

IAS 16

Objective of IAS 16

The objective of IAS 16 is to prescribe the accounting treatment for property, plant, and equipment. The principal issues are the recognition of assets, the determination of their carrying amounts, and the depreciation charges and impairment losses to be recognised in relation to them.

Scope

IAS 16 does not apply to

- assets classified as held for sale in accordance with IFRS 5
- exploration and evaluation assets (IFRS 6)
- biological assets related to agricultural activity (see IAS 41) or
- mineral rights and mineral reserves such as oil, natural gas and similar non-regenerative resources

What are Property, Plant and Equipment

Property, plant and equipment are tangible items that:

- Are held by an entity for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- Are expected to be used during more than one period.

Recognition

Property, plant and equipment are recognised when the *Framework* recognition criteria are met:

- It is **probable** that future economic benefits that are attributable to the asset will flow to the entity; and
- The cost of the asset can be **reliably measured**.

Measurement at recognition

All items of property, plant and equipment are recognised at *cost*.

Cost includes:

- **Purchase price**, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates
- **Directly attributable costs** of bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management, e.g.

(a) Employee benefit costs	(b) Cost of site preparation
(c) Initial delivery and handling costs	(d) Installation and assembly costs
(e) Costs of testing whether the asset is functioning properly	(f) Professional fees.
- **Estimated cost of dismantling and removing the item** and restoring the site on which it is located due to obligation (IAS 37) incurred when the item is acquired or through use (other than to produce inventories).

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- **Finance costs**

The capitalisation of finance costs is required for 'qualifying assets', i.e. those which necessarily take a substantial period of time to be ready for their intended use or sale under IAS 23 *Borrowing Costs*.

Subsequent costs

Subsequent costs on property, plant and equipment are capitalised when the cost of replacement is incurred providing the recognition criteria are met.

e.g.

- Furnace relining
- Replacement of aircraft interiors.

Measurement after recognition

Cost model

Property, plant and equipment is carried at cost less accumulated depreciation and impairment losses.

Revaluation model

Property, plant and equipment is carried at a **revalued amount**.

Revalued amount = fair value at date of revaluation less subsequent accumulated depreciation and impairment losses.

Fair value

Fair value of land and buildings is usually determined from market-based evidence by appraisal by professionally qualified valuers. Fair value of plant and equipment is usually their market value determined by appraisal. Where there is no market-based evidence of fair value because of the item's specialized nature (and such items are rarely sold) it is valued using an income or depreciated replacement cost approach.

Where an item of property, plant and equipment is revalued, **all other assets in the same class** should also be revalued.

Frequency

Revaluations should be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the balance sheet date.

The fundamental objective of depreciation

Following the matching concept, to reflect in operating profit the cost of use of tangible non-current assets (the amount of economic benefits consumed).

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The extent to which land and buildings should be depreciated;

It is not normally necessary to depreciate land, unless it is subject to depletion in some way – a quarry for example. Buildings should be depreciated like any other non-current asset so as to allocate their depreciable amount (cost or valuation) over their useful economic life.

Two possible methods of calculating depreciation, with explanations.

Straight line. The depreciable amount of an asset, less any residual value, is written off in equal instalments over its estimated useful economic life.

Reducing balance. Depreciation is calculated as a percentage of the net book value of the asset at the end of each period.

QUESTION FFQA1

A company's income statement for the year ended 31 December 2005 showed a net profit of \$83,600. It was later found that \$18,000 paid for the purchase of a motor van had been debited to the motor expenses account. It is the company's policy to depreciate motor vans at 25 per cent per year on the straight line basis, with a full year's charge in the year of acquisition.

What would the net profit be after adjusting for this error?

- A \$106,100 B \$70,100 C \$97,100 D \$101,600

QUESTION FFQA2

At 31 December 2004 Q, a limited liability company, owned a building that cost \$800,000 on 1 January 1995. It was being depreciated at two per cent per year.

On 1 January 2005 a revaluation to \$1,000,000 was recognised. At this date the building had a remaining useful life of 40 years.

What is the depreciation charge for the year ended 31 December 2005 and the revaluation reserve balance as at 1 January 2005?

Depreciation charge for year ended 31 December 2005	Revaluation reserve as at 1 January 2005
A 25,000	200,000
B 25,000	360,000
C 20,000	200,000
D 20,000	360,000

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QUESTION FFQA3

The plant and machinery account (at cost) of a business for the year ended 31 December 2005 was as follows:

Plant and machinery – cost			
2005		2005	
	\$		\$
1 Jan Balance	240,000	31 March Transfer disposal account	60,000
30 June Cash – purchase of plant	160,000	31 Dec Balance	340,000
	<u>400,000</u>		<u>400,000</u>

The company's policy is to charge depreciation at 20% per year on the straight line basis, with proportionate depreciation in the years of purchase and disposal.

What should be the depreciation charge for the year ended 31 December 2005?

- A \$68,000 B \$64,000 C \$61,000 D \$55,000

QUESTION FFQA4

What is the correct double entry to record the depreciation charge for a period?

- A DR Depreciation expense
CR Accumulated depreciation
B DR Accumulated depreciation
CR Depreciation expense

QUESTION FFQA5

Beta purchased some plant and equipment on 1 July 2001 for \$40,000. The estimated scrap value of the plant in ten years. time is estimated to be \$4,000. Beta.s policy is to charge depreciation on the straight line basis, with a proportionate charge in the period of acquisition.

What should the depreciation charge for the plant be in Beta.s accounting period of twelve months to 30 September 2001?

- A \$720 B \$600 C \$900 D \$675

QUESTION FFQA6

At 30 September 2000, the following balances existed in the records of Lambda:

Plant and equipment: Cost 860,000

Accumulated depreciation 397,000

During the year ended 30 September 2001, plant with a written down value of \$37,000 was sold for \$49,000. The plant had originally cost \$80,000. Plant purchased during the year cost \$180,000. It is the company.s policy to charge a full year.s depreciation in the year of acquisition of an asset and none in the year of sale, using a rate of 10% on the straight line basis.

What net amount should appear in Lambda.s balance sheet at 30 September 2001 for plant and equipment?

- A \$563,000 B \$467,000 C \$510,000 D \$606,000

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QUESTION FFQA7

A company's plant and machinery ledger account for the year ended 30 September 2002 was as follows:

Plant and machinery – cost			
2001	\$	2002	\$
1 October Balance	381,200	1 June Disposal account – cost of asset sold	36,000
1 December Cash – addition	18,000	30 September Balance	363,200
	<u>399,200</u>		<u>399,200</u>

The company's policy is to charge depreciation at 20% per year on the straight line basis, with proportionate depreciation in years of purchase and sale.

What is the depreciation charge for the year ended 30 September 2002?

A \$74,440 B \$84,040 C \$72,640 D \$76,840

QUESTION FFQA8

The accounting records of Riffon, a limited liability company included the following balances at 30 June 2002:

Office buildings – cost 1,600,000
 Office buildings – accumulated depreciation
 Office buildings – (10 years at 2% per year) 1,320,000
 Plant and machinery – cost (all purchased in 2000 or later) 1,840,000
 Plant and machinery – accumulated depreciation
 Plant and machinery – (straight line basis at 25% per year) 1,306,000

During the year ended 30 June 2003 the following events occurred:
 2002

1 July It was decided to revalue the office building to \$2,000,000, with no change to the estimate of its remaining useful life.

1 October New plant costing \$200,000 was purchased.

2003

1 April Plant which had cost \$240,000 and with accumulated depreciation at 30 June 2002 of \$180,000 was sold for \$70,000.

It is the company's policy to charge a full year's depreciation on plant in the year of acquisition and none in the year of sale.

Required: Prepare the following ledger accounts to record the above balances and events:

**(a) Office building: cost/valuation,
 accumulated depreciation and
 revaluation reserve.**

**(b) Plant and machinery: cost,
 accumulated depreciation**

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QUESTION FFQA9

At 31 December 2003 Q, a limited liability company, owned a building that had cost \$800,000 on 1 January 1994. It was being depreciated at two per cent per year.

On 31 December 2003 a revaluation to \$1,000,000 was recognised. At this date the building had a remaining useful life of 40 years.

Which of the following pairs of figures correctly reflects the effects of the revaluation?

Depreciation charge for year ended 31 December 2004	Revaluation reserve as at 31 December 2003
A 25,000	200,000
B 25,000	360,000
C 20,000	200,000
D 20,000	360,000

QUESTION FFQA10

Xavier purchased a piece of production equipment on 1 July 20X5 incurring the following costs:

List price of machine	8,550
Trade discount	(855)
Delivery costs	105
Set-up costs incurred internally	356

Notes

(1) The machine was expected to have a useful life of 12 years and a residual value of \$2,000.

(2) Xavier's accounting policy is to charge a full year's depreciation in the year of purchase and no depreciation in the year of retirement or sale.

(3) Xavier has a policy of keeping all equipment at revalued amounts. No revaluations had been necessary until 30 September 20X8 when one of the major suppliers of such machines went bankrupt causing a rise in prices. A specific market value for Xavier's machine was not available, but an equivalent machine would now cost \$15,200 (including relevant disbursements). Xavier treats revaluation surpluses as being realised through use of the asset and transfers them to retained earnings over the life of the asset. The remaining useful life and residual value of the machine remained the same.

(4) Xavier's year end is 30 September.

Required

Show the accounting effect of the above transaction at 30 September 20X5, 20X8 and 20X9.

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