 1	To Bank	3,00,000	July 1	By Bank	2,50,000
			July 1	By P&L A/c (Loss)	50,000
			Dec. 31	By Depreciation (10,000 + 5000)	25,000
			Dec. 31	By Balance c/d (78,625 + 231,250)	3,70,000
		7,15,000			7,15,000
2012			2012		
Jan. 1	To Balance b/d	3,70,000	Dec. 31	By Depreciation	55,500
				By Balance c/d	3,14,500
		3,70,000			3,70,000

## ILLUSTRATION 6

M Ltd. which depreciates its machinery @ 10% p.a. according to D.B.M. (Diminishing Balance Method), had on 1st April, 2006 Rs. 4, 86,000 balance in its machinery A/c. During 2004 the year ended 31st March, 2007, the machinery purchased on 1st April, 2004 for Rs. 60,000 was sold for Rs. 40,000. On 1st October, 2006 and a new machinery costing Rs. 70,000 was purchased and installed on the same date, installation charges Rs. 5000.

The Company wants to change its method of depreciation from W.D.V to Straight line method w.e.f. 1st April, 2004 and adjust the difference before 31st March, 2007, the rate of Depreciation remaining the same as before.

Show Machinery A/c for the year ended 31st March, 2007.

**Solution:**

**In the books of M. Ltd.  
Machinery A/c**

<b>Date</b>	<b>Particulars</b>	<b>Amount (₹)</b>	<b>Date</b>	<b>Particulars</b>	<b>Amount (₹)</b>
2006 April 1	To Balance b/d	4,80,000	2006 Oct. 1	By Bank	40,000
Oct. 1	To Bank	70,000	Oct. 1	By P&L A/c (Loss)	6,170
Oct. 1	To Bank	5,000	2007 Mar. 31	By Depreciation	60,180
				By P&L A/c (Dep.)	5,400
				By balance c/d	4,49,250
		5,61,000			5,61,000



**Working:**

(i) Machinery sold on Oct. 1st, 2006

Cost on April, 2004

60,000

Less: Dep. for 2004-05

6,000

54,000

Less: Dep. for 2005-06

5,400

48,600

Less: Dep. for 06-07 for 6 months

2,430

46,170

Less: Sale

(40,000)

Loss

6,170

(ii) Additional Depreciation

Cost of Machinery on April 1st, 2004

$$4,86,000 \times \frac{10}{9} \times \frac{10}{9}$$

₹ 6,00,000

Less: Book Value of Machinery

Sold on October 1 2006

₹ 60,000

Book value on April 1st, 2004

₹ 5,40,000

Dep. for 2004-05 & 2005-06 @ 10% p.a. (54,000 + 54,000)

1,08,000

Less: Dep. for 2004-05, 2005-06

Already charged under W.D.V (54,000 + 48,600)

1,02,600

Difference

5,400

## STRAIGHT LINE METHOD

## DIMINISHING BALANCE METHOD

The depreciation amount provided on the asset using Straight Line Method is constant every year throughout the lifetime of the asset.

The depreciation amount provided on the asset is not constant every year but the percent of depreciation is constant.

### Value of Asset

The value of the asset becomes zero or null at the end of the lifetime of the asset.

The value of the asset never become zero at the end of the lifetime of the asset.

### Depreciation Amount

The depreciation amount of the asset stays same for all the years of lifetime of an asset.

The depreciation amount of the asset is higher in the earlier years and become lesser in the later years.



## STRAIGHT LINE METHOD

## DIMINISHING BALANCE METHOD

### Profits Earned

Under Straight Line Method, the profits earned on the asset during the earlier years of the asset is higher because of the less maintenance and repair costs.

Under Diminishing Balance Method, the profits earned on the asset during the earlier is less when compared to later years.

### Overall Charge

In Straight Line Method, the overall charge on the assets go on increasing year by year because of the increasing maintenance and repair costs of the asset as the time passes.

In Diminishing Balance Method, the overall charge remains more or less same because of the decreasing depreciation in the later years and increasing repair costs as years pass.

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*Thank  
You!*