2 REDUCING BALANCE METHOD OF DEPRECIATION

Objectives

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

- Identify reducing balance method of depreciation in depreciation items;
- Calculate and post provision for depreciation by reducing balance method and post to the ledger and final accounts.

2.1 Introduction

Reducing balance method is another method by which provision is made for depreciation of fixed assets. Other names for this method include diminishing balance method or reducing instalment method or Written down value method.

This is an accelerated depreciation method by which the highest amount of depreciation is provided in early year.

Terminologies

1. **Net Residual Value**: This is the value of asset at the end of the fixed life span otherwise as the scrap value less or minus all charges for its disposal.
2. **Value of Asset**: This is the amount of money an asset is worth at a particular point of time. It may be its original value; this refers to the amount of money an asset is bought initially. It may be its reduced value, that is, the value of an asset after provision for depreciation has been made. It may be its market value, that is, the value of an asset at the current market price.
3. **Rate of Depreciation**: This refers to fixed percentage of which provision for depreciation is made.

2.2 Identifying Reducing Balance Method

By this method a fixed percentage is written off the original value or cost price of the asset in the first year of use. The same percentage is written off the diminishing book value of the asset in each subsequent year. This is fixed until the amount of depreciation charged decreases or falls as the year of use increases. In other words, the amount of depreciation charged in the early years of use is larger in the early years and it is smaller in the later years. In reducing balance method, no consideration is given to scrap value or residual value, that is, scrap value is not provided for and provision for depreciation is calculated on the actual cost price of asset without any deduction for scrap value.

2.3 Calculation of Provision for Depreciation by Reducing Balance Method

By reducing balance method, if machinery is bought on January, depreciation are fixed at 10% for each year for 3 years. The calculation is as follows:

Dec. 31, 2009 provision for depreciation is 10% of 120,000 which is equal to 12,000. Dec 31, 2010 provision for 2009 at N120,000 and the provision for depreciation is 10% of N120, 000 minus N12,000, that is 10% of N108,000 which is equal to N10,800. Dec. 31, 2011provision for depreciation is 10% of N10,800, that is, 10% of N97, 200 which is equal to N9,720.

Posting of Provision for Depreciation by Reducing Balance Method to the Ledger and Final Account

This method is the same as in the case of straight line method, see item 1.4 of chapter 1.

Example 2.1

Machinery bought on January 1, 2009 for N120,000 was depreciated every year at the rate of 10% by the diminishing balance method. Make entries for the first 3 years.

Solution

Machinery Account

		₦			₦
2009			Dec.31	Depreciation	
Jan. 1	Cash	120,000		(10% of 120,000)	12,000
			Dec.31	Bal. C/d	108,000
		120,000			120,000
2010			2010		
Jan. 1	Bal.b/d	108,000	Dec. 31	Depreciation	
				(10% of 108,000)	10,800
			Dec.31		97,200
		108,000			108,000
			2011		
2011			Dec. 31	Depreciation	
Jan.	Bal.b/d	97,200		(10% of 97,200)	9,720
			Dec.31	Bal.c/d	87,480
		97,200			97,200

Depreciation Account

		₦			₦
2009			2009		
Dec 31	Machinery	12,000	Dec 31	Profit & Loss	12,000
2010			2010		
Dec 31	Machinery	10,800	Dec 31	Profit & Loss	10,000
2011			2011		
Dec 31	Machinery	9,720	Dec 31	Profit & Loss	9,720

Profit and Loss Account for the year Ended 31st December, 2009

	₦
Depreciation:	
Machinery	12,000

Profit and Loss Account for the year Ended 31st December, 2010

	₦
Depreciation:	
Machinery	10,000

Profit and Loss Account for the year Ended 31st December, 2011

	₦
Depreciation:	
Machinery	9,720

Balance Sheet as at 31st December 2009

	₦	₦
Fixed Assets:		
Machinery	120, 000	
Less Depreciation	12, 000	108,000

Balance Sheet as at 31st December 2010

	₦	₦
Fixed Assets:		
Machinery	108, 000	
Less Depreciation	10,800	97,200

Balance Sheet as at 31st December 2011

	₦	₦
Fixed Assets:		
Machinery	120,000	
Less Depreciation	9,720	87,480

Activity

Using the imaginary value of N150, 000 for machinery bought on 1st January, 2009 by manufacturer, take necessary decision as to rate of depreciation. Make provision for depreciation and show calculation for 3years by using:

(a) Straight Line Method.
(b) Reducing Balancing Method.

2.4 Summary

In this chapter, students have learnt that:

1. In reducing balance method of depreciation, the highest amount of depreciation is provided in the early years.
2. Provision for depreciation by reducing balance method is calculated on the actual cost price of asset without any deduction for scrap value.
3. Provisions for depreciation by reducing balance method are posted to the ledger and final account.

2.5 Revision Questions

1. In reducing balance method provision for depreciation is a/an _____.
A. fixed amount
B. fixed percentage
C. increasing amount
D. increasing percentage

2. In reducing balance method, provision for depreciation is calculated on _____.
A. originating value of asset
B. market value of asset
C. diminishing value of asset
D. accelerated value of asset

3. Another name for the reducing balance method is _____.
A. fixed installment method
B. fixed balance method
C. written down value method
D. higher installment method

Use the following information to answer questions 4 and 5:
Cost price of asset N150,000 on 1st Jan. 2009. Provision for depreciation for the first year N15,000.

4. Using the reducing balance method, the rate of depreciation is
A. 30 percent

B. 10 percent
C. 15 percent
D. 25 percent

5. Using the reducing balance method, the amount of provision for depreciation in the second year is_____.
A. N20,000
B. N14,000
C. N13,000
D. N15,400

6. State the main features of the reducing balance method of depreciation.
7. Distinguish between the straight line method of depreciation and the reducing balance method.
8. What are the advantages and disadvantages of the reducing balance method?
9. A motor van bought on January, 2009 for N170,000 was depreciated every year at the rate of 10% by diminishing balance method. Make necessary entries for the first four years in the ledger and in the final account.
10. Adamu a businessman in Lagos bought a plant costing N220,000 on 1st January, 2009. He decided to provide for depreciation at the rate of 10% P.A. The scrap value is estimated at N50,000. Show the plant account for 4 using the:
(a) Straight Line method.
(b) Diminishing Balance method.

11. On the 1st of January, 2009, Adewale Thompson, a manufacturer bought machinery at the cost of N220, 000 and was depreciated at the rate of 15% P.A by the reducing balance method. Calculate the provision for depreciation for 3 years. Make necessary entries in ledger and in final account.