

Indian Accounting Standard (Ind AS) 16

Property, Plant and Equipment

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Indian Accounting Standard (Ind AS) 16

Property, Plant and Equipment

*(This Indian Accounting Standard includes paragraphs set in **bold** type and plain type, which have equal authority. Paragraphs in bold type indicate the main principles.)*

Objective

1. The objective of this Standard is to prescribe the accounting treatment for property, plant and equipment so that users of the financial statements can discern information about an entity's investment in its property, plant and equipment and the changes in such investment. The principal issues in accounting for property, plant and equipment are the recognition of the assets, the determination of their carrying amounts and the depreciation charges and impairment losses to be recognised in relation to them.

Scope

2. **This Standard shall be applied in accounting for property, plant and equipment except when another Standard requires or permits a different accounting treatment.**
3. This Standard does not apply to:
 - (a) property, plant and equipment classified as held for sale in accordance with Ind AS 105 *Non-current Assets Held for Sale and Discontinued Operations*;
 - (b) biological assets related to agricultural activity (See Ind AS 41, *Agriculture*¹);
 - (c) the recognition and measurement of exploration and evaluation assets (see Ind AS 106 *Exploration for and Evaluation of Mineral Resources*); or
 - (d) mineral rights and mineral reserves such as oil, natural gas and similar non-regenerative resources.

However, this Standard applies to property, plant and equipment used to develop or maintain the assets described in (b)–(d).

4. Other Indian Accounting Standards may require recognition of an item of property, plant and equipment based on an approach different from that in this

¹ Indian Accounting Standard (Ind AS) 41, *Agriculture*, is under formulation.

Standard. For example, Ind AS 17 *Leases* requires an entity to evaluate its recognition of an item of leased property, plant and equipment on the basis of the transfer of risks and rewards. However, in such cases other aspects of the accounting treatment for these assets, including depreciation, are prescribed by this Standard.

5. An entity accounting for investment property in accordance with Ind AS 40 *Investment Property* shall use the cost model in this Standard.

Definitions

6. The following terms are used in this Standard with the meanings specified:

Carrying amount is the amount at which an asset is recognised after deducting any accumulated depreciation and accumulated impairment losses.

Cost is the amount of cash or cash equivalents paid or the fair value of the other consideration given to acquire an asset at the time of its acquisition or construction or, where applicable, the amount attributed to that asset when initially recognised in accordance with the specific requirements of other Indian Accounting Standards, eg Ind AS 102 *Share-based Payment*.

Depreciable amount is the cost of an asset, or other amount substituted for cost, less its residual value.

Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life.

Entity-specific value is the present value of the cash flows an entity expects to arise from the continuing use of an asset and from its disposal at the end of its useful life or expects to incur when settling a liability.

Fair value is the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm's length transaction.

An impairment loss is the amount by which the carrying amount of an asset exceeds its recoverable amount.

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 one period.

Recoverable amount is the higher of an asset's fair value less costs to sell and its value in use.

The *residual value* of an asset is the estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

Useful life is:

- (a) the period over which an asset is expected to be available for use by an entity; or**
- (b) the number of production or similar units expected to be obtained from the asset by an entity.**

Recognition

- 7. The cost of an item of property, plant and equipment shall be recognised as an asset if, and only if:**
 - (a) it is probable that future economic benefits associated with the item will flow to the entity; and**
 - (b) the cost of the item can be measured reliably.**
- 8. Spare parts and servicing equipment are usually carried as inventory and recognised in profit or loss as consumed. However, major spare parts, stand-by equipment and servicing equipment qualify as property, plant and equipment when an entity expects to use them during more than one period..
- 9. This Standard does not prescribe the unit of measure for recognition, ie what constitutes an item of property, plant and equipment. Thus, judgement is required in applying the recognition criteria to an entity's specific circumstances. It may be appropriate to aggregate individually insignificant items, such as moulds, tools and dies, and to apply the criteria to the aggregate value.
- 10. An entity evaluates under this recognition principle all its property, plant and equipment costs at the time they are incurred. These costs include costs incurred initially to acquire or construct an item of property, plant and equipment and costs incurred subsequently to add to, replace part of, or service it.

Initial costs

- 11. Items of property, plant and equipment may be acquired for safety or environmental reasons. The acquisition of such property, plant and equipment, although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for an entity 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 entity 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 recognised as an asset because without them the entity is unable to manufacture and sell chemicals. However, the resulting carrying amount of such an asset and related assets is reviewed for impairment in accordance with Ind AS 36 *Impairment of Assets*.

Subsequent costs

12. Under the recognition principle in paragraph 7, an entity does not recognise 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 recognised in profit or loss as incurred. Costs of day-to-day servicing are primarily the costs of labour and consumables, and may include the cost of small parts. The purpose of these expenditures is often described as for the 'repairs and maintenance' of the item of property, plant and equipment.
13. Parts of some items of property, plant and equipment may require replacement at regular intervals. For example, a furnace may require relining after a specified number of hours of use, or aircraft interiors such as seats and galleys may require replacement several times during the life of the airframe. Items of property, plant and equipment may also be acquired to make a less frequently recurring replacement, such as replacing the interior walls of a building, or to make a nonrecurring replacement. Under the recognition principle in paragraph 7, an entity recognises 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 derecognised in accordance with the derecognition provisions of this Standard (see paragraphs 67–72).
14. 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 recognised 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 (as distinct from physical parts) is derecognised. This occurs regardless of whether the cost of the previous inspection was identified in the transaction in which the item was acquired or constructed. If necessary, the estimated cost of a future similar inspection may be used as an indication of what the cost of the existing inspection component was when the item was acquired or constructed.

Measurement at recognition

15. **An item of property, plant and equipment that qualifies for recognition as an asset shall be measured at its cost.**

Elements of cost

16. 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 and removing the item and restoring the site on which it is located, the obligation for which an entity 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.

17. Examples of directly attributable costs are:

- (a) costs of employee benefits (as defined in Ind AS 19 *Employee Benefits*) arising directly from the construction or acquisition of the item of property, plant and equipment;
- (b) costs of site preparation;
- (c) initial delivery and handling costs;
- (d) installation and assembly costs;
- (e) costs of testing whether the asset is functioning properly, after deducting the net proceeds from selling any items produced while bringing the asset to that location and condition (such as samples produced when testing equipment); and
- (f) professional fees.

18. An entity applies Ind AS 2 *Inventories* to the costs of obligations for dismantling, removing and restoring the site on which an item is located that are incurred during a particular period as a consequence of having used the item to produce inventories during that period. The obligations for costs accounted for in accordance with Ind AS 2 or Ind AS 16 are recognised and measured in accordance with Ind AS 37 *Provisions, Contingent Liabilities and Contingent Assets*.

19. Examples of costs that are not costs of an item of property, plant and equipment are:

- (a) costs of opening a new facility;
- (b) costs of introducing a new product or service (including costs of advertising and promotional activities);
- (c) costs of conducting business in a new location or with a new class of customer (including costs of staff training); and
- (d) administration and other general overhead costs.

20. 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, costs incurred in using or redeploying an item are not included in the carrying amount of that item. For example, 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 item's output builds up; and
 - (c) costs of relocating or reorganising part or all of an entity's operations.
21. 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 recognised in profit or loss and included in their respective classifications of income and expense.
22. The cost of a self-constructed asset is determined using the same principles as for an acquired asset. If an entity 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 Ind AS 2). Therefore, any internal profits are eliminated in arriving at such costs. Similarly, the cost of abnormal amounts of wasted material, labour, or other resources incurred in self-constructing an asset is not included in the cost of the asset. Ind AS 23 *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.

Measurement of cost

23. 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 recognised as interest over the period of credit unless such interest is capitalised in accordance with Ind AS 23.
24. One or more items of property, plant and equipment may be acquired in exchange for a non-monetary asset or assets, or a combination of monetary and non-monetary assets. The following discussion refers simply to an exchange of

one non-monetary asset for another, but it also applies to all exchanges described in the preceding sentence. The cost of such an item of property, plant and equipment is measured at fair value unless (a) the exchange transaction lacks commercial substance or (b) the fair value of neither the asset received nor the asset given up is reliably measurable. The acquired item is measured in this way even if an entity cannot immediately derecognise the asset given up. If the acquired item is not measured at fair value, its cost is measured at the carrying amount of the asset given up.

25. An entity determines whether an exchange transaction has commercial substance by considering the extent to which its future cash flows are expected to change as a result of the transaction. An exchange transaction has commercial substance if:

- (a) the configuration (risk, timing and amount) of the cash flows of the asset received differs from the configuration of the cash flows of the asset transferred; or
- (b) the entity-specific value of the portion of the entity's operations affected by the transaction changes as a result of the exchange; and
- (c) the difference in (a) or (b) is significant relative to the fair value of the assets exchanged.

For the purpose of determining whether an exchange transaction has commercial substance, the entity-specific value of the portion of the entity's operations affected by the transaction shall reflect post-tax cash flows. The result of these analyses may be clear without an entity having to perform detailed calculations.

26. The fair value of an asset for which comparable market transactions do not exist is reliably measurable if (a) the variability in the range of reasonable fair value estimates is not significant for that asset or (b) the probabilities of the various estimates within the range can be reasonably assessed and used in estimating fair value. If an entity is able to determine reliably the fair value of either the asset received or the asset given up, then the fair value of the asset given up is used to measure the cost of the asset received unless the fair value of the asset received is more clearly evident.

27. The cost of an item of property, plant and equipment held by a lessee under a finance lease is determined in accordance with Ind AS 17.

28. [Refer to Appendix 1].

Measurement after recognition

29. An entity shall choose either the cost model in paragraph 30 or the revaluation model in paragraph 31 as its accounting policy and shall apply that policy to an entire class of property, plant and equipment.

Cost model

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

Revaluation model

31. **After recognition as an asset, an item of property, plant and equipment whose fair value can be measured reliably shall 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 shall 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 end of the reporting period.**
32. The fair value of land and buildings is usually determined from market-based evidence by appraisal that is normally undertaken by professionally qualified valuers. The fair value of items of plant and equipment is usually their market value determined by appraisal.
33. If there is no market-based evidence of fair value because of the specialised nature of the item of property, plant and equipment and the item is rarely sold, except as part of a continuing business, an entity may need to estimate fair value using an income or a depreciated replacement cost approach.
34. The frequency of revaluations depends upon the changes in fair values of the items of property, plant and equipment being revalued. When the fair value of a revalued asset differs materially from its carrying amount, a further revaluation is required. 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.
35. When an item of property, plant and equipment is revalued, any accumulated depreciation at the date of the revaluation is treated in one of the following ways:
- (a) restated proportionately with the change in the gross carrying amount of the asset so that the carrying amount of the asset after revaluation equals its revalued amount. This method is often used when an asset is revalued by means of applying an index to determine its depreciated replacement cost.
 - (b) eliminated against the gross carrying amount of the asset and the net amount restated to the revalued amount of the asset. This method is often used for buildings.

The amount of the adjustment arising on the restatement or elimination of accumulated depreciation forms part of the increase or decrease in carrying amount that is accounted for in accordance with paragraphs 39 and 40.

- 36. If an item of property, plant and equipment is revalued, the entire class of property, plant and equipment to which that asset belongs shall be revalued.**
37. A class of property, plant and equipment is a grouping of assets of a similar nature and use in an entity's operations. The following are examples of separate classes:
- (i) land;
 - (ii) land and buildings;
 - (iii) machinery;
 - (iv) ships;
 - (v) aircraft;
 - (vi) motor vehicles;
 - (vii) furniture and fixtures; and
 - (viii) office equipment.
38. The items within a class of property, plant and equipment are revalued simultaneously to avoid selective revaluation of assets and the reporting of amounts in the financial statements that are a mixture of costs and values as at different dates. However, a class of assets may be revalued on a rolling basis provided revaluation of the class of assets is completed within a short period and provided the revaluations are kept up to date.
- 39. If an asset's carrying amount is increased as a result of a revaluation, the increase shall be recognised in other comprehensive income and accumulated in equity under the heading of revaluation surplus. However, the increase shall be recognised in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognised in profit or loss.**
- 40. If an asset's carrying amount is decreased as a result of a revaluation, the decrease shall be recognised in profit or loss. However, the decrease shall be recognised in other comprehensive income to the extent of any credit balance existing in the revaluation surplus in respect of that asset. The decrease recognised in other comprehensive income reduces the amount accumulated in equity under the heading of revaluation surplus.**
41. The revaluation surplus included in equity in respect of an item of property, plant and equipment may be transferred directly to retained earnings when the asset is

- derecognised. 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 entity. 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 the asset's original cost. Transfers from revaluation surplus to retained earnings are not made through profit or loss.
42. The effects of taxes on income, if any, resulting from the revaluation of property, plant and equipment are recognised and disclosed in accordance with Ind AS 12 *Income Taxes*.

Depreciation

43. **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 shall be depreciated separately.**
44. An entity allocates the amount initially recognised in respect of an item of property, plant and equipment to its significant parts and depreciates separately each such part. For example, it may be appropriate to depreciate separately the airframe and engines of an aircraft, whether owned or subject to a finance lease. Similarly, if an entity acquires property, plant and equipment subject to an operating lease in which it is the lessor, it may be appropriate to depreciate separately amounts reflected in the cost of that item that are attributable to favourable or unfavourable lease terms relative to market terms.
45. 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.
46. To the extent that an entity depreciates separately some parts of an item of property, plant and equipment, it also depreciates separately the remainder of the item. The remainder consists of the parts of the item that are individually not significant. If an entity 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.
47. An entity may choose to depreciate separately the parts of an item that do not have a cost that is significant in relation to the total cost of the item.
48. **The depreciation charge for each period shall be recognised in profit or loss unless it is included in the carrying amount of another asset.**
49. The depreciation charge for a period is usually recognised in profit or loss. However, sometimes, the future economic benefits embodied in an asset are absorbed in producing other assets. In this case, the depreciation charge constitutes part of the cost of the other asset and is included in its carrying amount. For example, the depreciation of manufacturing plant and equipment is

included in the costs of conversion of inventories (see Ind AS 2). Similarly, depreciation of property, plant and equipment used for development activities may be included in the cost of an intangible asset recognised in accordance with Ind AS 38 *Intangible Assets*.

Depreciable amount and depreciation period

- 50. **The depreciable amount of an asset shall be allocated on a systematic basis over its useful life.**
- 51. **The residual value and the useful life of an asset shall be reviewed at least at each financial year-end and, if expectations differ from previous estimates, the change(s) shall be accounted for as a change in an accounting estimate in accordance with Ind AS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*.**
- 52. Depreciation is recognised 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.
- 53. The depreciable amount of an asset is determined after deducting its residual value. In practice, the residual value of an asset is often insignificant and therefore immaterial in the calculation of the depreciable amount.
- 54. The residual value of an asset may increase to an amount equal to or greater than the asset's carrying amount. If it does, the asset's depreciation charge is zero unless and until its residual value subsequently decreases to an amount below the asset's carrying amount.
- 55. Depreciation of an asset begins when it is available for use, ie 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 classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with Ind AS 105 and the date that the asset is derecognised. Therefore, depreciation does not cease when the asset becomes idle or is retired from active use unless the asset is fully depreciated. However, under usage methods of depreciation the depreciation charge can be zero while there is no production.
- 56. The future economic benefits embodied in an asset are consumed by an entity principally through its use. However, other factors, such as technical or commercial obsolescence and wear and tear while an asset remains idle, often result in the diminution of the economic benefits that might have been obtained from the asset. Consequently, all the following factors are considered in determining the useful life of an asset:

- (a) expected usage of the asset. Usage is assessed by reference to the asset's expected capacity or physical output.
 - (b) expected physical wear and tear, which depends on operational factors such as the number of shifts for which the asset is to be used and the repair and maintenance programme, and the care and maintenance of the asset while idle.
 - (c) technical or commercial obsolescence arising from changes or improvements in production, or from a change in the market demand for the product or service output of the asset.
 - (d) legal or similar limits on the use of the asset, such as the expiry dates of related leases.
57. The useful life of an asset is defined in terms of the asset's expected utility to the entity. The asset management policy of the entity 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 judgement based on the experience of the entity with similar assets.
58. 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.
59. 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

60. **The depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity.**
61. **The depreciation method applied to an asset shall 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 shall be changed to reflect the changed pattern. Such a change shall be accounted for as a change in an accounting estimate in accordance with Ind AS 8.**
62. A variety of depreciation methods can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life. These methods

include the straight-line method, the diminishing balance method and the units of production method. Straight-line depreciation results in a constant charge over the useful life if the asset's residual value does not change. The diminishing balance method results in a decreasing charge over the useful life. The units of production method results in a charge based on the expected use or output. The entity selects the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. That method is applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits.

Impairment

63. To determine whether an item of property, plant and equipment is impaired, an entity applies Ind AS 36 *Impairment of Assets*. That Standard explains how an entity reviews the carrying amount of its assets, how it determines the recoverable amount of an asset, and when it recognises, or reverses the recognition of, an impairment loss.
64. [Refer Appendix 1]

Compensation for impairment

65. **Compensation from third parties for items of property, plant and equipment that were impaired, lost or given up shall be included in profit or loss when the compensation becomes receivable.**
66. Impairments or losses of items of property, plant and equipment, related claims for or payments of compensation from third parties and any subsequent purchase or construction of replacement assets are separate economic events and are accounted for separately as follows:
- (a) impairments of items of property, plant and equipment are recognised in accordance with Ind AS 36;
 - (b) derecognition of items of property, plant and equipment retired or disposed of is determined in accordance with this Standard;
 - (c) compensation from third parties for items of property, plant and equipment that were impaired, lost or given up is included in determining profit or loss when it becomes receivable; and
 - (d) the cost of items of property, plant and equipment restored, purchased or constructed as replacements is determined in accordance with this Standard.

Derecognition

67. **The carrying amount of an item of property, plant and equipment shall be derecognised:**
- (a) on disposal; or

- (b) **when no future economic benefits are expected from its use or disposal.**
68. **The gain or loss arising from the derecognition of an item of property, plant and equipment shall be included in profit or loss when the item is derecognised (unless Ind AS 17 requires otherwise on a sale and leaseback). Gains shall not be classified as revenue.**
- 68A However, an entity that, in the course of its ordinary activities, routinely sells items of property, plant and equipment that it has held for rental to others shall transfer such assets to inventories at their carrying amount when they cease to be rented and become held for sale. The proceeds from the sale of such assets shall be recognised as revenue in accordance with Ind AS 18 *Revenue*. Ind AS 105 does not apply when assets that are held for sale in the ordinary course of business are transferred to inventories.
69. The disposal of an item of property, plant and equipment may occur in a variety of ways (eg by sale, by entering into a finance lease or by donation). In determining the date of disposal of an item, an entity applies the criteria in Ind AS 18 for recognising revenue from the sale of goods. Ind AS 17 applies to disposal by a sale and leaseback.
70. If, under the recognition principle in paragraph 7, an entity recognises in the carrying amount of an item of property, plant and equipment the cost of a replacement for part of the item, then it derecognises the carrying amount of the replaced part regardless of whether the replaced part had been depreciated separately. If it is not practicable for an entity to determine the carrying amount of the replaced part, it may use the cost of the replacement as an indication of what the cost of the replaced part was at the time it was acquired or constructed.
71. **The gain or loss arising from the derecognition of an item of property, plant and equipment shall be determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.**
72. The consideration receivable on disposal of an item of property, plant and equipment is recognised initially at its fair value. If payment for the item is deferred, the consideration received is recognised initially at the cash price equivalent. The difference between the nominal amount of the consideration and the cash price equivalent is recognised as interest revenue in accordance with Ind AS 18 reflecting the effective yield on the receivable.

Disclosure

73. **The financial statements shall disclose, for each class of property, plant and equipment:**
- (a) **the measurement bases used for determining the gross carrying amount;**
- (b) **the depreciation methods used;**

- (c) the useful lives or the depreciation rates used;
 - (d) the gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period; and
 - (e) a reconciliation of the carrying amount at the beginning and end of the period showing:
- (i) additions;
 - (ii) assets classified as held for sale or included in a disposal group classified as held for sale in accordance with Ind AS 105 and other disposals;
 - (iii) acquisitions through business combinations;
 - (iv) increases or decreases resulting from revaluations under paragraphs 31, 39 and 40 and from impairment losses recognised or reversed in other comprehensive income in accordance with Ind AS 36;
 - (v) impairment losses recognised in profit or loss in accordance with Ind AS 36;
 - (vi) impairment losses reversed in profit or loss in accordance with Ind AS 36;
 - (vii) depreciation;
 - (viii) the net exchange differences arising on the translation of the financial statements from the functional currency into a different presentation currency, including the translation of a foreign operation into the presentation currency of the reporting entity; and
 - (ix) other changes.

74. The financial statements shall also disclose:

- (a) the existence and amounts of restrictions on title, and property, plant and equipment pledged as security for liabilities;
- (b) the amount of expenditures recognised in the carrying amount of an item of property, plant and equipment in the course of its construction;
- (c) the amount of contractual commitments for the acquisition of property, plant and equipment; and
- (d) if it is not disclosed separately in the statement of profit and loss, the amount of compensation from third parties for items of property, plant

and equipment that were impaired, lost or given up that is included in profit or loss.

75. Selection of the depreciation method and estimation of the useful life of assets are matters of judgement. Therefore, disclosure of the methods adopted and the estimated useful lives or depreciation rates provides users of financial statements with information that allows them to review the policies selected by management and enables comparisons to be made with other entities. For similar reasons, it is necessary to disclose:
- (a) depreciation, whether recognised in profit or loss or as a part of the cost of other assets, during a period; and
 - (b) accumulated depreciation at the end of the period.
76. In accordance with Ind AS 8 an entity discloses the nature and effect of a change in an accounting estimate that has an effect in the current period or is expected to have an effect in subsequent periods. For property, plant and equipment, such disclosure may arise from changes in estimates with respect to:
- (a) residual values;
 - (b) the estimated costs of dismantling, removing or restoring items of property, plant and equipment;
 - (c) useful lives; and
 - (d) depreciation methods.
77. **If items of property, plant and equipment are stated at revalued amounts, the following shall be disclosed:**
- (a) **the effective date of the revaluation;**
 - (b) **whether an independent valuer was involved;**
 - (c) **the methods and significant assumptions applied in estimating the items' fair values;**
 - (d) **the extent to which the items' fair values were determined directly by reference to observable prices in an active market or recent market transactions on arm's length terms or were estimated using other valuation techniques;**
 - (e) **for each revalued class of property, plant and equipment, the carrying amount that would have been recognised had the assets been carried under the cost model; and**

(f) the revaluation surplus, indicating the change for the period and any restrictions on the distribution of the balance to shareholders.

78. In accordance with Ind AS 36 an entity discloses information on impaired property, plant and equipment in addition to the information required by paragraph 73(e)(iv)–(vi).
79. Users of financial statements may also find the following information relevant to their needs:
- (a) the carrying amount of temporarily idle property, plant and equipment;
 - (b) the gross carrying amount of any fully depreciated property, plant and equipment that is still in use;
 - (c) the carrying amount of property, plant and equipment retired from active use and not classified as held for sale in accordance with Ind AS 105; and
 - (d) when the cost model is used, the fair value of property, plant and equipment when this is materially different from the carrying amount.

Therefore, entities are encouraged to disclose these amounts.

Appendix A

Changes in Existing Decommissioning, Restoration and Similar Liabilities

This Appendix is an integral part of Ind AS 16.

Background

1. Many entities have obligations to dismantle, remove and restore items of property, plant and equipment. In this Appendix such obligations are referred to as 'decommissioning, restoration and similar liabilities'. Under Ind AS 16, the cost of an item of property, plant and equipment includes the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which an entity 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. Ind AS 37 contains requirements on how to measure decommissioning, restoration and similar liabilities. This Appendix provides guidance on how to account for the effect of changes in the measurement of existing decommissioning, restoration and similar liabilities.

Scope

2. This Appendix applies to changes in the measurement of any existing decommissioning, restoration or similar liability that is both:
 - (a) recognised as part of the cost of an item of property, plant and equipment in accordance with Ind AS 16; and
 - (b) recognised as a liability in accordance with Ind AS 37.

For example, a decommissioning, restoration or similar liability may exist for decommissioning a plant, rehabilitating environmental damage in extractive industries, or removing equipment.

Issue

3. This Appendix addresses how the effect of the following events that change the measurement of an existing decommissioning, restoration or similar liability should be accounted for:
 - (a) a change in the estimated outflow of resources embodying economic benefits (eg cash flows) required to settle the obligation;

(b) a change in the current market-based discount rate as defined in paragraph 47 of Ind AS 37 (this includes changes in the time value of money and the risks specific to the liability); and

(c) an increase that reflects the passage of time (also referred to as the unwinding of the discount).

Accounting Principles

4. Changes in the measurement of an existing decommissioning, restoration and similar liability that result from changes in the estimated timing or amount of the outflow of resources embodying economic benefits required to settle the obligation, or a change in the discount rate, shall be accounted for in accordance with paragraphs 5–7 below.

5. If the related asset is measured using the cost model:

(a) subject to (b), changes in the liability shall be added to, or deducted from, the cost of the related asset in the current period.

(b) the amount deducted from the cost of the asset shall not exceed its carrying amount. If a decrease in the liability exceeds the carrying amount of the asset, the excess shall be recognised immediately in profit or loss.

(c) if the adjustment results in an addition to the cost of an asset, the entity shall consider whether this is an indication that the new carrying amount of the asset may not be fully recoverable. If it is such an indication, the entity shall test the asset for impairment by estimating its recoverable amount, and shall account for any impairment loss, in accordance with Ind AS 36.

6. If the related asset is measured using the revaluation model:

(a) changes in the liability alter the revaluation surplus or deficit previously recognised on that asset, so that:

(i) a decrease in the liability shall (subject to (b)) be recognised in other comprehensive income and increase the revaluation surplus within equity, except that it shall be recognised in profit or loss to the extent that it reverses a revaluation deficit on the asset that was previously recognised in profit or loss;

(ii) an increase in the liability shall be recognised in profit or loss, except that it shall be recognised in other comprehensive income and reduce the revaluation surplus within equity to the extent of any credit balance existing in the revaluation surplus in respect of that asset.

(b) in the event that a decrease in the liability exceeds the carrying amount that would have been recognised had the asset been carried under the cost model, the excess shall be recognised immediately in profit or loss.

- (c) a change in the liability is an indication that the asset may have to be revalued in order to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the end of the reporting period. Any such revaluation shall be taken into account in determining the amounts to be recognised in profit or loss or in other comprehensive income under (a). If a revaluation is necessary, all assets of that class shall be revalued.
 - (d) Ind AS 1 requires disclosure in the statement of profit and loss of each component of other comprehensive income or expense. In complying with this requirement, the change in the revaluation surplus arising from a change in the liability shall be separately identified and disclosed as such.
- 7. 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 shall be recognised in profit or loss as they occur. This applies under both the cost model and the revaluation model.
 - 8. The periodic unwinding of the discount shall be recognised in profit or loss as a finance cost as it occurs. Capitalisation under Ind AS 23 is not permitted.

Illustrative examples of Changes in Existing Decommissioning, Restoration and Similar Liabilities

(These examples accompany, but are not part of, Appendix A.)

Common facts

- IE1 An entity has a nuclear power plant and a related decommissioning liability. The nuclear power plant started operating on 1 January 2000. The plant has a useful life of 40 years. Its initial cost was Rs. 120,000 ; this included an amount for decommissioning costs of Rs. 10,000, which represented Rs. 70,400 in estimated cash flows payable in 40 years discounted at a risk-adjusted rate of 5 per cent. The entity's financial year ends on 31 December.

Example 1: Cost model

- IE2 On 31 December 2009, the plant is 10 years old. Accumulated depreciation is Rs. 30,000 ($\text{Rs. } 120,000 \times \frac{10}{40}$ years). Because of the unwinding of discount (5 per cent) over the 10 years, the decommissioning liability has grown from Rs. 10,000 to Rs. 16,300.
- IE3 On 31 December 2009, the discount rate has not changed. However, the entity estimates that, as a result of technological advances, the net present value of the decommissioning liability has decreased by Rs. 8,000. Accordingly, the entity adjusts the decommissioning liability from Rs.16,300 to Rs. 8,300. On this date, the entity makes the following journal entry to reflect the change:

	Rs.	Rs.
Dr decommissioning liability	8,000	
Cr cost of asset		8,000

- IE4 Following this adjustment, the carrying amount of the asset is Rs. 82,000 ($\text{Rs. } 120,000 - \text{Rs. } 8,000 - \text{Rs. } 30,000$), which will be depreciated over the remaining 30 years of the asset's life giving a depreciation expense for the next year of Rs. 2,733 ($\text{Rs. } 82,000 \div 30$). The next year's finance cost for the unwinding of the discount will be Rs. 415 ($\text{Rs. } 8,300 \times 5$ per cent).
- IE5 If the change in the liability had resulted from a change in the discount rate, instead of a change in the estimated cash flows, the accounting for the change

would have been the same but the next year's finance cost would have reflected the new discount rate.

Example 2: Revaluation model

- IE6 The entity adopts the revaluation model in Ind AS 16 whereby the plant is revalued with sufficient regularity that the carrying amount does not differ materially from fair value. The entity's policy is to eliminate accumulated depreciation at the revaluation date against the gross carrying amount of the asset.
- IE7 When accounting for revalued assets to which decommissioning liabilities attach, it is important to understand the basis of the valuation obtained. For example:
- (a) if an asset is valued on a discounted cash flow basis, some valuers may value the asset without deducting any allowance for decommissioning costs (a 'gross' valuation), whereas others may value the asset after deducting an allowance for decommissioning costs (a 'net' valuation), because an entity acquiring the asset will generally also assume the decommissioning obligation. For financial reporting purposes, the decommissioning obligation is recognised as a separate liability, and is not deducted from the asset. Accordingly, if the asset is valued on a net basis, it is necessary to adjust the valuation obtained by adding back the allowance for the liability, so that the liability is not counted twice.²
 - (b) if an asset is valued on a depreciated replacement cost basis, the valuation obtained may not include an amount for the decommissioning component of the asset. If it does not, an appropriate amount will need to be added to the valuation to reflect the depreciated replacement cost of that component.
- IE8 Assume that a market-based discounted cash flow valuation of Rs. 115,000 is obtained at 31 December 2002. It includes an allowance of Rs. 11,600 for decommissioning costs, which represents no change to the original estimate, after the unwinding of three years' discount. The amounts included in the balance sheet at 31 December 2002 are therefore:

	Rs.
Asset at valuation (1)	126,600
Accumulated depreciation	nil
Decommissioning liability	(11,600)
Net assets	115,000
Retained earnings (2)	(10,600)
Revaluation surplus (3)	15,600

Notes:

² For examples of this principle, see Ind AS 36 *Impairment of Assets*.

- (1) Valuation obtained of Rs. 115,000 plus decommissioning costs of Rs. 11,600, allowed for in the valuation but recognised as a separate liability = Rs. 126,600.
- (2) Three years' depreciation on original cost Rs. 120,000 $\times \frac{3}{40} =$ Rs. 9,000 plus cumulative discount on Rs.10,000 at 5 per cent compound = Rs. 1,600; total Rs. 10,600.
- (3) Revalued amount Rs. 126,600 less previous net book value of Rs. 111,000 (cost Rs. 120,000 less accumulated depreciation Rs. 9,000).
- IE9 The depreciation expense for 2003 is therefore Rs. 3,420 (Rs. 126,600 $\times \frac{1}{37}$) and the discount expense for 2003 is Rs. 600 (5 per cent of Rs. 11,600). On 31 December 2003, the decommissioning liability (before any adjustment) is Rs. 12,200 and the discount rate has not changed. However, on that date, the entity estimates that, as a result of technological advances, the present value of the decommissioning liability has decreased by Rs. 5,000. Accordingly, the entity adjusts the decommissioning liability from Rs. 12,200 to Rs. 7,200.
- IE10 The whole of this adjustment is taken to revaluation surplus, because it does not exceed the carrying amount that would have been recognised had the asset been carried under the cost model. If it had done, the excess would have been taken to profit or loss in accordance with paragraph 6(b). The entity makes the following journal entry to reflect the change:

	Rs.	Rs.
Dr decommissioning liability	5,000	
Cr revaluation surplus		5,000

- IE11 The entity decides that a full valuation of the asset is needed at 31 December 2003, in order to ensure that the carrying amount does not differ materially from fair value. Suppose that the asset is now valued at Rs.107,000, which is net of an allowance of Rs.7,200 for the reduced decommissioning obligation that should be recognised as a separate liability. The valuation of the asset for financial reporting purposes, before deducting this allowance, is therefore Rs.114,200. The following additional journal entry is needed:

	Rs.	Rs.
Dr accumulated depreciation (1)	3,420	
Cr asset at valuation		3,420
Dr revaluation surplus (2)	8,980	
Cr asset at valuation (3)		8,980

Notes:

- (1) Eliminating accumulated depreciation of Rs.3,420 in accordance with the entity's accounting policy.
- (2) The debit is to revaluation surplus because the deficit arising on the revaluation does not exceed the credit balance existing in the revaluation surplus in respect of the asset.
- (3) Previous valuation (before allowance for decommissioning costs) Rs.126,600, less cumulative depreciation Rs.3,420, less new valuation (before allowance for decommissioning costs) Rs.114,200.

IE12 Following this valuation, the amounts included in the balance sheet are:

	Rs.
Asset at valuation	114,200
Accumulated depreciation	nil
Decommissioning liability	(7,200)
Net assets	107,000
Retained earnings (1)	(14,620)
Revaluation surplus (2)	11,620

Notes:

- (1) Rs.10,600 at 31 December 2002 plus 2003's depreciation expense of Rs.3,420 and discount expense of Rs.600 = Rs.14,620.
- (2) Rs.15,600 at 31 December 2002, plus Rs.5,000 arising on the decrease in the liability, less Rs.8,980 deficit on revaluation = Rs.11,620.

Appendix B

References to matters contained in other Indian Accounting Standards

This Appendix is an integral part of Ind AS 16.

This appendix lists the appendices which are part of other Indian Accounting Standards and make reference to Ind AS 16, *Property, Plant and Equipment*

1. Appendix A, *Income Taxes—Recovery of Revalued Non-Depreciable Assets* contained in Ind AS 12.
2. Appendix A, *Service Concession Arrangements* contained in Ind AS 11 *Construction Contracts*.
3. Appendix B, *Service Concession Arrangements: Disclosures* contained in Ind AS 11 *Construction Contracts*.
4. Appendix C, *Determining whether an Arrangement contains a Lease* contained in Ind AS 17 *Leases*.
5. Appendix A, *Intangible Assets—Web Site Costs* contained in Ind AS 38 *Intangible Assets*.
6. Appendix C, *Transfers of Assets from Customers* contained in Ind AS 18 *Revenue*.

Appendix 1

Note: This Appendix is not a part of this Indian Accounting Standard. The purpose of this Appendix is only to bring out the differences, if any, between Indian Accounting Standard (Ind AS) 16 and the corresponding International Accounting Standard (IAS) 16, Property, Plant and Equipment and IFRIC 1, Changes in Existing Decommissioning, Restoration and Similar Liabilities.

Comparison with IAS 16, *Property, Plant and Equipment* and IFRIC 1, *Changes in Existing Decommissioning, Restoration and Similar Liabilities*.

1. The transitional provisions given in IAS 16 and IFRIC 1 have not been given in Ind AS 16, since all transitional provisions related to Ind ASs, wherever considered appropriate have been included in Ind AS 101, *First-time Adoption of Indian Accounting Standards* corresponding to IFRS 1, *First-time Adoption of International Financial Reporting Standards*.
2. Different terminology is used in this standard, e.g., the term 'balance sheet' is used instead of 'Statement of financial position' and 'Statement of profit' and loss is used instead of 'Statement of comprehensive income'.
3. Paragraph 28 has been deleted since Ind AS 20, *Accounting for Government Grants and Disclosure of Government Assistance* does not permit the option of reducing the carrying amount of an item of property, plant and equipment by the amount of government grant received in respect of such an item, which is permitted in IAS 20. However, to maintain consistency with paragraph numbers of IAS 16, this paragraph number is retained in Ind AS 16.
4. Paragraph number 64 appears as 'Deleted' in IAS 16. In order to maintain consistency with paragraph numbers of IAS 16, the paragraph number is retained in Ind AS 16.
5. Paragraphs 5 of Ind AS 16 and IE 7 of Appendix A of Ind AS 16 have been modified, since Ind AS 40, *Investment Property*, prohibits the use of fair value model.

