**DEPRECIATION**

It is the loss of value of a non-current asset throughout its period of use by the firm. IAS 16 on property, plant and equipment defines depreciation as the allocation of a depreciable amount of a non-current asset over its estimated useful life.

Under the matching concept, all incomes or revenues and expenses for a particular period should be reported in the financial statements and because depreciation is an expense of the business therefore, it will be charged in the P&L A/C.

**Causes of Depreciation**

**1. *Physical Factors***

a) Wear and tear: Some non-current assets depreciate or lose value due to use overtime

e.g. machinery and motor vehicles.

b) Rot/decay/rust:: This happens on assets that are not well maintained by the firm e.g.

Some machines.

**2. *Economic Factors***

a) Inadequacy: Some assets lose value due to them becoming inadequate e.g. when a

business grows or expands then some buildings may become inadequate due to space. Also some machines that are unable to manufacture a large number of goods.

b) Obsolescence: Some assets become obsolete due to change in technology or different

methods of production e.g. computers.

**3. *Time Factors***

Some assets have a legal fixed time e.g. properties on lease.

**4. *Depletion***

This occurs when some assets have a wasting character due to extraction of raw materials, minerals or oil. Such assets include mines, oil wells, and quarries.

**Methods of Calculating Depreciation**

These are the methods developed to assist in estimating the amount of depreciation to be charged in the P&L a/c as an expense.

The methods chosen by a firm should be in accordance with the agreed accounting practice, accounting standards and suit the firm’s non-current assets. There are 2 main methods of estimating depreciation and 5 others that will apply in a firm’s situation.

The main methods are: *Straight-line method* and *Reducing Balance method*. The other 5 methods include:

1. Sum of the digits methods – uses a formular.
2. Revaluation method – applies to a non-current asset of low value.
3. Machine-Hour method – depreciation is based on number of hours a machine is expected to operate (manufacturing process).
4. Unit of output method – depreciation is based on the number of units a machine is expected to produce.
5. Depletion of units – depreciation is based on number of units extracted from the asset.

**Straight-Line Method**

This method ensures that a uniform amount of depreciation is charged in the P&L a/c for a particular asset and is based on the following formular:

Depreciation for year = Cost of asset – Residual Value = £100,000 - £20,000

Estimated useful life 8

= £10,000 per year.

**Cost of Asset – Residual Value**

Estimated useful life of asset.

**Residual Value**

The amount the firm expects to sell the asset after the period of use in the firm, also called Sales Value / Scrap Value.

**Estimated Useful Life**

The period the asset is expected to be used in the firm.

**Example**

A firm buys a machine for £100,000 which it expects to use in the firm for eight years. After the eight years the machine will be sold for £20,000. Under the straight-line method, the depreciation amount will be computed as follows:

This means for this asset £10,000 will be charged in the P&L account as depreciation expense on the machine.

The straight line method assumes that benefits accruing on use of a non-current asset are spread out evenly over the life of the asset e.g. buildings use straight-line method.

Percentage rate based on cost as opposed to number of years can also be used to calculate the depreciation.

**Reducing Balance Method**

The firm determines a fixed percentage rate that is applied on the cost of the asset during the first period of use. The same rate is applied in the subsequent financial periods but the rate is applied on the reduced value of the asset. (Cost of asset – total depreciation provided to date).

This method ensures that higher amount of depreciation are charged in the P&L account in the earlier periods of use and lower amounts in the latter periods of use as shown in the following example:

**Example**

Assume a firm buys machinery for £100,000 and provides depreciation on machines at 20% p.a. on reducing balance method. The depreciation charged to the P&L will be as follows for the next 3 years.

Year 1

£

Cost 100,000

Depreciation 20% of 100,000 (20,000) P&L YR 1

Balance to YR 2 80,000

Year 2

Depreciation 20% of 80,000 80,000

(16,000) P&L YR 2

Balance to YR 3 64,000

Year 3

Depreciation 20 % of 64,000 64,000

(12,800) P&L YR 3

Balance to YR 4 51,200

Reducing balance method (diminishing balance method) assumes that benefits accruing from the use of an asset are higher in the first periods of use and lower in the latter periods e.g.

* Fixtures, furniture and fitting.
* Plant and machinery.
* Motor vehicles.

**ACCOUNTING TREATMENT ON DEPRECIATION**

When non-current assets are depreciated, a new account for each type of asset is opened; this account is called a provision for depreciation whereby the following entries will be made:

Debit – P&L a/c

Credit – Provision for depreciation a/c

With the amount of depreciation charged for the period.

### Example on straight-line method

The entries will be as follows:

Debit – P&L a/c with £10,000

Credit – Provision for depreciation. Machines a/c with £10,000 being depreciation provided for the machine.

The ledger accounts will be as follows:

Machinery Provision for Depreciation Machinery

£ £ £ £

Cashbook 100,000 31/12 Bal c/d 100,000 31/12 Bal c/d 10,000 P&L 10,000

The final accounts extracts will be shown as follows:

**(a) Profit And Loss Account (Extract) for the year ended**

**Expenses** £ £

Depreciation:

Buildings x

Plant and machinery 10,000

Furniture, Fixtures and Fittings x

Motor vehicles x

**(b) Balance sheet (Extract) as at\_\_\_\_\_\_\_\_**

Non Current Assets Cost Total NBV (Net Book Value)

£ Depreciation (£) £

Land x - x

Buildings x (x) x

Plant and Machinery x (x) x

Furniture, Fixtures & fittings x (x) x

Motor vehicles x (x) x

x x x

### Example

A company starts in business on 1 January 2002. You are to write up the motor cars account and the provision for depreciation account for the year ended 31 December 2002 from the information given below. Depreciation is at the rate of 20 per cent per annum. Using the basis of one month’s ownership needs one month’s depreciation.

2002 Bought two motor vans for £12,000 each on 1 January

Bought one motor van for £14,000 on 1 July.

Motorcars a/c

2002 £ 2002 £

1/1 Cashbook 24,000

1/7 Cashbook 14,000 31/12 Bal c/d 38,000

38,000 38,000

### Calculation for depreciation

1/1 24,000 x 20 x 12 = £4,800 + 1/7( 14,000 x 20 x 6 = 1,400 )

100 12 100 12

= £4,800 + 1,400 = £6,200

Provision- Depreciation for Motor cars A/c

2002 £ 2002 £

31/12 Bal c/d 6,200 31/12 P&L 6,200

**Profit And Loss Account (Extract) for the period.**

**Expenses** £ £

Depreciation:

Motor vans 6200

### Balance Sheet (Extract) as at 31/12/2002

**Non-current Assets** Cost Total NBV

Depreciation

Motor vans 38,000 (6200) 31,800

### Example

A company starts in business on 1 January 1999, the financial year end being 31 December.

You are to show:

1. The plant account.
2. The provision for depreciation account.
3. The balance sheet extracts for each of the years 1999, 2000, 2001, 2002.

The machinery bought was:

1999 1 January 1 plant costing £8,000

2000 1 July 2 plant costing £5,000 each

1 October 1 plant costing £6,000

2002 1 April 1 plant costing £2,000

Depreciation is at the rate of 10 per cent per annum, using the straight-line method, plant being depreciated for each proportion of a year.

Plant a/c

1999 £ 199 £

1/1 Cashbook 8000 31/12 Bal c/d 8000

2000 2000

1/1 Bal b/d 8000

1/7 Cashbook 10,000

1/10 Cashbook 6,000 31/12 Bal c/d 24,000

24,000 24,000

2001 2001

1/1 Bal b/d 24,000 31/12 Bal c/d 24,000

2002 2002

1/1 Bal b/d 24,000

1/4 Cashbook 2,000 31/12 Bal c/d 26,000

26,000 26,000

### Calculation for Depreciation

1999 £ Accumulated Depreciation

£8,000 x 10/100 x 12/12 = 800 800

2000

£10,000 x 10/100 x 6/12 = 500

£6,000 x 10/100 x 3/12 = 150

£8,000 x 10/100 x 12/12 = 800

1,450 2,250

2001

£24,000 x 10/100 x 12/12 = 2400 4,650

2002

£24,000 x 10/100 x 12/12 = 2400

£2,000 x 10/100 x 9/12 = 150

2,250 7,200

Provision – Depreciation Machines

1999 £ 1999 £

31/12 Bal c/d 800 31/12 P&L 800

2000 £ 2000 £

1/1 Bal b/d 800

31/12 Bal c/d 2,250 P&L 1,450

2,250 2,250

2001 £ 2001 £

1/1 Bal b/d 2,250

31/12 Bal c/d 4,650 P&L 2,400

4650 4650

2002 £ 2002 £

1/1 Bal b/d 4,650

31/12 Bal c/d 7,200 P&L 2,550

7,200 7,200

### Balance Sheet (Extract) as at 31/12/99 – 31/12/02

Non Current Assets Cost Total NBV

Depreciation

1999

Motor vans 8,000 (800) 7,200

1999

Motor vans 24,000 (2,250) 21,750

1999

Motor vans 24,000 (4,650) 19,350

1999

Motor vans 26,000 (7,200) 18,800