1 STRAIGHT LINE METHOD OF DEPRECIATION

Objectives

At the end of this chapter, students should be able to:

- List the various causes of depreciation;
- Identify the straight line method items;
- Calculate and post provision for depreciation to final solution.

1.1 Introduction

The term .depreciation. simply means the .wear and tear. of an asset. It is the process of assigning the cost of an asset in an orderly and systematic manner over the years it is put into use. The purpose of depreciation is to reduce the value of the assets in the books to the estimated sum the assets may fetch when it is finally disposed off after a period of use and to spread the burden of cost fairly over the life span of asset. The book keeping entry to record depreciation has effect on the profit and loss account and the balance sheet. There are various methods of writing off the depreciable amount of a fixed asset. This chapter deals with straight line method or fixed installment method.

1.2 TERMINOLOGIES

1. Cost of Asset or Original Value

This is the cost price of an asset when it is newly acquired. It is the market value of an asset at the beginning of its life span. When an asset is newly bought, the book value may be equal to the market value e.g. if a company buys a motor 1st January, 2010 at the cost of N150,000.00, this amount will represent the original or market value of the asset as well as the book value as at that date.

2. Residual Value

This is otherwise called SCRAP VALUE or BREAK-OFF VALUE; it may also be called SALVAGE VALUE. It is the estimated amount to be realised by sale of asset when it is retired from use. It is the market or book value of fixed asset at the end of its service.

3. Number of Years or Life Span

This is the length of time an asset is estimated to be in use before it is finally written off. It is the expected number of years an asset remains in service before it is scrapped. Though it may be long, the useful life of a fixed asset is usually limited.

4. Obsolescence This means the process of becoming out of date by means of new inventions.

1.3 Causes of Depreciation

1. Wear and tear: This refers to gradual exhausting of an asset as resulting from use.
2. Physical factors: This refers to natural factors affecting the life span of an asset e.g. Weather and Erosion.
3. Obsolescence: This is a factor affecting the life span of an asset owing to new invention or change of fashion.
4. Change in price: This refers to fall in market prices or exchange rates.

1.4 Items for Straight Line Method

Straight line method may be used for the following items:
1. Fixed assets having high rate of wear and tear as a result of frequent or intensive use include:
a) Office equipments like typewriters, calculating machines, photocopies and duplicating machines.
b) Motor vehicle.

c) Farm engines and machine like lawn mowers, tractors, ploughs and harvesting machines.
d) Electrical appliances like generators, air conditioners, refrigerator and deep freezers.
2. Fixed assets subject to high rate of obsolescence e.g. computers, text books, cars, etc.
3. Fixed asset of perishable nature like wooden furniture glassware, carpets, plastic furniture and bottles, etc.
4. Fixed assets easily affected by weather e.g. Iron sheets, metals, painted walls and structures, etc.
5. Fixed assets easily affected by erosion e.g. arable lands and structures in flood areas.

1.5 Calculation of Depreciation by Straight Line Method

Using this method, an equal proportion of the cost of an asset is allocated to each period of use. Consequently, this method is most appropriate when the usage of an asset is fairly uniform from year to year. The computation of the periodic charge of depreciation is done by deducting the estimated residual or scrap value from the cost, dividing the remaining cost by the years of the estimated useful life. For example if a depreciable asset has a useful life for 4 years, in the annual computation of depreciation expenses will be as follows:

$$\frac{\text{Original Cost - Residual Value}}{\text{Years of Unit Life}} = \frac{\text{N170,000 - N20,00}}{4}$$

$$= \frac{150,000}{4} \qquad \text{N } 37,500$$

i.e	Cost of depreciable asset	=	₦ 170, 000
	Less estimated residual value	=	₦ 20, 000
	Total amount of depreciable cost	=	₦ 150,000
	Estimated useful life	=	4 years
	Depreciation expenses each year (150,000 ÷ 4)	=	₦ 37500

Posting of Depreciation Provision of the Final Account After getting the amount of depreciation provision for each year, the following steps are taken:
Step 1: Journalise the amount of provision for depreciation.
Step 2: Debit depreciation account with the amount of provision for depreciation.
Step 3: Credit the fixed assets concerned with the same amount.
Step 4: Credit depreciation account with the same amount to close it.
Step 5: Debit profit & loss account by transfer of the same account from depreciation account.
Step 6: Show the amount of depreciation provision in the balance sheet as a deduction from the value of asset concerned.

EXAMPLE 1.1
On Jan 1. 2009, Junaid, a trader from Ibadan bought a motor van for 150, 000.00. He estimated that at the end of 3 years its scrap value will be N9,000. Assuming that Junaid closes his books on 31st December every year, show the entries in his books for the depreciation of the asset by the fixed installment method.

SOLUTION

$$\frac{\text{Original Cost} \quad \text{Residual Value}}{\text{Years of Unit Life}} = \frac{150,000 - 9,000}{3}$$

$$= \frac{141,000}{3} = 47,000 \text{ per year}$$

Depreciation provision each year = 47, 000

JOURNAL

2009			₦	₦
Dec. 31	Depreciation A/c	DR	47,000	
	Motor Van			47,000
	Being depreciation written off			
Dec. 31	Profit and Loss A/C	DR	47,000	
	Depreciation A/C			47,000
	Being depreciation for the year transferred			

This journal is applicable to each of the year 2010 and 2011.

GENERAL LEDGER

MOTOR VAN ACCOUNT

2009		₦	2009		₦
Jan. 1	Cash	150,000	Dec. 31	Depreciation	47,000
			Dec. 31	Balance c/d	103,000
		150,000			150,000
2010			**2010**		
Jan. 1	Bal. b/d	103,000	Dec. 31	Depreciation	47,000
			Dec. 31	Bal. c/d	56,000
		103,000			103,000
2011			**2011**		
Jan. 1	Bal. b/d	56,000	Dec. 31	Depreciation	47,000
			Dec.31	Bal. c/d	9,000
		56,000			56,000
2012					
Jan.1.	Bal. b/d	9,000			

DEPRECIATION ACCOUNT

		₦			₦
2009			**2009**		
Dec. 31	Motor Van	47,000	Dec. 31	Profit & Loss A/C	47,000
2010			**2010**		
Dec.31	Motor Van	47,000	Dec. 31	Profit & Loss A/C	47,000
2011			**2011**		
Dec.31	Motor Van	47,000	Dec.31	Profit & Loss A/C	47,000

Profit and Loss Account for the year Ended 31st Dec 2009

Depreciation	
Motor Vans	47,000

The same method of profit and loss account is applicable to 2010 and 2011. The balance sheet will appear as follows.

Balance Sheet as at 31st December, 2009

	₦	₦
Fixed Assets:		
Motor Van	150,000	
Less Depreciation	47,000	103,000

Balance Sheet as at 31st December, 2010

	₦	₦
Fixed Assets:		
Motor Van	150,000	
Less Depreciation	47,000	103,000

Balance Sheet as at 31st December, 2011

	₦	₦
Fixed Assets:		
Motor Van	56,000	
Less Depreciation	47,000	9,000

ACTIVITY

1. List the various items for depreciation.
2. List those items suitable for the straight line method.

1.6 Summary

In this chapter, students have learnt that:
Depreciation is the wear and tear of an asset.
1. The various causes of depreciation are wear and tear, physical factors, obsolescence, change in price, e.t.c.
2. The various items for straight line method are office equipment, motor vehicle, form engines electrical appliances, e.t.c. The value of an asset using the methods of depreciation is known as residual value.
3. Calculation of depreciation by straight line method is the purpose of depreciation. This is to reduce by allocating a fixed peculate of cost to each period of use.

1.7 Revision Questions

1. Depreciation means _____.
A. wear and tear
B. use and save
C. wear and rear
D. tear and wear

2. One of the following is a cause of depreciation.
A. Metal
B. Traffic
C. Weather
D. Market

3. A straight line method provision for depreciation is _____.
A. varied
B. fixed
C. direct

D. regular

4. Another word for residual value is _____.
A. market value
B. scrap value
C. reduced value
D. original value

5. Provision for depreciation is a/an _____.
A. asset
B. profit
C. loss
D. expense

6. State with examples the various causes of depreciation.
7. Why is provision made for depreciation?
8. Explain with the aid of illustration, the meaning of the straight line method of depreciation.
9. State the advantages and disadvantages of the straight line method of depreciation.
10. On 1st January 2009, Sunday Akinleye bought a machine for N2,560,000. The life span of the machine was estimated at five years and the residual value was estimated at N195,000. The machine was depreciated under the straight line method. Show book entries for the five years necessary to record these transactions.
11. A company acquired a machine on the 1st of January, 2009 for N80,000. Its life span was estimated at four years, with a N10,000.00 scrap value. Show the book entries in the company's book with respect to this item.