

## **TOPIC 6.**

# **IND AS – 16 PROPERTY, PLANT & EQUIPMENT**

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### **Quote**

*Dream Big and Dare to Fail.....*



## NON APPLICABILITY OF INDAS 16:

1. When any other Standard specifically applied to a particular item or transaction such as IndAS 17 on Leases of Fixed Assets.
2. Biological Assets related to Agricultural activity (IND AS 41 is applicable on such assets)  
**However INDAS 16 – PPE is applicable on Bearer Plants.**
3. PPE classified as “Held for Sale” (IndAS 105)
4. Recognition and Measurement of Exploration and Evaluation Assets (IndAS 106)

## IMPORTANT DEFINITIONS:

### 1. PROPERTY PLANT AND EQUIPMENT

Any Tangible item will be called as PPE if it satisfies the following Conditions:

Condition - 1	Condition - 2
Held for Use in Production or Supply of goods and services For Rental to Others For Administrative Purposes	Expected to be Used for <b>more than 12 Months.</b>

**Items of PPE may also be acquired for safety or environmental reasons:**

Although not directly increasing the future economic benefits, Such items of PPE 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.

**2. Biological Assets:** It means Living Plants and Animals. INDAS 16 applies on Bearer Plants only.

**3. Bearer Plant:** a plant that satisfies all the 3 conditions:

Bearer Plant is a plant which	Is used in the production or supply	Of Agricultural produce
	Is expected to bear produce	• For more than a period of 12 months
	Has a remote likelihood of being sold as Agricultural produce	• Except for incidental scrap sales

**Note:** When bearer plants are no longer used to bear produce they might be cut down and sold as scrap. For example - use as firewood. Such incidental scrap sales would not prevent the plant from satisfying the definition of a Bearer Plant.

**Example of bearer plant is Mango Tree, Coconut Tree etc**

4. **Fair value** is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. (See Ind AS 113, Fair Value Measurement.)

### **RECOGNITION CRITERIA FOR PPE:**

The **cost of an item of PPE** 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.

#### **Notes:**

1. It may be **appropriate to aggregate individually insignificant items**, such as moulds, tools and dies and to apply the criteria to the aggregate value.
2. An enterprise **may decide to expense an item** which could otherwise have been included as PPE, because the amount of the expenditure is not material.

#### **Treatment of Spare Parts, Standby Equipment and Servicing Equipment**

**Case1:** If they meet the definition of PPE as per INDAS 16: Recognised as PPE as per INDAS 16

**Case2:** If they do not meet the definition of PPE as per INDAS 16: Such items are classified as Inventory as per AS 2.





## Treatment of different subsequent expenditure on PPE:

1. **Cost of day to day servicing:** This cost is directly recognised in the Statement of Profit and Loss.

### Example 1-

Entity A, a supermarket chain, is renovating one of its major stores. The store will have more available space for in store promotion outlets after the renovation and will include a restaurant. Management is preparing the budgets for the year after the store reopens, which include the cost of remodeling and the expectation of a 15% increase in sales resulting from the store renovations, which will attract new customers. State whether the remodeling cost will be capitalized or not.

**Answer:** The expenditure in remodeling the store will create future economic benefits (in the form of 15% of increase in sales) and the cost of remodeling can be measured reliably, therefore, it should be capitalised.

2. **Replacement of parts of PPE:** Capitalise in the carrying amount of PPE if the recognition criteria are met.

### Examples

- a. Aircraft interiors such as seats and galleys may require replacement several times during the life of the airframe.
- b. Replacing the interior walls of a building, or to make a non-recurring replacement.

Q19.

Sun Ltd has acquired a heavy road trailer at a cost of ₹600,000 (with no breakdown of component parts). The estimated useful life is 12 years. At the end of the 8<sup>th</sup> year, the engine requires replacement, as further maintenance is uneconomical due to the off-road time required. The remainder of the vehicle is perfectly road worthy and is expected to last for the next four years. The cost of the new engine is Rs.3,50,000. The discount rate assumed is 5%. Whether the cost of new engine can be recognised as the asset, and if so, what treatment should be followed?





**Answer:** The new engine will produce economic benefits to the Company and cost of the engine can be measured reliably. Hence, the item should be recognised as the asset.

The cost of 3,50,000 of new engine will be added to the carrying amount.

The original invoice of the trailer did not specify the cost of the engine. Therefore, the cost of replacement 3,50,000 will be used as indicative price and discount to year 1 i.e. Rs. 2,36,894

Revised Cost =  $(200000 - 78965 + 350000) = 471035$

3. **Regular Major Inspection or Overhaul:** When each major inspection is performed, its cost is recognised in the carrying amount of the item of PPE 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 derecognized.

### Example 2:

A shipping company is required by law to bring all ships into dry dock every five years for a major inspection and overhaul. Overhaul expenditure might at first sight seem to be a repair to the ships but it is actually a cost incurred in getting the ship back into a seaworthy condition. As such the costs must be capitalised.

A ship which cost ₹ 20 million with a 20 year life must have major overhaul in every five years. The estimated cost of the overhaul at the five-year point is ₹ 5 million.

The depreciation charge for the first five years of the assets life will be as follows:

	Overhaul Component (Million)	Ship (other than overhaul component) Million
Cost	5	15
Years	5	20
Depreciation per year	1	0.75

Total accumulated depreciation for the first five years will be Rs. 8.75, and the carrying amount of the ship at the end of year 5 will be Rs. 11.25 million.

The actual overhaul costs incurred at the end of year 5 are Rs. 6 million. This amount will now be capitalised into the costs of the ship, to give a carrying amount of Rs. 17.25 million.

The depreciation charge for years 6 to 10 will be as follows:

	Overhaul Component (Million)	Ship (other than overhaul component) Million
Cost	6	11.25
Years	5	15
Depreciation per year	1.2	0.75

Annual depreciation for years 6 to 10 will now be Rs.1.95 million. This process will be continued for years 11 to 15 and years 16 to 20. By the end of year 20, the capital cost of ₹ 20 million will have been depreciated plus the actual overhaul costs incurred at years 5, 10 and 15.

### MEASUREMENT OF PPE

At Initial Recognition	After Initial Recognition
COST MODEL	COST MODEL or REVALUATION MODEL

Cost of an item of PPE comprises:

COST Includes	COST Excludes
(a) Purchase Price including Import duties and Non-refundable Taxes	Cost of Opening new business such as inauguration cost
(b) Any Directly attributable Costs bringing the Asset to its 'location and condition' Eg. Cost of Employee benefits on construction or acquisition of PPE Installation Cost Cost of Testing the PPE Professional Fees Initial delivery Cost etc	Startup Costs Cost of introducing a new product including advertising Initial operating losses Cost of relocating or reorganizing part or all the operations of an enterprises.
(c) Decommissioning Restoration and Similar Liabilities	Administrative and other general overheads



<i>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'</i>	<i>Abnormal Cost/Losses (eg. Loss due to strike)</i>
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**Q20.**

On April 1, 20X1, XYZ Ltd. acquired a machine under the following terms:

List price of the machine	80,00,000
Import duty	5,00,000
Delivery Fees	1,00,000
Electrical installation cost	10,00,000
Pre-production testing	4,00,000
Purchase of five years maintenance contract	7,00,000

In addition to the above information XYZ Ltd. was granted a trade discount of 10% on the initial list price of the asset and a settlement discount of 5%, if payment for the machine was received within one month of purchase. XYZ Ltd. paid for the plant on April 20, 20X1. At what cost the asset will be recognised?

**Solve here- (Hint: 92,00,000)**

### Q21.

Entity A has an existing freehold factory property, which it intends to knock down and redevelop. During the redevelopment period the company will move its production facilities to another (temporary) site. The following incremental costs will be incurred:

1. Setup costs of Rs.5,00,000 to install machinery in the new location.
2. Rent of Rs. 15,00,000
3. Removal costs of Rs. 3,00,000 to transport the machinery from the old location to the temporary location.

Can these costs be capitalised into the cost of the new building?

#### Answer:

Constructing or acquiring a new asset may result in incremental costs that would have been avoided if the asset had not been constructed or acquired. These costs are not to be included in the cost of the asset if they are not 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. The costs to be incurred by the company do not meet the requirement of INDAS 16 and therefore, cannot be capitalised.

### Q22.

An amusement park has a 'soft' opening to the public, to trial run its attractions. Tickets are sold at a 50% discount during this period and the operating capacity is 80%. The official opening day of the amusement park is three months later. Management claims that the soft opening is a trial run necessary for the amusement park to be in the condition capable of operating in the intended manner. Accordingly, the net operating costs incurred should be capitalised. Comment.

#### Answer:

The net operating costs should not be capitalised, but should be recognised in the Statement of Profit and Loss.

Even though it is running at less than full operating capacity (in this case 80% of operating capacity), there is sufficient evidence that the amusement park is capable of operating in the manner intended by management. Therefore, these costs are specific to the start-up and, therefore, should be expensed as incurred.





## MEASUREMENT AT INITIAL RECOGNITION:

### (A) If payment is deferred beyond normal credit terms:

Cost of an item of PPE is the **CASH PRICE EQUIVALENT** at the recognition date.

Total payment - Cash price equivalent :

- ◆ Is recognised as Interest over the period of credit.
- ◆ unless such interest is capitalised in accordance with INDAS 23

### **Q23.**

On 1st April 20X1, an item of property is offered for sale at Rs. 10 million, with payment terms being three equal installments of Rs.33,33,333 over a two years period (payments are made on 1st April 20X1, 31st March 20X2 and 31st March 20X3).

The property developer is offering a discount of 5 percent (i.e. Rs. 0.5 million) if payment is made in full at the time of completion of sale. Implicit interest rate of 5.36 percent p.a.

Show how the property will be recorded in accordance of Ind AS 16.

### **Solution:**

Ind AS 16 requires that the cost of an item of PPE is the cash price equivalent at the recognition date. Hence, the purchaser that takes up the deferred payment terms will recognise the acquisition of the asset as follows

<u>On 1st April, 20X1</u>		(Rs)	(Rs)
Property, Plant and Equipment	Dr.	95,00,000	
To Cash			33,33,333
To Accounts Payable			61,66,667
(Initial recognition of property)			
<u>On 31st March 20X2</u>			
Interest Expense	Dr.	3,30,533	
Accounts payable	Dr.	30,02,800	
To Cash			33,33,333
(Recognition of interest expense and payment of second installment)			
<u>On 31st March 20X3</u>			
Interest Expense	Dr.	1,69,467	
Accounts payable	Dr.	31,63,867	
To Cash			33,33,334
(Recognition of interest expense and payment of final installment)			

**(B) PPE acquired in Exchange for a Non-monetary Asset or Assets or a combination of Monetary and Non-monetary Assets:**

Cost of such an item of PPE is measured at fair value of Asset Received (1<sup>st</sup> Priority) or Asset Given up (2<sup>nd</sup> Priority) unless:

- (i) Exchange transaction lacks commercial substance; Or
- (ii) Fair value of neither the asset(s) received nor the asset(s) given up is reliably measurable.

If the PPE acquired is not measured at Fair Value, its cost is measured at the **carrying amount of the asset given up.**

**Q24.**

Pluto Ltd owns land and building which are carried in its balance sheet at an aggregate carrying amount of ₹10 million. The fair value of such asset is ₹15 million. It exchanges the land and building for a private jet, which has a fair value of ₹18 million, and pays additional ₹3 million in cash. Show the necessary treatment as per IND AS 16.

**Solution:** Private Jet shall be recognized at FV of private jet if it is clearly evident otherwise at FV of L&B

The required journal entry is therefore as follow:

Property, Plant and Equipment (Private Jet) Dr.	18,000	
To Property, Plant and Equipment (Land and Building)		10,000
To Cash		3,000
To Profit on exchange of assets		5,000

**(C) PPE purchased for a Consolidated Price:**

Where several items of PPE 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.

**Note:** 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.

**(D) PPE held by a lessee under a Finance Lease:**

The cost of an item of PPE held by a lessee under a finance lease is determined in accordance with INDAS 116 (Leases) (EARLIER INDAS 17)

**(E) Government Grant related to PPE:**

The carrying amount of an item of PPE may be reduced by government grants in accordance



with INDAS 20 (Accounting for Government Grants).

### MEASUREMENT AFTER INITIAL RECOGNITION

An enterprise should choose

- ◆ **Either** Cost model,
- ◆ **Or** Revaluation model

as its accounting policy and should apply that policy to an entire class of PPE.

**Class of PPE:** A class of PPE is a grouping of assets of a **similar nature and use** in operations of an enterprise.

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
- (i) Bearer plants

#### **Cost Model**

After recognition as an asset, an item of PPE should be carried at:

Cost - Any Accumulated Depreciation - Any Accumulated Impairment losses

#### **Revaluation Model**

After recognition as an asset, an item of PPE whose fair value can be measured reliably should be carried at a revalued amount.

Fair value at the date of revaluation	-
Less: Any subsequent accumulated depreciation	(-)
Less: Any subsequent accumulated impairment losses	(-)
<b>Carrying value</b>	<u>=</u>

Revaluation for entire class of PPE



If an item of PPE is revalued, **the entire class of PPE** to which that asset belongs should be revalued.

**Example 3:**

Entity A is a large manufacturing group. It owns a number of industrial buildings, such as factories and warehouses and office buildings in several capital cities. The industrial buildings are located in industrial zones, whereas the office buildings are in central business districts of the cities. Entity A's management want to apply the revaluation model as per INDAS 16 to the subsequent measurement of the office buildings but continue to apply the historical cost model to the industrial buildings.

State whether this is acceptable under INDAS 16 or not with reasons?

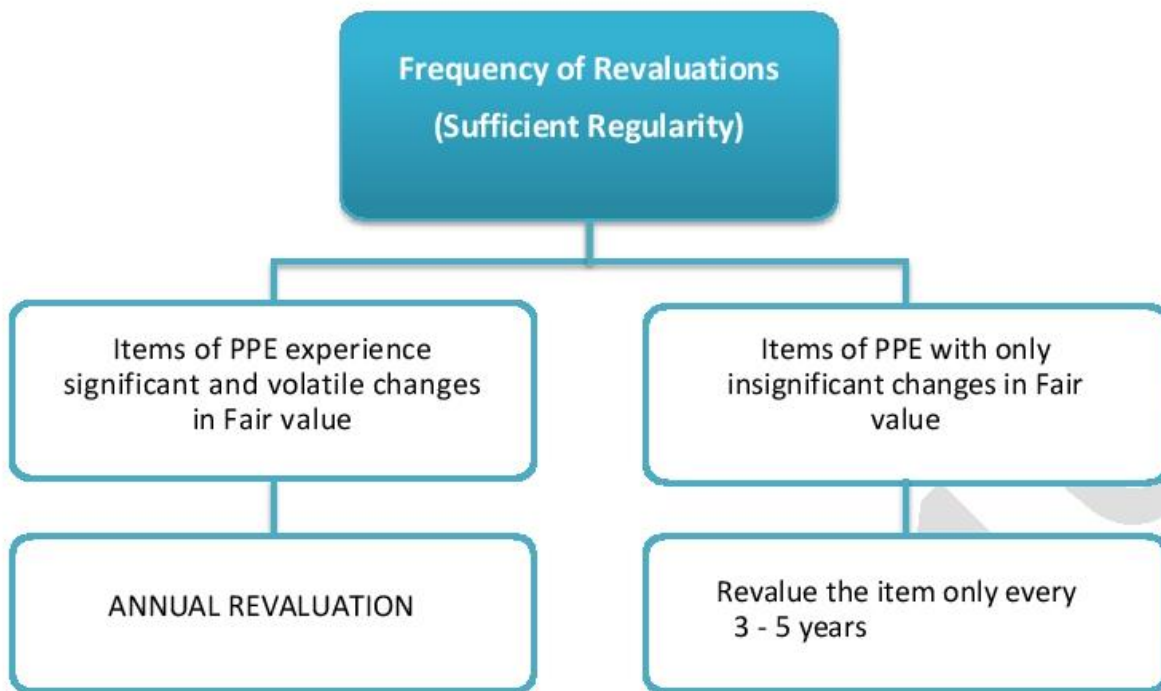
**Answer:**

Entity A's management can apply the revaluation model only to the office buildings. The office buildings can be clearly distinguished from the industrial buildings in terms of their function, their nature and their general location. INDAS 16 permits assets to be revalued on a class by class basis.

The different characteristics of the buildings enable them to be classified as different PPE classes. The different measurement models can, therefore, be applied to these classes for subsequent measurement.

All properties within the class of office buildings must, therefore, be carried at revalued amount.





### ACCOUNTING TREATMENT OF REVALUATIONS

When an item of PPE is revalued, the carrying amount of that asset is adjusted to the revalued amount.

At the date of the revaluation, the asset is treated in one of the following ways:

#### **Technique 1: Change in Gross Carrying amount and Accumulated depreciation amount**

Gross carrying amount is adjusted in a manner that is consistent with the revaluation of the carrying amount of the asset.

*Gross carrying amount -*

- May be restated by reference to observable market data, or
- May be restated proportionately to the change in the carrying amount.

*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.

**Technique 2: Accumulated depreciation is eliminated** against the gross carrying amount of the asset.

**Q25.**

Jupiter Ltd. has an item of plant with an initial cost of Rs. 100,000. At the date of revaluation accumulated depreciation amounted to Rs. 55,000. The fair value of asset, by reference to transactions in similar assets, is assessed to be Rs.65,000. Find out the entries to be passed?

**Solution:**

**Method – I: Accumulated Depreciation is eliminated**

Accumulated depreciation	Dr.	55,000	
To Asset Cost			55,000
Asset Cost	Dr.	20,000	
To Revaluation reserve			20,000

The net result is that the asset has a carrying amount of ₹ 65,000 (100,000 – 55,000 + 20,000).

**Method – II: Change in gross carrying amount and accumulated depreciation**

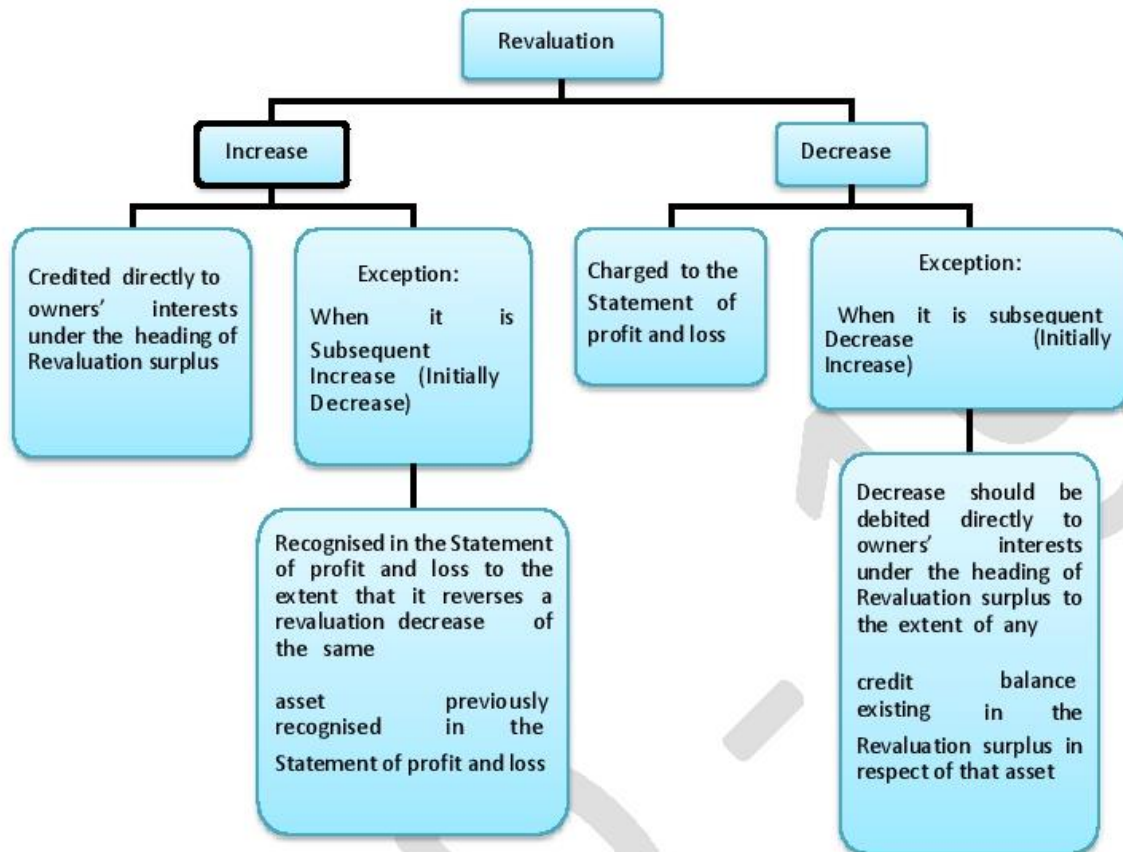
Carrying amount (100,000 – 55,000)	45,000
Fair value (revalued amount)	65,000
Surplus	20,000
% of surplus (20,000/ 45,000)	44.44%

**Entries to be Made:**

Asset (1,00,000 x 44.44%)	Dr.	44,444
To Accumulated Depreciation (55,000 x 44.44%)		24,444
To Surplus on Revaluation		20,000



## Revaluation - Increase or Decrease - Treatment



### Utilisation of Revaluation Surplus

The revaluation surplus included in owners' interests in respect of an item of PPE may be transferred to the **Revenue Reserves when the asset is de-recognised.**

**Case I:** When we will transfer whole surplus ?

When the asset is:

- ◆ Retired; or
- ◆ Disposed of

**Case II:** When we will transfer partial surplus?

When the asset is still used by an enterprise not yet sold.

In such a case, the amount of the surplus transferred would be the excess depreciation  
Depreciation (based on Revalued Carrying amount) - Depreciation (based on Original Cost)

**Note:**

Transfers from Revaluation Surplus to the Revenue Reserves are not made through the Statement of Profit and Loss.

**Q26.**

An item of PPE was purchased for Rs. 9,00,000 on 1 April 20X1. It is estimated to have a useful life of 10 years and is depreciated on a straight line basis. On 1 April 20X3, the asset is revalued to Rs. 9,60,000. The useful life remains unchanged at ten years. Show the necessary treatment as per IND AS 16.

**Solution:****Calculation of Additional Depreciation:**

Actual depreciation for 20X3-X4 based on revalued amount	1,20,000
Depreciation for 20X3-20X4 on historical cost (9,00,000/10)	(90,000)
<b>Additional Depreciation</b>	<b>30,000</b>

In the profit or loss for 20X3-20X4, a depreciation expense of Rs 1,20,000 will be charged. A reserve transfer, which will be shown in the statement of changes in equity, may be undertaken as follows:

Revaluation surplus	Dr.	30,000	
To Retained earnings			30,000

The closing balance on the revaluation surplus on 31st March, 20X4 will therefore be as follows:

Balance arising on revaluation (9,60,000 – 7,20,000)	240,000
Transfer to retained earnings	(30,000)
	<b>210,000</b>



## DEPRECIATION

### Component Method of Depreciation:

Each part of an item of PPE with a cost that is **significant in relation to the total cost** of the item should be depreciated separately.

**Example:** It may be appropriate to depreciate separately the airframe and engines of an aircraft, whether owned or subject to a finance lease.

Is Grouping of Components possible?

Yes.

A significant part of an item of PPE 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.

### Accounting Treatment:

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 for example -

- **INDAS 2:** Depreciation of manufacturing plant and equipment is included in the costs of conversion of inventories as per INDAS 2.
- **INDAS 38:** Depreciation of PPE used for development activities may be included in the cost of an intangible asset recognised in accordance with INDAS 38 on Intangible Assets.

### Depreciable Amount and Depreciation Period

What is "Depreciable Amount"?

**Depreciable amount is:**

Cost of an asset (or other amount substituted for cost i.e. revalued amount) - Residual value

The depreciable amount of an asset should be allocated on a systematic basis over its useful life.



#### Example 4:

Entity A has a policy of not providing for depreciation on PPE capitalised in the year until the following year, but provides for a full year's depreciation in the year of disposal of an asset. Is this acceptable?

#### Solution:

The depreciable amount of a tangible fixed asset should be allocated on a systematic basis over its useful life. The depreciation method should reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity. Therefore not charging depreciation in the year of capitalization and charging full year's depreciation in the year of sale is **not justified** as per IND AS 16.

#### Review of Residual Value and Useful Life of an Asset:

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 INDAS 8 'Accounting Policies, Changes in Accounting Estimates and Errors'.

#### Q27. (Change in estimate of useful life)

Entity A purchased an asset on 1<sup>st</sup> January 2013 for ₹ 1,00,000 and the asset had an estimated useful life of 10 years and a residual value of nil.

On 1<sup>st</sup> January 2017, the directors review the estimated life and decide that the asset will probably be useful for a further 4 years.

Calculate the amount of depreciation for each year, if company charges depreciation on Straight Line basis.

#### Solution

The entity has charged depreciation using the straight-line method at ₹ 10,000 per annum i.e. (1,00,000/10 years).

On 1<sup>st</sup> January 2017, the asset's net book value is [1,00,000 - (10,000 x 4)] ₹ 60,000. The remaining useful life is 4 years.

The company should amend the annual provision for depreciation to charge the unamortised cost over the revised remaining life of four years.

Consequently, it should charge depreciation for the next 4 years at ₹ 15,000 per annum i.e. (60,000 / 4 years).





**Note:** Depreciation is recognised even if the Fair value of the Asset exceeds its Carrying Amount. Repair and maintenance of an asset do not negate the need to depreciate it.

### Commencement of period for charging Depreciation

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 the management.

#### **Example 5:**

Entity B constructs a machine for its own use. Construction is completed on 1<sup>st</sup> November 2016 but the company does not begin using the machine until 1<sup>st</sup> March 2017. Comment

#### **Solution**

The entity should begin charging depreciation from the date the machine is ready for use – that is, 1<sup>st</sup> November 2016. The fact that the machine was not used for a period after it was ready to be used is not relevant in considering when to begin charging depreciation.

### **Cessation of Depreciation**

1. Depreciation ceases to be charged when asset's residual value exceeds its carrying amount

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.

#### **Q28. (Depreciation where residual value is the same as or close to Original cost)**

A property costing Rs. 10,00,000 is bought in 2016. Its estimated total physical life is 50 years. However, the company considers it likely that it will sell the property after 20 years.

The estimated residual value in 20 years' time, based on 2016 prices, is:

Case (a) 10,00,000

Case (b) 9,00,000.

Calculate the amount of depreciation.



## **Solution**

### **Case (a)**

The company considers that the residual value, based on prices prevailing at the balance sheet date, will equal the cost.

There is, therefore, no depreciable amount and depreciation is correctly zero.

### **Case (b)**

The company considers that the residual value, based on prices prevailing at the balance sheet date, will be Rs. 9,00,000 and the depreciable amount is, therefore, Rs. 1,00,000.

Annual depreciation (on a straight line basis) will be Rs. 5,000  $[(10,00,000 - 9,00,000) \div 20]$ .

## **II. 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.

## **Depreciation on Land and Buildings**

Land and buildings are separable assets and are accounted for separately, **even when they are acquired together.**

A. **Land:** Land has an unlimited useful life and therefore is not depreciated.

**Exceptions:** Quarries and sites used for landfill.

### Depreciation on Land:

I. **If land itself has a limited useful life:**

It is depreciated in a manner that reflects the benefits to be derived from it.

II. **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.

B. **Buildings:**

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.





## DEPRECIATION METHOD

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.

The method selected is applied **consistently from period to period** unless:

- There is a change in the expected pattern of consumption of those future economic benefits; or
- That the method is changed in accordance with the statute to best reflect the way the asset is consumed.

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:

- a) Straight-line depreciation method results in a constant charge over the useful life if the asset's residual value does not change
- b) Diminishing balance method results in a decreasing charge over the useful life.
- c) Units of production method results in a charge based on the expected use or output.

### **Q28. Change in Depreciation Method**

An entity acquired an asset 3 years ago at a cost of Rs 5 million. The depreciation method adopted for the asset was 10 percent reducing balance method.

At the end of Year 3, the entity estimates that the remaining useful life of the asset is 8 years and determines to adopt straight –line method from that date so as to reflect the revised estimated pattern of recovery of economic benefits.

Show the necessary treatment in accordance of Ind AS 16.

#### **Solution**

Change in Depreciation Method shall be accounted for as a change in an accounting estimate in accordance of Ind AS 8 and hence will have a prospective effect

Depreciation Charges for year I to II will be as follows:

Year 1	Rs 500,000
Year 2	Rs 450,000
Year 3	Rs 405,000
Year 4 to Year 11	Rs 455,625 p.a.



### **REVIEW OF DEPRECIATION METHOD:**

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.

#### **Note:**

**Such a change should be accounted for as a change in an accounting estimate in accordance with INDAS 8.**





# CHANGES IN EXISTING DECOMMISSIONING, RESTORATION AND OTHER LIABILITIES

## Basic Meanings

**Decommissioning** – Withdrawal

**Restoration** – Action of bringing something back to original condition

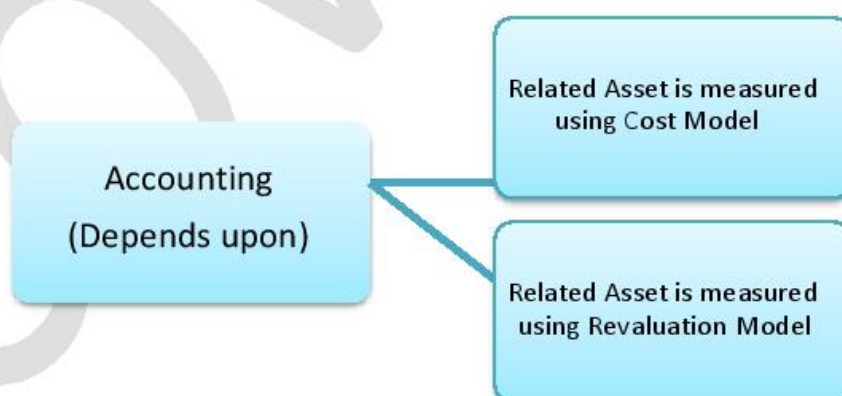
**Other Liabilities** – Changes in Duties payable on PPE, Changes in Foreign Exchange Liability on purchase of PPE, Change in price of PPE after purchase.

Cost of PPE may change subsequent to its acquisition on account of changes in initial estimate of amount provided for dismantling, restoration and other Liabilities.

The cost of PPE 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
- ◆ Change in Discount rate used to make provision for cost of Decommissioning and Restoration.

The above are included in the cost of the asset. Accounting for the above changes:



**A.** 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.

**Note:** 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 recognised immediately in the Statement of Profit and Loss.

**B.** If the related asset is measured using the Revaluation model:

Changes in the liability alter the revaluation surplus or deficit previously recognized on that asset, so that:

- (i) Decrease in the liability credited directly to revaluation surplus in the owners' interest

Exception:

- It should be recognised in the Statement of Profit and Loss **to the extent** that it reverses a revaluation deficit on the asset that was previously recognised in the Statement of Profit and Loss.

**Note:** 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 should be recognised immediately in the Statement of Profit and Loss.

- (ii) Increase in the liability should be recognised in the Statement of Profit and Loss

Exception:

- It should be debited directly to Revaluation surplus in the owners' interest **to the extent** of any credit balance existing in the Revaluation surplus in respect of that asset.

**What happens if the related asset has reached the end of its useful life?**

All subsequent changes in the liability should be recognised in the Statement of Profit and Loss as they occur.

**Note:** This applies under both the cost model and the revaluation model.

## RETIREMENTS

**According to IndAS 105 - Items of PPE retired from active use and held for disposal should be stated at the lower of:**

- ◆ Carrying Amount, and
- ◆ Fair Value less cost of disposal

**Note:** Any write-down in this regard should be recognised immediately in the Statement of Profit and Loss.





### **Example 6: (Gain on replacement of Insured Assets)**

Entity A carried plant and machinery in its books at Rs. 2,00,000. These were destroyed in a fire. The assets were insured 'New for old' and were replaced by the insurance company with new machines that cost Rs. 20,00,000. The machines were acquired by the insurance company and the company did not receive the Rs. 20,00,000 as cash compensation. State, how Entity A should account for the same?

#### **Solution**

Entity A should account for a loss in the Statement of Profit and Loss on de-recognition of the carrying value of plant and machinery in accordance with INDAS 16.

Entity A should separately recognise a receivable and a gain in the income statement resulting from the insurance proceeds under INDAS 37 once receipt is virtually certain. The receivable should be measured at the fair value of assets that will be provided by the insurer.

## **DE-RECOGNITION**

**The carrying amount of an item of PPE should be de-recognised:**

- On disposal
- By sale
- By entering into a finance lease, or
- By donation, or
- When no future economic benefits are expected from its use or disposal

#### **Accounting Treatment:**

Gain or loss arising from de-recognition of an item of PPE should be included in the **Statement of Profit and Loss when the item is derecognized** unless INDAS 17/116 on Leases, requires otherwise on a sale and leaseback (INDAS 17/116 on Leases, applies to disposal by a sale and lease back.)

Where,

Gain or loss arising from de-recognition of an item of PPE = Net disposal proceeds (if any) - Carrying Amount of the item

**Note:** Gains should **not** be classified as revenue, as defined in INDAS 115.

#### **Exception:**

An enterprise that in the course of its ordinary activities, routinely sells items of PPE that it had held for rental to others should 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 should be recognised in revenue in accordance with INDAS 18 - Revenue





## COMPONENT ACCOUNTING – NOW A REALITY

MCA has made the component accounting mandatory for the financial year commencing on or after 1<sup>st</sup> April, 2015. Under INDAS 16, use of component accounting approach is optional, however schedule II requires the application of component accounting mandatory. This view is reinforced by IND AS 16 (PPE). Therefore now the companies would have to break their tangible assets into various components for computation of depreciation.

For compliance with schedule II, components will need to be identified for the opening block of assets as at 1<sup>st</sup> April, 2015 and cannot be restricted to only new assets acquired on or after adoption of component approach.

There can be certain assets which comprise of different components whose useful lives differ significantly and thus require replacement from time to time within the estimated useful life of the principal asset. Example – Aircraft which comprises of Airframe (the body), Engine and Interiors. all these are having different useful lives.

Now the concern is ‘What should be the useful life of the Aircraft?’ If the life of airframe (being the longest of the individual lives) is taken as a life of the aircraft, then how the expenditure on replacement of interiors and engines during the useful life of the aircraft be dealt with?

In order to overcome this concern it is imperative that the components of a single asset are treated as different assets for accounting purpose.

To illustrate this, suppose a composite asset costs Rs. 100, whose useful life as a whole can be considered as 8 years. It has a major component X, whose cost is Rs. 40. This component is expected to have a life of 4 years while the rest of the asset is expected to have a life of 10 years.

In the absence of component approach, the position would be as follows:

Year	Annual Charge to P&L Account
1 to 4	12.5 (100/8)
5	12.5 + 40 = 52.5
6-8	12.5

Thereby, it is evident that charging replacement cost of X in the year of replacement would distort the True and Fair View.





However, if the aforesaid component is treated as a separate asset, the annual depreciation charge would be as follows:

Depreciation on major Component X	$40/4 = 10$
Depreciation on rest of the assets	$60/10 = 6$
Total	16

From above we can see that this is the best way of accounting for assets having major components whose useful lives differ significantly.

**Problem in component accounting:** There may arise a difficulty if there are a large number of individual components having varying lives which are shorter than the principal asset's life. In such a case, apportioning the cost to components may present difficulties since the prices of all parts may not be available, or the aggregate price of all individual components may not necessarily be equal to the price of the composite asset. Moreover, such an exercise may be far too detailed and end up cluttering the fixed assets schedule. Hence, component approach is followed for parts of an asset which have significant costs and different useful life from remaining parts of the asset.

**Therefore,**

Schedule II requires separate depreciation only for components of an asset having:

- (i) Significant cost, and
- (ii) Different useful lives from remaining parts of the asset.

A company needs to identify only material/ significant components separately for depreciation. For example, A Limited buys a machine for Rs. 500,000. The machine consists of four components, of which the cost of two components (with different useful lives) is Rs. 490,000. The remaining two components have a cost of Rs. 5,000 each, which is considered insignificant, and they have useful lives of four and six years respectively.

In the above example, we believe that the two insignificant components could be combined to give a cost of Rs. 10,000 and a useful life of five years. Accordingly, the machine would be split into 3 different components.

### Accounting for Replacement Cost:

Currently, companies need to expense replacement costs in the year of incurrence. Under component accounting, companies will capitalise these costs as a separate component of the asset, with consequent expensing of the net carrying value of the replaced component. The capitalized replacement cost will be depreciated over its estimated useful life (generally,



till the time of next replacement), which should be lower than the life of the principal asset.

However, it is important to note that the day-to-day service cost for an item of fixed asset will be expensed and will not qualify for capitalization.

### **Accounting for Major Inspection or Overhaul**

- Major inspection/overhaul cost is treated as a separate part of the asset, regardless of whether any physical part of the asset is replaced or not.
- When the company purchases a new asset, it is received after major inspection or overhauling by the manufacturer. Hence, major inspection or overhaul can be identified separately at the time of purchase of new asset.
- The cost of such major inspection or overhaul is depreciated separately over the period till next major inspection or overhaul. Upon next major inspection or overhaul, the cost of new major inspection or overhaul is added to the gross block of the asset and any residual amount pertaining to the previous inspection or overhaul is derecognized.
- For example, C Limited runs a merchant shipping business and has just acquired a new ship for Rs.10,000. The useful life of the ship is 15 years, but it will be dry-docked every three years and a major overhaul will be carried out. At the date of acquisition, the dry-docking costs for similar ships that are three years old are approximately Rs. 2,000. Therefore, the cost of the dry-docking component for accounting purposes is Rs. 2,000 and this amount would be depreciated over the three years to the next dry-docking. The remaining carrying amount, which may need to be split into further components, is Rs. 8,000. Any additional components will be depreciated over their own estimated useful lives.

### **Useful Life of Components:**

- Each significant component of the asset having useful life, which is different from the useful life of the principal asset, is depreciated separately.
- If useful life of the component is lower than the useful life of the principal asset as prescribed in Schedule II, such lower useful life should be used.
- On the other hand, if the useful life of the component is higher than the useful life of the principal asset as prescribed in Schedule II, the company can use higher useful life only if the component is expected to be used even after expiry of useful life of the principal asset.





### **Presentation and Disclosures:**

Although individual components are accounted for separately, the financial statements continue to disclose a single asset. For example, an airline would generally disclose aircraft as a class of assets, rather than disclosing separate information in respect of the aircraft airframe, engines, interiors, etc. Moreover, Schedule II requires disclosure of justification if a company uses higher or lower life than what is prescribed in Schedule II.

### **Transitional Provision:**

If a component has zero remaining useful life on 1<sup>st</sup> April 2015, its carrying amount, after retaining any residual value, may be charged to the opening balance of retained earnings. The carrying amount of other components, i.e., components whose remaining useful life is not nil as on 1<sup>st</sup> April 2015, is to be depreciated over the remaining useful life.

#### **Identification of Cost of Component as on 1 April, 2015**

Application Guide on the provisions of Schedule II of the Companies Act, 2013 states that, if the separate cost of each significant component of an asset is not available in the books of account, following criteria can be used:

- Break up cost provided by the vendor; or
- Cost break up given by internal/external technical experts; or
- Current replacement cost of component of the related asset and applying value the same basis on the historical cost of asset.

While the Application Guide does not clarify whether or not there is a free choice in applying the above criteria, it appears logical to apply the criteria in the chronological order in which they are stated above. Let's discuss this concept by way of an example:

Company acquired a machine on 1<sup>st</sup> April 2011 for Rs.100,000. The useful life of the machine was 20 years. As on 31<sup>st</sup> March 2015, the accumulated depreciation is Rs. 20,000 (machine costing Rs. 100,000 depreciated for four years with nil residual value), and corresponding WDV is INR 80,000 (Rs. 100,000 - Rs. 20,000). Pursuant to Schedule II of the Companies Act, 2013, the company started following component accounting w.e.f 1<sup>st</sup> April 2015, wherein two components (A and B) were identified having an original cost of Rs. 20,000 and Rs. 80,000 respectively. The useful life of component A is estimated as 8 years (from the date of purchase) whereas the useful life for component B remains unchanged. Thus, the remaining



useful life of component A as at 1<sup>st</sup> April 2015 is 4 years.

For allocating the carrying value to components A and B, one view is that the carrying value should be allocated as per the original cost of the components. As per this, the carrying value of component A i.e. INR 16,000 (i.e. original cost of 20,000 less accumulated depreciation of 4,000) will be depreciated over 4 years and that of component B i.e. INR 64,000 (i.e. original cost of 80,000 less accumulated depreciation of 16,000) will be depreciated over 16 years.

An alternative view could be to allocate the carrying value to the components 'on the basis of' their current replacement cost. As per this, WDV of INR 80,000 will be allocated to components A and B in the ratio of their current replacement cost. Let's assume that current replacement cost of components A and B is INR 10,000 and INR 60,000, respectively. Therefore WDV of INR 80,000 will be apportioned into component A and component B as INR 11,429 and INR 68,571 respectively.

As stated above, while the Application Guide on the provisions of Schedule II of the Companies Act, 2013 does not clarify which is the preferred criteria to identify the cost of each significant component, it would be appropriate to use the original cost of acquisition as the basis, if the same is available.





### ADDITIONAL QUESTION:

#### **Q29:**

MS Ltd. has acquired a heavy machinery at a cost of Rs 1,00,00,000 (with no breakdown of the component parts). The estimated useful life is 10 years. At the end of the sixth year, one of the major components, the turbine requires replacement, as further maintenance is uneconomical. The remainder of the machine is perfect and is expected to last for the next four years. The cost of a new turbine is Rs 45,00,000. Appropriate Discount Rate is 5% pa  
Can the cost of the new turbine be recognised as an asset, and, if so, what treatment should be used?

#### **Solution:**

The new turbine will produce economic benefits to MS Ltd., and the cost is measurable. Hence, the item should be recognised as an asset. The original invoice for the machine did not specify the cost of the turbine; however, the cost of the replacement Rs 45,00,000 can be used as an indication (usually by discounting) of the likely cost, six years previously.

If an appropriate discount rate is 5% per annum, Rs 45,00,000 discounted back six years amounts to Rs 33,57,900 [ $\text{Rs } 45,00,000 / (1.05)^6$ ], i.e., the approximate cost of turbine before 6 years.

The current carrying amount of the turbine which is required to be replaced of Rs 13,43,160 would be derecognised from the books of account, (i.e., Original Cost Rs 33,57,900 as reduced by accumulated depreciation for past 6 years Rs 20,14,740, assuming depreciation is charged on straight-line basis.)

The cost of the new turbine, Rs 45,00,000 would be added to the cost of machine, resulting in a revision of carrying amount of machine to Rs 71,56,840. (i.e.,  $\text{Rs } 40,00,000^* - \text{Rs } 13,43,160 + \text{Rs } 45,00,000$ ).

\*Original cost of machine Rs 1,00,00,000 reduced by accumulated depreciation (till the end of 6 years) Rs 60,00,000.

#### **Q30:**

The term of an operating lease allows a tenant, XYZ Ltd. to tailor the property to meet its specific needs by building an additional internal wall, but on condition that the tenant returns the property at the end of the lease in its original state. This will entail dismantling the internal wall. XYZ Ltd. incurs a cost of ₹25,00,000 on building the wall and present value of estimated cost to dismantle the wall is ₹10,00,000. At what value should the leasehold improvements be capitalised in the books of XYZ Ltd.





### Solution:

The leasehold improvement is not only the cost of building the wall, but also the cost of restoring the property at the end of the lease. As such both costs i.e., Rs35,00,000 are capitalised when the internal wall is built and will be recognised in profit and loss over the useful life of the asset (generally the lease term) as a part of depreciation charge).

### Q31:

X Limited started construction on a building for its own use on April 1, 20X0. The following costs are incurred:

	Amount (Rs).
Purchase price of land	30,00,000
Stamp duty & legal fee	2,00,000
Architect fee	2,00,000
Site preparation	50,000
Materials	10,00,000
Direct labour cost	4,00,000
General overheads	1,00,000

Other relevant information: Material costing Rs 1,00,000 had been spoiled and therefore wasted and a further Rs 1,50,000 was spent on account of faulty design work. As a result of these problems, work on the building was stopped for two weeks during November 20X0 and it is estimated that Rs 22,000 of the labour cost relate to that period. The building was completed on January 1, 20X1 and brought in use April 1, 20X1. X Limited had taken a loan of Rs 40,00,000 on April 1, 20X0 for construction of the building (which meets the definition of qualifying asset as per INDAS 23). The loan carried an interest rate of 8% per annum and is repayable on April 1, 20X2.

Calculate the cost of the building that will be included in tangible non-current asset as an addition?

### Solution:

Only those costs which are directly attributable to bringing the asset into working condition for its intended use should be included. Administration and general costs cannot be included. Abnormal cost also should be excluded. The cost of spoilt materials and faulty designs are abnormal costs. The labour cost incurred during the stoppage is an abnormal cost and should not to be included. The interest on loan should be capitalised from April 1, 20X0, and capitalization of interest on loan must cease when the asset is ready to use i.e., January 1, 20X1.





**Amount to be included in Property, Plant and Equipment (PPE):**

	Rs.
Purchase price of land	30,00,000
Stamp duty & legal fee	2,00,000
Architect fee	2,00,000
Site preparation	50,000
Material (10,00,000 – 2,50,000)	7,50,000
Direct labour cost (4,00,000 – 22,000)	3,78,000
General overheads	Nil
Interest (40,00,000 x 8%) x 9/12	2,40,000
<b>Total to be capitalized</b>	<b>48,18,000</b>

**Note:**

Since the work was stopped during two weeks, considering this period as extended period, therefore labour cost is treated as abnormal and capitalisation of Borrowing cost shall also be suspended for 2 weeks as per IndAS 23.

**Q32:**

On 1 April 20X1, Sun Ltd purchased some Land for Rs.10000 (including legal costs of Rs 1000) in order to construct a new factory. Construction work commenced on 1 May 20X1. Sun Ltd incurred the following costs in relation with its construction:

- Preparation and levelling of the land – Rs. 300
- Purchase of materials for the construction – Rs.6080 in total.
- Employment costs of the construction workers – Rs.200 per month.
- Overhead costs incurred directly on the construction of the factory – Rs 100 per month.
- Ongoing overhead costs allocated to the construction project using the company's normal overhead allocation model – Rs 50 per month.
- Income received during the temporary use of the factory premises as a car park during the construction period – Rs. 50.
- Costs of relocating employees to work at the new factory – Rs 300
- Costs of the opening ceremony on 31 January 20X1 – Rs 150



The factory was completed on 30 November 20X1 and production began on 1 February 20X2. The overall useful life of the factory building was estimated at 40 years from the date of completion. However, it is estimated that the roof will need to be replaced 20 years after the date of completion and that the cost of replacing the roof at current prices would be 30% of the total cost of the building.

At the end of the 40-year period, Sun Ltd has a legally enforceable obligation to demolish the factory and restore the site to its original condition. The directors estimate that the cost of demolition in 40 years' time (based on prices prevailing at that time) will be Rs 20000. An annual risk adjusted discount rate which is appropriate to this project is 8%. The present value of Rs 1 payable in 40 years' time at an annual discount rate of 8% is Rs. 0.046

The construction of the factory was partly financed by a loan of Rs 17500 taken out on 1 April 20X1. The loan was at an annual rate of interest of 6%. During the period 1 April 20X1 to 31 August 20X1 (when the loan proceeds had been fully utilised to finance the construction), Sun Ltd received investment income of Rs 100 on the temporary investment of the proceeds.

*Required:* Compute the carrying amount of the factory in the Balance Sheet of Sun Ltd at 31 March 20X2. You should explain your treatment of all the amounts referred to in this part in your answer.

**Solution:**

### Computation of the cost of the factory

Description	Included in P.P.E.	Explanation
Purchase of land	10,000	Both the purchase of the land and the associated legal costs are direct costs of constructing the factory.
Preparation and leveling	300	A direct cost of constructing the factory
Materials	6,080	A direct cost of constructing the factory
Employment costs of construction workers	1,400	A direct cost of constructing the factory for a seven-month period
Direct overhead costs	700	A direct cost of constructing the factory for a seven-month period
Allocated overhead costs	Nil	Not a direct cost of construction
Income from use as a car park	Nil	Not essential to the construction so recognised directly in profit or loss
Relocation costs	Nil	Not a direct cost of construction
Opening ceremony	Nil	Not a direct cost of construction
Finance costs	700	Capitalise the interest cost incurred in an eight-month period (purchase of land would trigger off capitalisation)



Investment income on temporary investment of the loan proceeds	(100)	offset against the amount capitalized
Demolition cost recognised as a provision	<u>920</u>	Where an obligation must recognise as part of the initial cost
<b>Total</b>	<b><u>20,000</u></b>	
<b>Computation of accumulated depreciation</b>		
Total depreciable amount	10,000	All of the net finance cost of 600 (700 - 100) has been allocated to the depreciable amount. Also acceptable to reduce by allocating a portion to the non-depreciable land element principle
Depreciation must be in two parts: Depreciation of roof component	50	$10,000 \times 30\% \times 1/20 \times 4/12$
Depreciation of remainder	58	$10,000 \times 70\% \times 1/40 \times 4/12$
Total depreciation	108	
<b>Computation of carrying amount</b>	<b><u>19,892</u></b>	<b>20,000 - 108</b>

### Q33. (Exam Nov. 2018 - 8 Marks)

On 1st April, 2017 Good Time Limited purchased some land for Rs 1.5 crore (including legal cost of Rs 10 lakhs) for the purpose of constructing a new factory. Construction work commenced on 1st May, 2017. Good Time Limited incurred the following costs in relation to its construction

	Rs
Preparation and levelling of the land	4,40,000
Purchase of materials for the construction	92,00,000
Employment costs of the construction workers (per month)	1,45,000
Overhead costs incurred directly on the construction of the factory (per month)	1,25,000
Ongoing overhead costs allocated to the construction project (using the company's normal overhead allocation model) per month	75,000
Costs of relocating employees to work at new factory	
Costs of the opening ceremony on 1st January, 2018	3,25,000
Income received during the temporary use of the factory premises as a store during the construction period.	2,50,000
	60,000

The construction of the factory was completed on 31st December, 2017 and production began on 1st February, 2018. The overall useful life of the factory building was estimated at 40 years from the date of completion. However, it is estimated that the roof will need to be replaced 20 years after the date of completion and that the cost of replacing the roof at current prices would be 25% of the total cost of the building.

At the end of the 40 years period, Good Time Limited has a legally enforceable obligation to demolish the factory and restore the site to its original condition. The company estimates that the cost of demolition in 40 year's time (based on price prevailing at that time) will be Rs 3 crore. The annual risk adjusted discount rate which is appropriate to this project is 8%. The present value of Rs 1 payable in 40 years time at an annual discount rate of 8% is 0.046.

The construction of the factory was partly financed. by a loan of Rs 1.4 crore taken out on 1st April, 2017. The loan was at an annual rate of interest of 9%. During the period 1st April, 2017 to 30th September, 2017 (when the loan proceeds had been fully utilized to finance the construction), Good Time Limited received investment income of Rs 1,25,000 on the temporary investment of the proceeds.

You are required to compute the cost of the factory and the carrying amount of the factory in the Balance Sheet of Good Time Limited as at 31st March, 2018.

### Solution

#### Computation of the cost of the factory

	Rs
Purchase of land	1,50,00,000
Preparation and levelling	4,40,000
Materials	92,00,000
Employment costs of construction workers (1,45,000 x 8 months)	11,60,000
Direct overhead costs (1,25,000 x 8 months)	10,00,000
Allocated overhead costs	Nil
Income from use of a factory as a store	Nil
Relocation costs	Nil
Cost of the opening ceremony	Nil
Finance costs	9,45,000
Investment income on temporary investment of the loan proceeds	(1,25,000)
Demolition cost recognised as a provision (3,00,00,000 x 0.046)	13,80,000
<b>Total</b>	<b>2,90,00,000</b>



### Computation of carrying amount of the factory as at 31st March, 2018

		Land (Non-depreciable asset)	Factory (Depreciable asset)
Cost of the asset (Total cost 2,90,00,000)		1,50,00,000	1,40,00,000
Less: Depreciation			
On Land		Nil	
On Factory			
Depreciation on roof component (1,40,00,000 × 25% × 1/20 × 3/12)	43,750		
Depreciation on remaining factory (1,40,00,000 × 75% × 1/40 × 3/12)	65,625		(1,09,375)
Carrying amount of depreciable asset i.e factory		1,50,00,000	1,38,90,625
Total cost			2,88,90,625

#### Note:

- Interest cost has been capitalised based on nine month period. This is because; purchase of land would trigger off capitalisation.
- All of the net finance cost of Rs 8,20,000 (Rs 9,45,000 - Rs 1,25,000) has been allocated to the depreciable asset i.e. Factory. Alternatively, it can be allocated proportionately between land and factory.

#### Q34.

X Ltd. has a machine which got damaged due to fire as on January 31, 20X1. The carrying amount of machine was Rs 1,00,000 on that date. X Ltd. sold the damaged asset as scrap for Rs 10,000. X Ltd. has insured the same asset against damage. As on March 31, 20X1, the compensation proceeds was still in process but the insurance company has confirmed the claim. Compensation of Rs 50,000 is receivable from the insurance company. How X Ltd. will account for the above transaction?

#### Solution:

Impairment or losses of items of property, plant and equipment and related claims for or payments of compensation from third parties are separate economic events and should be accounted for separately.

X Ltd. should account for the above transaction as given below:

At the time of sale of scrap machine, X Ltd. should write off the carrying amount of asset



from books of account and provide a loss of Rs 90,000. (i.e., carrying amount of Rs 1,00,000 – realised amount of Rs 10,000)

As on March 31, 20X1, X Ltd. should recognise income of Rs 50,000 against the compensation receivable in its profit or loss.

### Q35:

An entity has a nuclear power plant and a related decommissioning liability. The nuclear power plant started operating on April 1, 2017. The plant has a useful life of 40 years. Its initial cost was Rs. 1,20,000 which 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 March 31. On 31<sup>st</sup> March 2027, value of the decommissioning liability has decreased by 8,000. The discount rate has not yet changed. How the entity will account for the above changes in decommissioning liability if it adopts cost model?

### Solution:

On March 31, 2027, the plant is 10 years old. Accumulated depreciation is Rs 30,000 (Rs 1,20,000 × 10/years). Because of the unwinding of discount (5 per cent) over the 10 years, the decommissioning liability has increased from Rs 10,000 to Rs 16,300.

On March 31, 2027, 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:

Decommissioning liability A/c	Dr.	8,000
To Cost of asset		8,000

Following this adjustment, the carrying amount of the asset is Rs 82,000 (Rs 1,20,000 – Rs 8,000 – 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 (Rs 82,000 ÷ 30). The next year's finance cost for the unwinding of the discount will be Rs 415 (Rs 8,300 × 5 per cent).

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.

### Q36:

An entity has a nuclear power plant and a related decommissioning liability. The nuclear power plant started operating on April 1, 2011. The plant has a useful life of 40 years. Its initial cost



was Rs. 1,20,000.; 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 March 31.

Assume that a market-based discounted cash flow valuation of Rs. 1,15,000 is obtained at March 31, 2014. It excludes an allowance of Rs. 11,600 for decommissioning costs, which represents no change to the original estimate, after the unwinding of three years' discount.

On March 31, 2015, the entity estimates that, as a result of technological advances, the present value of the decommissioning liability has decreased by Rs. 5,000. **The entity decides that a full valuation of the asset is needed at March 31, 2015**, in order to ensure that the carrying amount does not differ materially from fair value. The asset is now valued at Rs. 1,07,000, which is net of an allowance for the reduced decommissioning obligation.

How the entity will account for the above changes in decommissioning liability if it adopts revaluation model?

**Solution:**

<b>At March 31, 20X4:</b>	<b>Rs</b>
Asset at valuation (1)	1,26,600
Accumulated depreciation	Nil
Decommissioning liability	(11,600)
Net assets	1,15,000
Retained earnings (2)	(10,600)
Revaluation surplus (3)	15,600

**Notes:**

(1) Valuation obtained of Rs 1,15,000 plus decommissioning costs of Rs 11,600, allowed for in the valuation but recognised as a separate liability = Rs 1,26,600.

(2) Three years' depreciation on original cost Rs 1,20,000  $\times$  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 1,26,600 less previous net book value of Rs 1,11,000 (cost Rs 120,000 less accumulated depreciation Rs 9,000).

The depreciation expense for 20X4-20X5 is therefore Rs 3,420 (Rs 1,26,600  $\times$  1/37) and the discount expense for 20X5 is Rs 600. On March 31, 20X5, the decommissioning liability (before any adjustment) is Rs 12,200. However, as per estimate of the entity, 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.

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. The entity makes the following journal entry to reflect the change:

		Rs	Rs
<b>Decommissioning liability</b>	<b>Dr.</b>	<b>5,000</b>	
<b>To Revaluation surplus</b>			<b>5,000</b>

As at March 31, 20X5, the entity revalued its asset at Rs 1,07,000, 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 1,14,200. The following additional journal entry is needed:

**Notes:**

		Rs	Rs
<b>Accumulated depreciation (1)</b>	<b>Dr.</b>	<b>3,420</b>	
<b>To Asset at valuation</b>			<b>3,420</b>
<b>Revaluation surplus (2)</b>	<b>Dr.</b>	<b>8,980</b>	
<b>To Asset at valuation (3)</b>			<b>8,980</b>

(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 1,26,600, less cumulative depreciation Rs 3,420, less new valuation (before allowance for decommissioning costs) Rs 1,14,200.

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

Asset at valuation	1,14,200
Accumulated depreciation	Nil
Decommissioning liability	(7,200)
Net assets	1,07,000
Retained earnings (1)	(14,620)
Revaluation surplus (2)	11,620

**Notes:**

(1) Rs 10,600 at March 31, 20X4, plus depreciation expense of Rs 3,420 and discount expense of Rs 600 = Rs 14,620.

(2) Rs 15,600 at March 31, 20X4, plus Rs 5,000 arising on the decrease in the liability, less Rs 8,980 deficit on revaluation = Rs 11,620.





Student Notes:-

COVID - 19





Student Notes:-

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