**Depreciation of Fixed Assets**

***What is depreciation?***

Depreciation of a fixed asset is the measure of the loss in value of that asset over its useful economic life. The main causes of depreciation can be summarized as:

Natural Usage – also known as wear and tear

Obsolescence – items being replaced for newer models

Passage of time – an asset getting older

***Why do businesses depreciate fixed assets?***

If depreciation is not charged, profits will be overstated and the balance sheet will not show the true value of the assets.

***How is depreciation estimated?***

The annual depreciation charge takes four factors into account.

* The cost of the asset
* The estimated economic life of the asset
* The estimated scrap value of the asset
* The selection of an appropriate method of depreciation

There are two main methods of calculating depreciation

* Straight line: this method reduces the value of the asset by the same amount each year. It allocates the depreciation cost equally to each year over the estimated useful economic life of the asset. This means that the charge to the profit and loss account will be the same each year.
* Reducing balance: This method reduces the value of the asset by a smaller amount each year. The amount of depreciation decreases as the value of the asset drops.

The purchase of a fixed asset is classified as a capital expense, it cannot be entered as an expense in the profit and loss account all in one year. This is because the benefit of the asset is expected to last in the business for more than one financial year. The depreciation cost is treated as an expense in the business profit and loss account with the net book value shown in the business’s balance sheet.

Each of the above methods of depreciation is what is known as an accounting base. The one chosen by the business is said to be the business’s accounting policy on depreciation.

**Example**

Company A purchased a delivery van for €25000 and its depreciation policy is to charge depreciation at the rate of 10% per annum using the straight line method.

Company B purchases a delivery van for €25000 and its depreciation policy is to charge depreciation at the rate of 10% per annum using the reducing balance method.

Calculate the depreciation charged by each company for the four years of the delivery van’s life, showing the net book value of the van at the end of year four in each case

|  |  |  |
| --- | --- | --- |
|  | Company A | Company B |
| Year 1 |  |  |
| Year 2 |  |  |
| Year 3 |  |  |
| Year 4 |  |  |
| Total Depreciation Charged |  |  |
| Net Book Value Year 4 |  |  |

**What is scrap value?**

Sometimes at the end of its useful economic life, an asset may have what is known as a residual value or scrap value. If this is the case then depreciation only takes place from the cost price down to this residual value.

**Example**

Darby Ltd purchased a new piece of machinery costing €12000 which has a useful economic life of five years, after which time it will be valued at €2000.

This means the asset will drop in value by €10000 over its useful economic life and not the full €12000

Depreciation will therefore be:

Cost – Scrap Value =

Note: The maximum amount that an asset can be depreciated by its cost price.

**The Accounts**

The Accounts and statements affected by depreciation are:

* The asset account
* The provision for depreciation account
* The disposal account
* The profit and loss extract
* The balance sheet extract

The Accounts will look as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Dr** |  | **Asset Account** | |  | **CR** |
| Date | Details |  | Date | Details |  |
| 1/1/ | Balance b/d | Xx | X/X/X | Disposal | xxx |
| XX/X/XX | New Assets | xx | 31/12 | Closing balance Y1 | Xx |
|  |  |  |  |  |  |
| 01/01 | Balance | Xx |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Dr** | **Provision for Depreciation Account** | | | | **CR** |
| Date | Details |  | Date | Details |  |
| X/X/XX | Total dep on asset sold | xxx | 1/1/ | Balance | xx |
| 31/12 | Balance c/d | xx | 31/12 | Depreciation charge | Xx |
|  |  |  |  |  |  |
|  |  |  | Year 2  1/1 | Balance b/d | xx |

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| --- | --- | --- | --- | --- | --- |
| **Dr** |  | **Disposal Account** | |  | **Cr** |
|  | Cost price of asset sold | xxx |  | Depreciation to date on the asset sold | Xx |
|  |  |  |  | All proceeds from sale | xx |
|  | Profit if any | xx |  | Loss if any | xx |
|  |  | xx |  |  | xx |

**Profit and Loss Account (extract)**

|  |  |
| --- | --- |
|  |  |
| **Expenses** |  |
| Depreciation of assets | xxx |

**Balance Sheet (extract)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Cost | Depreciation | Net Book Value |
| Fixed Assets |  |  |  |
| Assets | xx | xx | xx |

**Double-entry Rules**

|  |  |
| --- | --- |
| 1. **Assets Purchased** | |
| Debit Fixed asset a/c | **With Cost** |
| Credit Bank a/c |
| 1. **Annual Depreciation Charge** | |
| Debit Profit and loss a/c | **With annual charge** |
| Credit Provision for deprecia­­tion a/c |
| 1. **Assets Sold or Traded In** | |
| Debit Disposal A/C | **With the cost of the asset** |
| Credit Fixed Asset A/C |
|  |  |
| Debit Provision for Depreciation A/C | **With the total amount of depreciation to date** |
| Credit Disposal A/C |
|  |  |
| Debit Bank A/C | **With the proceeds/allowance of the sale** |
| Credit Disposal Account |
|  |  |
| Debit/Credit Profit and loss Account | **Profit/Loss on disposal** |
| Debit/Credit Disposal Account |
|  |  |
| 1. **Receipt of Insurance Compensation for Damaged Assets** | |
| Debit Bank Account | **Amount of compensation** |
| Credit Disposal A/C |

**Note:**

The disposal account is opened to establish whether a profit or loss has been made on the disposal of the asset.

If the credit side is greater than the debit side, then a profit on disposal has been made – essentially the asset has been over-depreciated in the books.

If the debit side is greater than the debit side, then a loss has been made on the disposal – essentially the asset has been under-depreciated in the books.

There is never a balance b/d on the disposal account. The balancing figure is the profit or loss figure which is charged to the profit and loss account appropriately.

The following figures need to be calculated for the final accounts:

* Cost of the asset - BS
* Depreciation charge for the year - P+L & BS
* Accumulated depreciation - BS
* Net Book Value - BS
* Profit/Loss on disposal – P+L & BS

**Question Technique**

Read the question and note:

* Method of depreciation
* Dates vehicles were acquired. Include fractions and label as 1/2/3/4/5.
* Note any extra items added to vehicles
* Note years accounts are prepared for

Begin workings

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| --- | --- | --- | --- | --- | --- | --- |
| No | Cost | Annual Dep | Dep to 1/1/04 | Dep for 04 | Dep for 05 | Disposal Account |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |

**Solution**

**Step 1**

Construct a table for calculations. Years across the top with vehicle numbers down the side.

**Step 2**

Place a line in the box where the asset did not exist in the business. Place a fraction in each box to indicate the number of months the vehicle was owned in an incomplete year.

**Step 3**

Fill in the depreciation boxes.

**Step 4**

Draw up the accounts using the figures from the table you’ve constructed

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| --- | --- | --- | --- | --- | --- |
| **Motor Vehicles Account** | | | | | |
| Date | Details |  | Date | Details |  |
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| **Provision for Depreciation Account** | | | | | | | |
| **Dr** |  |  |  | |  | **Cr** | |
| **Date** | **Details** | € | **Date** | **Details** | | | € |
| 2004 |  |  |  |  | | |  |
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| Dr | **Disposal of Vehicles Account** | | | | Cr |
| Date | Details | € | Date | Details | € |
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**Profit and Loss Account (extract)**

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| --- | --- |
| **Profit and Loss Account for Year Ended 31/12/08** | |
| **Less Expenses** |  |
| Depreciation of Delivery vans |  |
| Loss on sale of vans |  |
|  |  |
| **Add Income** |  |
| Profit on sale of van |  |

**Balance Sheet (extract)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Balance Sheet as on xx/xx/xxxx** | | | |
| **Tangible Fixed Assets** | **Cost** | **Acc. Depreciation** | **NBV** |
| Delivery Vans |  |  |  |
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