

ACCOUNTING STANDARD - 10

2.6 Property, Plant & Equipment

Property, Plant and Equipment

1. Property, plant and equipment are tangible items that:

- (a) are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- (b) are expected to be used during more than a period of twelve months.

** Bearer plant is a plant that

- (a) is used in the production or supply of agricultural produce;
- (b) is expected to bear produce for more than a period of twelve months; and
- (c) has a remote likelihood of being sold as agricultural produce, except for incidental scrap sales.

** Biological Asset is a living animal or plant.

** Agricultural Produce is the harvested product of biological assets of the enterprise.

2. The cost of an item of property, plant and equipment should be recognized as an asset if, and only if:

- (a) it is probable that future economic benefits associated with the item will flow to the enterprise; and
- (b) the cost of the item can be measured reliably.

3. Items such as spare parts, stand-by equipment and servicing equipment are recognized in accordance with this Standard when they meet the definition of property, plant and equipment. Otherwise, such items are classified as inventory.

4. This Standard does not prescribe the unit of measure for recognition, i.e., what constitutes an item of property, plant and equipment. Thus, judgment is required in applying the recognition criteria to specific circumstances of an enterprise. An example of a 'unit of measure' can be a 'project' of construction of a manufacturing plant rather than individual assets comprising the project in appropriate cases for the purpose of capitalization of expenditure incurred during construction period. Similarly, it may be appropriate to aggregate individually insignificant items, such as moulds, tools and dies and to apply the criteria to the aggregate value. An enterprise may decide to expense an item which could otherwise have been included as property, plant and equipment, because the amount of the expenditure is not material.

5. An enterprise evaluates under this recognition principle all its costs on property, plant and equipment at the time they are incurred. These costs include costs incurred:

- (a) initially to acquire or construct an item of property, plant and equipment; and
- (b) subsequently to add to, replace part of, or service it.

Initial Costs

The acquisition of property, plant and equipment which does not, directly increases the future economic benefits but may be necessary for an enterprise to obtain the future economic benefits from its other assets. Such items of property, plant and equipment qualify for recognition as assets because they enable an enterprise to derive future economic benefits from related assets in excess of what could be derived had those items not been acquired. For example, a chemical manufacturer may install new chemical handling processes to comply with environmental requirements for the production and storage of dangerous chemicals; related plant enhancements are recognized as an asset because without them the enterprise is unable to manufacture and sell chemicals.

Subsequent Costs**Repairs and Maintenance**

An enterprise does not recognize in the carrying amount of an item of property, plant and equipment the costs of the day-to-day servicing of the item. Rather, these costs are recognized in the statement of profit and loss as incurred. Costs of day-to-day servicing are primarily the costs of labor and consumables, and may include the cost of small parts. The purpose of such expenditures is often described as for the 'repairs and maintenance' of the item of property, plant and equipment.

Replacements

Parts of some items of property, plant and equipment may require replacement at regular intervals. For example, an aircraft interiors such as seats and galleys may require replacement several times during the life of the aircraft. An enterprise recognizes in the carrying amount of an item of property, plant and equipment the cost of replacing part of such an item when that cost is incurred if the recognition criteria are met. The carrying amount of those parts that are replaced is derecognized.

Inspection

A condition of continuing to operate an item of property, plant and equipment (for example, an aircraft) may be performing regular major inspections for faults regardless of whether parts of the item are replaced. When each major inspection is performed, its cost is recognized in the carrying amount of the item of property, plant and equipment as a replacement if the recognition criteria are satisfied. Any remaining carrying amount of the cost of the previous inspection is derecognized.

Measurement at Recognition**6. An item of property, plant and equipment that qualifies for recognition as an asset should be measured at its cost.**

The cost of an item of property, plant and equipment comprises:

- (a) its purchase price, including import duties and non –refundable purchase taxes,, after deducting trade discounts and rebates.
- (b) any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.
- (c) the initial estimate of the costs of dismantling, removing the item and restoring the site on which it is located, referred to as 'decommissioning, restoration and similar liabilities', the obligation for which an enterprise incurs either when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period.

The amount recognized as provision should be the best estimates of the expenditure required to settle the present obligation at the balance sheet date. The discount rate should be a pre-tax rate that reflects current market assessment of the time value of money and the risks specific to the liability.

7. Recognition of costs in the carrying amount of an item of property, plant and equipment ceases when the item is in the location and condition necessary for it to be capable of operating in the manner intended by management. Therefore the following costs are not included in the carrying amount of an item of property, plant and equipment:

- (a) costs incurred while an item capable of operating in the manner intended by management has yet to be brought into use or is operated at less than full capacity;
- (b) initial operating losses, such as those incurred while demand for the output of an item builds up; and
- (c) costs of relocating or reorganizing part or all of the operations of an enterprise.

8. Some operations occur in connection with the construction or development of an item of property, plant and equipment, but are not necessary to bring the item to the location and condition necessary for it to be capable of operating in the manner intended by management. These incidental operations may occur before or during the construction or development activities. For example, income may be earned through using a building site as a car park until construction starts. Because incidental operations are not necessary to bring an item to the location and condition necessary for it to be capable of operating in the manner intended by management, the income and related expenses of incidental operations are recognized in the statement of profit and loss and included in their respective classifications of income and expense.
9. The cost of a self-constructed asset is determined using the same principles as for an acquired asset. If an enterprise makes similar assets for sale in the normal course of business, the cost of the asset is usually the same as the cost of constructing an asset for sale (see AS 2). Therefore, any internal profits are eliminated in arriving at such costs. Similarly, the cost of abnormal amounts of wasted material, labor, or other resources incurred in self-constructing an asset is not included in the cost of the asset. AS 16, Borrowing Costs, establishes criteria for the recognition of interest as a component of the carrying amount of a self-constructed item of property, plant and equipment.
10. Bearer plants are accounted for in the same way as self-constructed items of property, plant and equipment before they are in the location and condition necessary to be capable of operating in the manner intended by management. Consequently, references to 'construction' in this Standard should be read as covering activities that are necessary to cultivate the bearer plants before they are in the location and condition necessary to be capable of operating in the manner intended by management.

Measurement of Cost

11. The cost of an item of property, plant and equipment is the cash price equivalent at the recognition date. If payment is deferred beyond normal credit terms, the difference between the cash price equivalent and the total payment is recognized as interest over the period of credit unless such interest is capitalized in accordance with AS 16.
12. The cost of an item acquired in exchange of another asset of property, plant and equipment is measured at fair value. If the acquired item(s) is/are not measured at fair value, its /their cost is measured at the carrying amount of the asset(s) given up.
13. Where several items of property, plant and equipment are purchased for a consolidated price, the consideration is apportioned to the various items on the basis of their respective fair values at the date of acquisition. In case the fair values of the items acquired cannot be measured reliably, these values are estimated on a fair basis as determined by competent valuer.

Measurement after Recognition

14. An enterprise should choose either the cost model or the revaluation model as its accounting policy and should apply that policy to an entire class of property, plant and equipment.

Cost Model

15. After recognition as an asset, an item of property, plant and equipment should be carried at its cost less any accumulated depreciation and any accumulated impairment losses.

Revaluation Model

16. After recognition as an asset, an item of property, plant and equipment whose fair value can be measured reliably should be carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. 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.

- 17.** The fair value of items of property, plant and equipment is usually determined from market-based evidence by appraisal that is normally undertaken by professionally qualified valuers. If there is no market-based evidence of fair value, an enterprise may need to estimate fair value using an income approach (for example, based on discounted cash flow projections) or a depreciated replacement cost approach.
- 18.** The frequency of revaluations depends upon the changes in fair values of the items of property, plant and equipment being revalued. Some items of property, plant and equipment experience significant and volatile changes in fair value, thus necessitating annual revaluation. Such frequent revaluations are unnecessary for items of property, plant and equipment with only insignificant changes in fair value. Instead, it may be necessary to revalue the item only every three or five years.
- 19.** When an item of property, plant and equipment is revalued, the carrying amount of that asset is adjusted to their valued amount. At the date of the revaluation, the asset is treated in one of the following ways:
- (a) the gross carrying amount is restated proportionately to the change in the carrying amount. The accumulated depreciation at the date of the revaluation is adjusted to equal the difference between the gross carrying amount and the carrying amount of the asset after taking into account accumulated impairment losses; or
 - (b) the accumulated depreciation is eliminated against the gross carrying amount of the asset.
- 20.** If an item of property, plant and equipment is revalued, the entire class of property, plant and equipment to which that asset belongs should be revalued.

A class of property, plant and equipment is a grouping of assets of a similar nature and use in operations of an enterprise. The following are examples of separate classes:

- (a) land;
 - (b) land and buildings;
 - (c) machinery;
 - (d) ships;
 - (e) aircraft;
 - (f) motor vehicles;
 - (g) furniture and fixtures;
 - (h) office equipment; and
 - (i) bearer plants.
- 21.** An increase in the carrying amount of an asset arising on revaluation should be credited directly to owners' interests under the heading of revaluation surplus. However, the increase should be recognized in the statement of profit and loss to the extent that it reverses a revaluation decrease of the same asset previously recognized in the statement of profit and loss.
- 22.** A decrease in the carrying amount of an asset arising on revaluation should be charged to the statement of profit and loss. However, the decrease should be debited directly to owners' interests under the heading of revaluation surplus to the extent of any credit balance existing in the revaluation surplus in respect of that asset.
- 23.** The revaluation surplus included in owners' interests in respect of an item of property, plant and equipment may be transferred to the revenue reserves when the asset is derecognized. This may involve transferring the whole of the surplus when the asset is retired or disposed of. However, some of the surplus may be transferred as the asset is used by an enterprise. In such a case, the amount of the surplus transferred would be the difference between depreciation based on the revalued carrying amount of the asset and depreciation based on its original cost. Transfers from revaluation surplus to the revenue reserves are not made through the statement of profit and loss.

Depreciation

- 24.** Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item should be depreciated separately.
- 25.** An enterprise allocates the amount initially recognized in respect of an item of property, plant and equipment to its significant parts and depreciates each such part separately. For example, it may be appropriate to depreciate separately the airframe and engines of an aircraft, whether owned or subject to a finance lease. This is popularly called component accounting.

A significant part of an item of property, plant and equipment may have a useful life and a depreciation method that are the same as the useful life and the depreciation method of another significant part of that same item. Such parts may be grouped in determining the depreciation charge.

The remainder consists of the parts of the item that are individually not significant. If an enterprise has varying expectations for these parts, approximation techniques may be necessary to depreciate the remainder in a manner that faithfully represents the consumption pattern and/or useful life of its parts.

- 26.** The depreciation charge for each period should be recognized in the statement of profit and loss unless it is included in the carrying amount of another asset.

Depreciable Amount and Depreciation Period

- 27.** The depreciable amount of an asset should be allocated on a systematic basis over its useful life.
- 28.** The residual value and the useful life of an asset should be reviewed at least at each financial year-end and, if expectations differ from previous estimates, the change(s) should be accounted for as a change in an accounting estimate in accordance with AS 5, Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies.
- 29.** Depreciation is recognized even if the fair value of the asset exceeds its carrying amount, as long as the asset's residual value does not exceed its carrying amount. Repair and maintenance of an asset do not negate the need to depreciate it. The depreciable amount of an asset is determined after deducting its residual value. The residual value of an asset may increase to an amount equal to or greater than its carrying amount. If it does, depreciation charge of the asset is zero unless and until its residual value subsequently decreases to an amount below its carrying amount.
- 30.** Depreciation of an asset begins when it is available for use, i.e., when it is in the location and condition necessary for it to be capable of operating in the manner intended by management. Depreciation of an asset ceases at the earlier of the date that the asset is retired from active use and is held for disposal and the date that the asset is derecognized. Therefore, depreciation does not cease when the asset becomes idle or is retired from active use (but not held for disposal) unless the asset is fully depreciated. However, under usage methods of depreciation, the depreciation charge can be zero while there is no production.
- 31.** All the following factors are considered in determining the useful life of an asset:
- (a) expected usage of the asset.
 - (b) expected physical wear and tear,
 - (c) technical or commercial obsolescence,
 - (d) legal or similar limits on the use of the asset, such as the expiry dates of related leases.

- 32.** The useful life of an asset is defined in terms of its expected utility to the enterprise. The asset management policy of the enterprise may involve the disposal of assets after a specified time or after consumption of a specified proportion of the future economic benefits embodied in the asset. Therefore, the useful life of an asset may be shorter than its economic life. The estimation of the useful life of the asset is a matter of judgment based on the experience of the enterprise with similar assets.
- 33.** Land and buildings are separable assets and are accounted for separately, even when they are acquired together. With some exceptions, such as quarries and sites used for landfill, land has an unlimited useful life and therefore is not depreciated. Buildings have a limited useful life and therefore are depreciable assets. An increase in the value of the land on which a building stands does not affect the determination of the depreciable amount of the building.

If the cost of land includes the costs of site dismantlement, removal and restoration, that portion of the land asset is depreciated over the period of benefits obtained by incurring those costs. In some cases, the land itself may have a limited useful life, in which case it is depreciated in a manner that reflects the benefits to be derived from it.

Depreciation Method

- 34.** The depreciation method used should reflect the pattern in which the future economic benefits of the asset are expected to be consumed by the enterprise.
- 35.** The depreciation method applied to an asset should be reviewed at least at each financial year-end and, if there has been a significant change in the expected pattern of consumption of the future economic benefits embodied in the asset, the method should be changed to reflect the changed pattern. Such a change should be accounted for as a change in an accounting estimate in accordance with AS 5.

Changes in Existing Decommissioning, Restoration and Other Liabilities

- 36.** The cost of property, plant and equipment may undergo changes subsequent to its acquisition or construction on account of changes in liabilities, price adjustments, changes in duties, changes in initial estimates of amounts provided for dismantling, removing, restoration and similar factors and included in the cost of the asset.
- 37. If the related asset is measured using the cost model:**
changes in the liability should be added to, or deducted from, the cost of the related asset in the current period. However the amount deducted from the cost of the asset should not exceed its carrying amount. If a decrease in the liability exceeds the carrying amount of the asset, the excess should be recognized immediately in the statement of profit and loss.
- 38. If the related asset is measured using the revaluation model:**
a decrease in the liability should be credited directly to revaluation surplus and an increase in the liability should be recognized in the statement of profit and loss.
- 39.** The adjusted depreciable amount of the asset is depreciated over its useful life. Therefore, once the related asset has reached the end of its useful life, all subsequent changes in the liability should be recognized in the statement of profit and loss as they occur. This applies under both the cost model and the revaluation model.

Retirements

- 40.** Items of property, plant and equipment retired from active use and held for disposal should be stated at the lower of their carrying amount and net realizable value. Any write-down in this regard should be recognized immediately in the statement of profit and loss.

De recognition**41. The carrying amount of an item of property, plant and equipment should be derecognized**

- (a) on disposal; or
- (b) when no future economic benefits are expected from its use or disposal.

The gain or loss arising from the de recognition of an item of property, plant and equipment should be included in the statement of profit and loss when the item is derecognized. Gains should not be classified as revenue, as defined in AS 9, Revenue Recognition.

Illustrations

Q. 1

A company has purchased plant and machinery in the year 2001-2002 for ₹45 lakhs. A balance of ₹5 lakhs is still payable to the suppliers for the same. The supplier waived off the balance amount during the financial year 2004-2005. The company treated it as income and credited to profit and loss account during 2004-2005.

Whether accounting treatment of the company is correct. If not, state with reasons.

Solution:

As per AS 10 the cost of fixed assets may undergo changes subsequent to its acquisition or construction on account of exchange fluctuation, price adjustments, changes in duties or similar factors. The treatment done by the company is not correct. ₹5 lakhs should be deducted from the cost of fixed assets.

Q. 2

ABC Ltd. gave 50,000 equity shares of ₹10 each (fully paid up) in consideration for supply of certain machinery by X & Co. The shares exchanged for machinery are quoted on Bombay Stock Exchange (BSE) at ₹15 per share, at the time of transaction. In the absence of fair market value of the machinery acquired, how the value of machinery would be recorded in the books of the company?

Solution:

As per AS-10 fixed asset acquired in exchange for shares or other securities should be recorded at its fair market value or the fair market value of the securities issued, whichever is more clearly evident. Since, the market value of the shares exchanged for the asset is more clearly evident, the company should record the value of machinery at ₹7,50,000. (i.e., 50,000 shares x 15 per share being the market price)

Q. 3

Jadu Ltd. purchased certain plant and machinery for ₹40 lakhs. 20% of the cost net of Cenvat credit is the subsidy component to be realized from a State Government for establishing industry in a backward district. Cost ₹40 lakhs include excise ₹5 lakhs against which Cenvat credit can be claimed. Compute depreciable amount.

Solution:

In this case, it is first necessary to determine the historical cost of the plant and machinery. This is shown in the following table.

	₹ in lakhs
Purchase price	40
Less: Specified duty against which CENVAT credit is available	<u>5</u>
Cost of plant & machinery for accounting purposes	35
Less: Subsidy provided by State Government	<u>7</u>
Depreciable Amount	28

Q. 4

On March 01, 2007, X Ltd. purchased ₹5 lakhs worth of land for a factory site. Company demolished an old building on the property and sold the material for ₹10,000. Company incurred additional cost and realized salvaged proceeds during the March 2007 as follows:

Legal fees for purchase contract and recording ownership	₹25,000
Title guarantee insurance	₹10,000
Cost for demolition of building	₹50,000

Compute the balance to be shown in the land account on March 31, 2007 balance sheet.

Solution:

Calculation of the cost for Purchase of Land		
Particulars		₹
Cost of Land		5,00,000
Legal Fees		25,000
Title Insurance		10,000
Cost of Demolition	50,000	
Less: Salvage value of Material	<u>10,000</u>	<u>40,000</u>
Cost of the Asset		5,75,000

Q. 5

Mr. X set up a new factory in the backward area and purchased plant for ₹500 lakhs for the purpose of his business. Purchases were entitled for the CENVAT credit of ₹10 lakhs and also Government agreed to extend the 20% subsidy for backward area development. Determine the depreciable value for the asset.

Solution:

	₹ (in lakhs)	
Particulars		
Cost of the plant	500	
Less: CENVAT	<u>10</u>	490
Less: Subsidy		<u>98</u>
Depreciable Value		392

Q. 6

In the books of Optic Fiber Ltd., plant and machinery stood at ₹6,32,000 on 1.4.2013. However on scrutiny it was found that machinery worth ₹1,20,000 was included in the purchases on 1.6.2013. on 30.6.2013 the company disposed a machine having book value of ₹1,89,000 on 1.4.2013 at ₹1,75,000 in part exchange of a new machine costing ₹2,56,000. The company charges depreciation @ 20% WDV on plant and machinery.

You are required to calculate:

- (i) Depreciation to be charged to P/L
- (ii) Book value of Plant and Machinery A/c as on 31.3.2014
- (iii) Loss on exchange of machinery.

Solution:

(i) Depreciation to be charged in the Profit and Loss Account	
	(₹)
Depreciation on old Machinery	31,600
[20% on ₹6,32,000 for 3 months(1.4.13 to 30.6.13)]	
Add: Depreciation machinery acquired on 1.06.2013	
(₹1,20,000 x 20% x 10/12)	20,000
Depreciation on Machinery after adjustment of Exchange	
[20% of ₹(6,32,000 -1,89,000+2,56,000) for 9 months]	<u>1,04,850</u>
Total Depreciation to be charged in Profit and loss A/c	<u>1,56,450</u>

(ii) Book Value of Plant and Machinery as on 31.03.2014		
	₹	₹
Balance as per books on 01.04.2013		6,32,000
Add: Included in purchases on 01.06.2013	1,20,000	
Add: Purchase on 30.06.2013	<u>2,56,000</u>	<u>3,76,000</u>
		10,08,000
Less: Book value of Machine sold on 30.6.2013		<u>(1,89,000)</u>
		8,19,000
Less: Depreciation on machinery in use (1,56,450 - 9,450)		<u>(1,47,000)</u>
Book Value as on 31.3.2014		<u>6,72,000</u>

(iii) loss on exchange of Machinery	
Book value of machinery as on 1.04.2013	1,89,000
Less: Depreciation for 3 months	<u>9,450</u>
WDV as on 30.6.2013	1,79,550
Less: Exchange value	<u>1,75,000</u>
Loss on exchange of machinery	<u>4,550</u>