

2. DEPRECIATION ACCOUNTING

1. MEANING:

Arises due to (a) Natural wear and tear (b) Use (c) Consumption (d) Efflux (passage) of time (e) Obsolescence through technology and market changes – due to external causes beyond the asset itself)

Applicability:

Depreciation is calculated on Fixed Assets and NOT on Current assets.

Coverage:

- Depreciation – Tangible Fixed Assets;
- Amortisation – Intangible Fixed Assets like patents.

Nature:

It is an expense & charge against profits; Mandatory to provide depreciation irrespective of profits or losses

Period of depreciation:

Depreciation is computed from the date it is ready for use.

Purpose:

Systematic Allocation of the cost of the fixed asset over its useful life.

Exception:

Land is not subject to depreciation because it has an indefinite Life.

Rate of depreciation:

Schedule II of the Companies Act, 2013 and Accounting Standard deals with rates of depreciation.

2. METHODS OF ACCOUNTING

- **Asset Credit Method** - Depreciation is charged against asset. Fixed asset is directly credited for depreciation.

- **Provisioning Method** – Provision for Depreciation is credited. Provision for depreciation is a liability and is shown as deduction from the respective fixed asset in the Balance Sheet. Asset is shown at original cost.

3. TERMS IN RELATION TO DEPRECIATION

Historical Cost / Original Cost –

Amount actually spent for purchasing the asset + other necessary expenses.

Estimated Net Residual Value –

Expected Sale Value – Expenses for making the sale / disposal /repairs. Otherwise called as Scrap Value.

Depreciable Amount –

[Historical cost – Estimated Net Residual Value (or) Scrap Value]

Written Down Value / Book Value –


[Historical Cost – Depreciation]

Useful Life –

No. of years benefits will be received or no. of production units / hours that can be used.

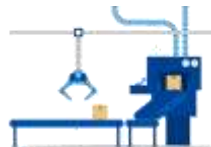
4. METHODS OF DEPRECIATION

<p>Straight Line or Fixed Installment (Eg. Buildings)</p>	<ul style="list-style-type: none"> • Benefits from the asset are uniform – Depreciation amount is uniform every year. • Straight line Depreciation Rate = $\frac{\text{straight line depreciation} \times 100}{\text{cost of asset}}$ • Annual Depreciation = $\frac{\text{cost of asset} - \text{scrap value}}{\text{useful life}}$ • Balance at the end of useful is ZERO (if scrap value is Nil) or Scrap Value • If rate is given, amount of depreciation = Historical Cost × Rate of depreciation • Demerit: Ignores the variations in the asset use.
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 <p>1 Jan 2015</p>	<p>31 Dec 2015</p>	<p>31 Dec 2016</p>
<p>Purchase Price – ₹ 10,000</p> <p>Life - 10 Years</p> <p>Dep Rate – 10%</p>	<p>1st Year Dep. ₹ 1000</p>	<p>WDV ₹ 9000</p> <p>2nd Year Dep. ₹ 1000</p>
<p>STRAIGHT LINE METHOD</p>		

Written Down Value or Reducing Balance (Eg. Machinery)

- Benefits from the asset decrease hence Depreciation also decreases.
- $\text{Diminishing Balance Depreciation Rate} = 1 - n \sqrt[n]{\frac{\text{Residual value}}{\text{cost of asset}}} \times 100$
Where, $n = \text{useful life}$
- $\text{Written Down Value (WDV)} = \text{Cost} - \text{Accumulated Depreciation}$
- $\text{Annual Depreciation} = \text{Written Down Value (WDV)} \times \text{Diminishing Balance Depreciation Rate}$
- Balance at the end of useful life shall NEVER be ZERO.



1 Jan 2015

31 Dec 2015

31 Dec 2016

Purchase Price – ₹ 10,000

Life - 10 Years

Dep Rate – 10%

1st Year Dep. ₹ 1000

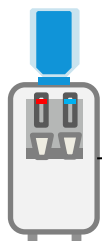
WDV ₹ 9000

2nd Year Dep. ₹ 900

WRITTEN DOWN VALUE

Sum of digits of years

- $\text{Depreciation} = \frac{\text{Remaining life of the asset (including current year)}}{\text{Sum of all the digits of the life of the asset in years}} \times \text{Original Cost}$
- Depreciation amount will decrease every year. Variation from WDV Method.
- Depreciation rate cannot be calculated.



1st Year Dep. 700 x 1 = 700

2nd Year Dep. 700 x 2 = 1400

3rd Year Dep. 700 x 3 = 2100

4th Year Dep. 700 x 4 = 2800

5th Year Dep. 700 x 5 = 3500

Purchase Price – ₹ 10,500

Life - 5 Years

(1+2+3+4+5 = 15)

Dep. – 700

SUM OF DIGITS OF YEARS

Machine Hour Or Service Hours Method

- $\text{Depreciation Rate Per Machine Hour} = \frac{\text{cost of asset} - \text{scrap value}}{\text{Life of the asset in hours}}$
- $\text{Annual Depreciation} = \text{Actual Machine Hours during the accounting year} \times \text{Depreciation Rate per Machine hour}$
- Depreciation amount may increase or decrease (based on use of machine hours)

- The method is particularly suitable for charging depreciation on plant and machinery, aircrafts, etc.



1st Year
15,000 Hour

Purchase Price –
₹ 50,000

1st Year Dep.
₹ 7500

Life in Hour –
1,00,000 Hr

Cost Per Hour - ₹ 50 Paise

MACHINE HOUR RATE

Production
Units

- Depreciation for the period = Depreciable Amount × $\frac{\text{Production during the period}}{\text{Estimated total production}}$
- Depreciation amount may increase or decrease (based on No. of units produced)



1st Year
20,000 Copies

Purchase Price –
₹ 50,000
Copies –
1,00,000

1st Year Dep.
₹ 10,000

During its entire life
0.5 per copy

PRODUCTION UNITS METHOD

Depletion

- Useful for wasting assets Eg. Coal Mines, Oil Wells, Quarries etc.
- Depreciation Rate per unit of output = $\frac{\text{cost of asset} - \text{scrap value}}{\text{Life of the asset in output}}$
- Annual Depreciation =
Actually quantity taken out during the accounting year X Depreciation Rate per unit of output
- Depreciation amount may increase or decrease (based on No. of units extracted)



1st Year
2,000 Tonnes

Purchase Price –
₹ 1,00,000

1st Year Dep.
₹ 8,000

Mine Capacity –
25,000 Tonnes

Cost Per Ton - ₹ 4

DEPLETION METHOD

5. FACTORS OF DEPRECIATION AND CHANGE IN THEM

FACTOR	CHANGE IN FACTOR
Book Value	<ul style="list-style-type: none"> Changes will be given prospective effect; New Amount of depreciation = $[Existing\ Book\ Value \pm Increase / Decrease] - Residual\ Value / Remaining\ useful\ life$
Useful Life	<ul style="list-style-type: none"> Whenever there is a revision in the estimated useful life of the asset, the unamortised depreciable amount should be charged over the revised remaining estimated useful life of the asset. New Amount of Depreciation = $[Existing\ Book\ Value - Residual\ Value] / Remaining\ useful\ life$
Residual Value	<ul style="list-style-type: none"> Changes will be given prospective effect; New Amount of Depreciation = $[Existing\ Book\ Value - Revised\ Residual\ Value] / Remaining\ useful\ life$
Depreciation Method	<ul style="list-style-type: none"> Change in Method of Depreciation can be made for: <ul style="list-style-type: none"> Compliance with Law / Statute / AS For better presentation of financial Statements.

6. REVALUATION OF FIXED ASSETS

- Upward Revaluation:** If the Fixed Asset is revalued and the value is increased, then the profit on such revaluation shall be credited to **REVALUATION RESERVE A/C**.
- Downward Revaluation:** If the Fixed Asset is revalued and the value is decreased, then the loss on such revaluation shall be debited to **PROFIT AND LOSS A/C**.

7. OTHER SIGNIFICANT POINTS

- For assets purchased on installment basis, depreciation is calculated on cash price (and not on installment price).

8. PROFIT OR LOSS ON THE SALE DISPOSAL OF DEPRECIABLE ASSETS

The resulting profit or loss on sale of the asset is ultimately transferred to profit and loss account.

9. WHEN PROVISION FOR DEPRECIATION ACCOUNT IS MAINTAINED**JOURNAL ENTRIES**

No	Particulars	L.F.	(Dr. Rs)	(Cr. Rs.)
1.	<i>For providing Depreciation</i>			
2	<i>For transfer of deprecation to the profit and Loss a/c</i>			
3	<i>On Sale of Asset</i>			
a)	<i>Depreciation up to the date of sale</i>			
b)	<i>Transfer of Cost</i>			
c)	<i>Transfer of Accumulated Depreciation</i>			
d)	<i>Sale Value</i>			
e)	<i>In case of Profit on sale of asset</i>			
f)	<i>In case of Loss on sale of asset</i>			

10. WHEN PROVISION FOR DEPRECIATION ACCOUNT IS NOT MAINTAINED

No	Particulars	L.F.	(Dr. Rs)	(Cr. Rs.)
1.	<i>For providing Depreciation</i>			
2	<i>For transfer of depreciation to the profit and Loss a/c</i>			
3	<i>On Sale of Asset</i>			
4	<i>In case of Profit on sale of asset</i>			
5	<i>In case of Loss on sale of asset</i>			

CLASS WORK

1. The M/s LG Transport purchased 10 trucks at ₹ 45,00,000 each on 1st April 2014. On October 1st, 2016, one of the trucks is involved in an accident and is completely destroyed and ₹ 27,00,000 is received from the insurance in full settlement. On the same date, another truck is purchased by the company for the sum of ₹ 50,00,000. The company write off 20% on the original cost per annum. The company observe the calendar year as its financial year.

You are required to prepare the motor truck account for two year ending 31 Dec, 2017.
(RTP May 2018)

Answer

Motor Truck A/c

Date	Particulars	Amount	Date	Particulars	Amount
2016			2016		
Jan-01	To balance b/d	2,92,50,000	Oct-01	By bank A/c	27,00,000
Oct-01	To Profit & Loss A/c (Profit on settlement of Truck)	4,50,000	Oct-01	By Depreciation on lost assets	6,75,000
Oct-01	To Bank A/c	50,00,000	Dec-31	By Depreciation A/c	83,50,000
			Dec-31	By balance c/d	2,29,75,000
2017		3,47,00,000	2017		3,47,00,000
Jan-01	To balance b/d	2,29,75,000	Dec-31	By Depreciation A/c	91,00,000
			Dec-31	By balance c/d	1,38,75,000
		2,29,75,000			2,29,75,000

Working Note:

1. To find out loss on Profit on settlement of truck

Particulars	₹
Original cost as on 1.4.2014	45,00,000
Less: Depreciation for 2014	6,75,000
	38,25,000
Less: Depreciation for 2015	9,00,000
	29,25,000
Less: Depreciation for 2016 (9 months)	6,75,000
	22,50,000
Less: Amount received from Insurance company	27,00,000
	4,50,000

2. M/s. Green Channel purchased a second-hand machine on 1st January, 2015 for ₹ 1,60,000. Overhauling and erection charges amounted to ₹40,000. Another machine was purchased for ₹ 80,000 on 1st July, 2015.

On 1st July, 2017, the machine installed on 1st January, 2015 was sold for ₹ 1,00,000. Another machine amounted to ₹30,000 was purchased and was installed on 30th September, 2017.

Under the existing practice the company provides depreciation @ 10% p.a. on original cost. However, from the year 2018 it decided to adopt WDV method and to charge depreciation @ 15% p.a. You are required to prepare Machinery account for the years 2015 to 2018. (RTP Nov 2018)

Answer

In the books of M/s. Green Channel Co.
Machinery Account

Date	Particulars	Amount	Date	Particulars	Amount
1.1.15	To Bank A/c	1,60,000	31.12.15	By Depreciation A/c	24,000
1.1.15	To Bank A/c	40,000		(₹ 20,000 + ₹ 4,000)	
	(Erection charges)		31.12.15	By Balance c/d	2,56,000
1.7.15	To Bank A/c	80,000		(₹ 1,80,000 + ₹ 76,000)	
		2,80,000			2,80,000
1.1.16	To Balance b/d	2,56,000	31.12.16	By Depreciation A/c	28,000
				(₹ 20,000 + ₹ 8,000)	
			31.12.16	By Balance c/d	2,28,000
				(₹ 1,60,000 + ₹ 68,000)	
		2,56,000			2,56,000
1.1.17	To Balance b/d	2,28,000	1.7.17	By Bank A/c	1,00,000
30.9.17	To Bank A/c	30,000		By Profit and Loss A/c (Loss on Sale - W.N. 1)	50,000
			31.12.17	By Depreciation A/c	18,750
				(₹ 10,000 + ₹ 8,000 + ₹ 750)	
			31.12.17	By Balance c/d	89,250

				(₹ 60,000 + ₹ 29,250)	
		2,58,000			2,58,000
1.1.18	To Balance b/d	89,250	31.12.18	By Depreciation A/c	13,387.5
				(₹ 9,000 + ₹ 4,387.5)	
			31.12.18	By Balance c/d	75,862.5
				(₹ 51,000 + ₹ 24,862.5)	
		89,250			89,250

Working Notes:

Book Value of machines (Straight line method)

Particulars	Machine	Machine	Machine
	I	II	III
	₹	₹	₹
Cost	2,00,000	80,000	30,000
Depreciation for 2015	20,000	4,000	
Written down value as on 31.12.2015	1,80,000	76,000	
Depreciation for 2016	20,000	8,000	
Written down value as on 31.12.2016	1,60,000	68,000	
Depreciation for 2017	10,000	8,000	750
Written down value as on 31.12.2017	1,50,000	60,000	29,250
Sale proceeds	1,00,000		
Loss on sale	50,000		

3. 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 ₹ 40,000. The remaining useful life was reassessed at 8 year. Calculate Depreciation for the fifth year. (QP Nov 18)

Solution

Calculation of depreciation for 5th year

Depreciation per year charged for four years = ₹ 10,00,000 / 10 = ₹ 1,00,000

(a) WDV of the machine at the end of fourth year = ₹ 10,00,000 - ₹ 1,00,000 × 4 = ₹ 6,00,000.

(b) Depreciable amount after revaluation = ₹ 6,00,000 + ₹ 40,000 = ₹ 6,40,000

- (c) Remaining useful life as per previous estimate = 6 years
- (d) Remaining useful life as per revised estimate = 8 years
- (e) Depreciation for the fifth year and onwards = ₹ 6,40,000 / 8 = ₹ 80,000.