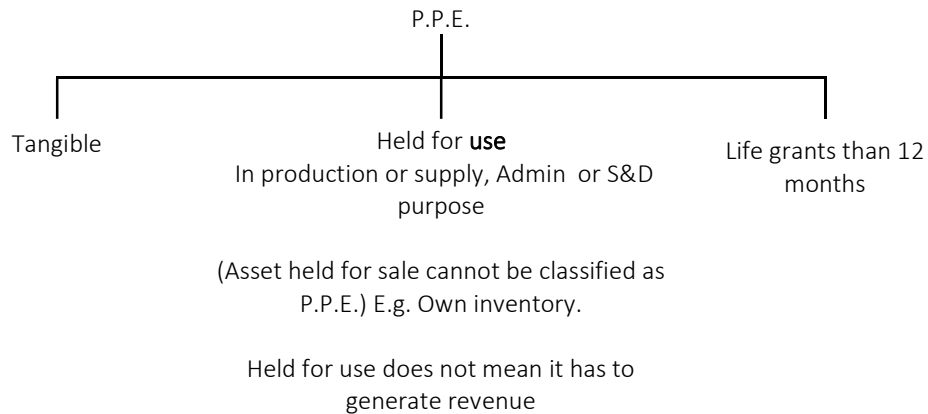


Chapter 1

IND AS 16- PLANT PROPERTY & EQUIPMENT

Objective: Accounting treatment for Property Plant and Equipment (P.P.E.)

i) Definition of P.P.E

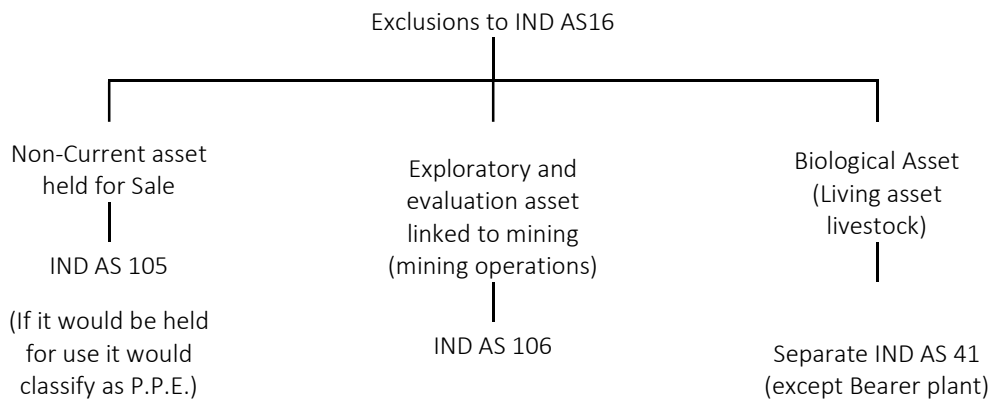


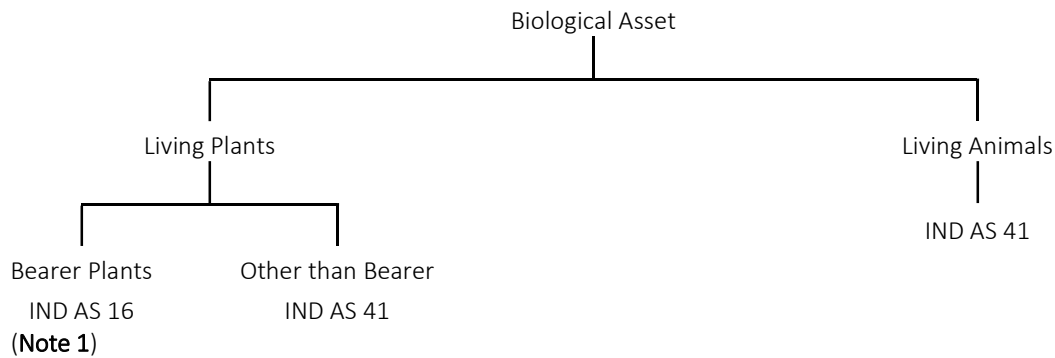
Spare Parts, stand by equipment's, servicing equipment's classification?



- If they meet all the three conditions of P.P.E. then classify it as P.P.E.
- You can also aggregate individually insignificant items such as molds, tools and dies and apply the above criteria to aggregate value

ii) Scope Exclusions



**Note 1:**

Bearer Plants are plants which bears some agricultural produce

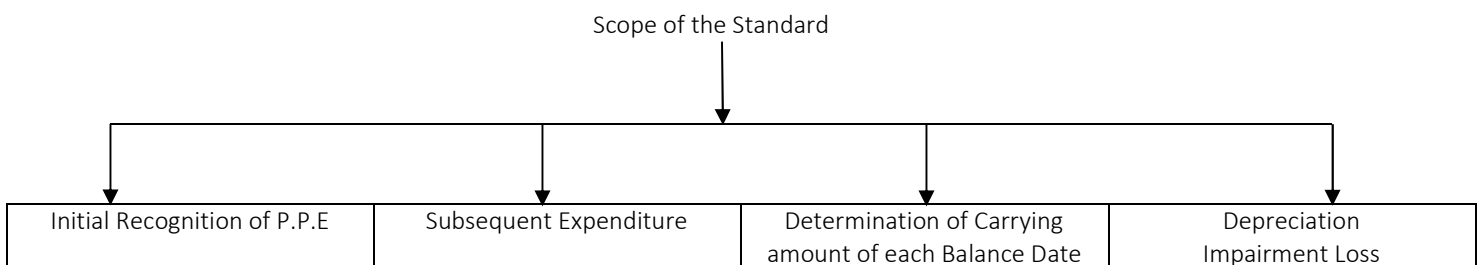
It is a living plant that:

- Used in production or supply of agricultural produce E.g. Grapevine, coconut tree. It is not agricultural produce themselves (Bamboo tree)
- Expected to bear produce for more than one period (Wheat grain plantation will bear wheat in less than 12 months and will be removed and farmer will sow another crop. Therefore, life is less than 12 months. Hence not a bearer plant)
- Remote likelihood of the plant being sold as agricultural produce, except for incidental scraps sales (the bearer is sold as agricultural produce and not plant itself).

E.g. A coconut tree is held for coconuts (produce)

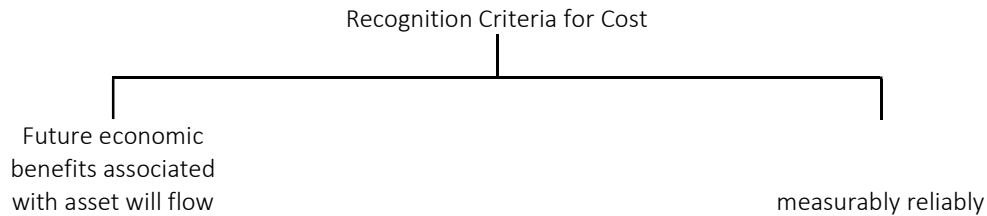
Therefore classification will be a bearer plant as the primary intention is to sell off produce i.e. coconut and not the coconut tree (Ultimately tree will be cut down and sold as scrap)

The Accounting Standard covers four main issues:



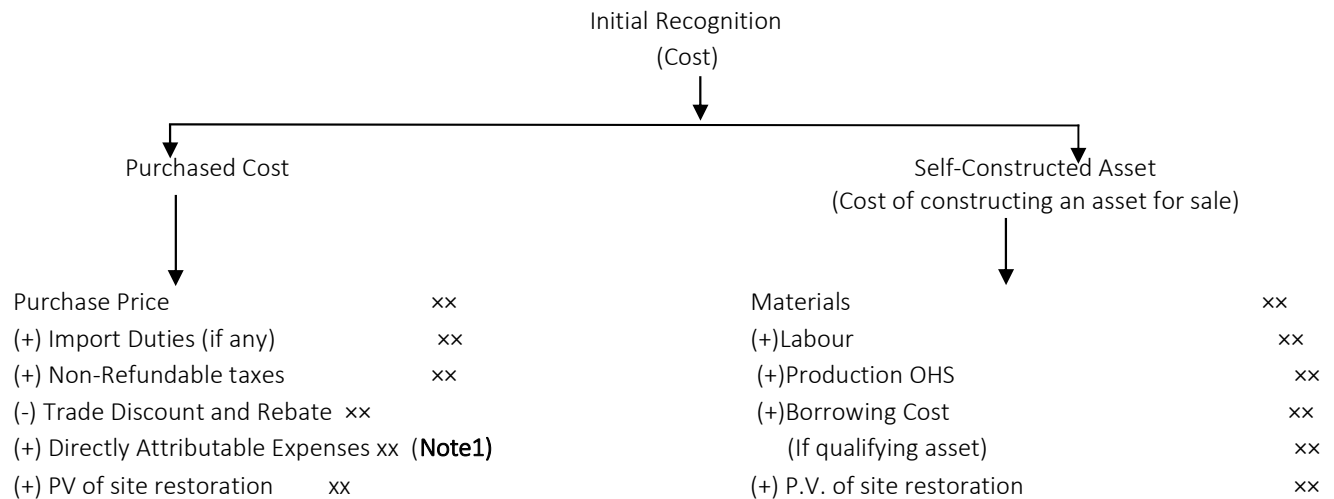
General recognition criteria

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



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

I) Initial Recognition of P.P.E



Note 1

Directly Attributable Expenses:

Expenses which are directly attributable to bring the asset to the location and condition necessary for it to be capable of operating in manner intended by management.

Examples

- Employee benefit cost arising directly from construction or purchase
- Initial delivery and handling cost
- Installation and assembly costs
- Professional fees
- Cost of testing

Exceptions of Directly attributable Cost:

1. Cost incurred in introducing new product or service E.g. Inauguration Expenses
(These kinds of expenses are brand building and marketing rather than production nature)
2. Cost of conducting business in a new location or with new class of customer E.g. Cost of Staff training for new software or customer
3. Cost of relocation or relocating entity's operation
(It is subsequent expenses and not expenditure that will increase asset value)
4. Initial operating losses to create demand E.g. Jio
5. Administrative and other general overhead cost
(General in nature and not directly attributable to asset)

Note 2:

a) Incidental Operations

Operations occur in connect with construction Development of P.P.E. but not necessary to bring the items to location and condition for it to be capable of operating in manner by management. If such operations are not necessary (or directly linked to getting asset ready to use condition) then it will be recognized in profit and loss and not decrease the cost of asset. E.g. Part of site offered for parking during or before construction phase. It is not directly attributable to bringing asset for use therefore profit and loss account

In the case if you are constructing a building then at site if you have to demolish the original building first, in such case scrap of demolition (Debris) is sold and income is earned. In such case this demolition operation is in connection to bringing the asset ready for use. Therefore this income will go in reducing loss of asset. (Directly attributing Income)
The same logic applies for expense of incidental operation also

b) Borrowing Cost if any to be capitalized if it is for qualifying asset

Qualifying asset takes substantial amount of time to ready for use generally more than one year. Therefore borrowing cost will be applicable only to self-construction asset and not to purchase asset (they are ready to be used from Day 1)

c) Abnormal loss expensed to Profit and Loss whereas normal loss should be capitalized. Unless given, Loss wastage assumed to be abnormal

d) Testing Cost

Pre-Production → Capitalize

Post Production → Quality Control Therefore, Expenses to Profit and Loss

e) Site Restoration/ Decommissioning/ Removal

As per IND AS 37 Provisions if there is a legal/constructive obligation to restore the site at end of project life then to same to be recognized and needs to be capitalized as per IND AS 16 at its Present Value.

Example:

Initial Cost Y0	100
Life	10 years
Dis Factor	10%
Site Restoration Cost	50

We find Present Value of Site Restoration

$$\text{i.e. } (50 \times 0.385) \quad 19.25$$

PVF (10%, 10th year)

Journal Entries:

P.P.E. A/c.....	Dr.	119.25	
To Bank A/c			100
To Provision for Site Reserve A/c			19.25

After 1st year

P.P.E. will get depreciated over its useful life

Depreciation A/c.....	Dr.	11.92	
To P.P.E. A/c (119.25/10)			11.92

Provision balance will also change as Y1 has passed now. 50 is payable after 9 years. As per IND AS 37 provision to be reassessed at every Balance Sheet date. Now PV of 50 for 9 years will be 21.20. Therefore provisions to be increased by 1.93. So slowly every year provision will be increased and by end of Y10 we will have Rs. 50 which will be paid.

Finance Cost A/c..... (Unwinding of Discount)	Dr. (Note)	1.93	
To Provision for Site restoration (19.25 × 10%)			1.93

Finance Cost is debited as the cost of 1.93 is not attributable to asset but due to passage of time.

Institute calls it unwinding of Discount. You have winded Rs. 50 to 19.25 and now it will unwind to 50 again. Since attributable to passage of time hence finance cost is debited and not P.P.E.

Year 2: Finance Cost
 $(19.25 + 1.93) \times 10\% = 2.12$

Therefore the cost of site restoration which is attributable to cost of asset is only 19.25 as Rs. 50 is value after 10 years which is equal to saying 19.25 as on today. The difference is not attributable to asset but it is finance cost. Hence cost to be capitalized is present value of Site restoration obligation.

Illustration 1

Determine if the following costs can be added to the invoiced purchase price and included in the initial recognition of the cost of the asset:

1. Consultant's fees for choosing the new asset.
2. A trade discount received of 5% of the purchase price of the asset
3. A discount received for paying the invoice within 90 days
4. Interest paid on a short term loan taken to provide the necessary cash for payment of the purchase price
5. Import duties paid
6. Shipping costs and cost of road transport
7. Insurance for the shipping
8. An economic development rebate from the state
9. GST paid on the purchase
10. Cost of laying a new concrete slab and installing special rubber mounted footings for the new price in order to reduce vibration during use.
11. Hire of a crane to transfer the press from the vehicles into the factory
12. Costs associated with removing a section of the factory roof to allow the machine to be dropped into place and subsequently refitting the roof
13. Professional fees charged by consulting engineer for overseeing the installation process.
14. Electricians fees for connecting the press to the power supply
15. A portion of the operating costs (salaries, office expenses) of the purchasing department
16. Costs of materials (papers and inks) used in calibrating the machine and setting it up for operation
17. Costs of training the operations of the new machine
18. A portion of the inefficiencies in production for the first month of use while the operations become comfortable with using the machine.

Illustration 2

On 1st April, 2011, XYZ Ltd. acquired a machine under the following terms:

	₹
List price of Machine	80,00,000
Import Duty	5,00,000
Delivery Fees	1,00,000
Electrical installation costs	10,00,000
Pre-production testing	4,00,000
Purchase of five year maintenance contract with vendor	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 20th April, 2011. At what cost the asset will be recognized?

Illustration 3

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 capitalized in the books of XYZ Ltd.?

Illustration 4

X Ltd. started construction on a building for its own use on 1st April, 2015. The following costs are incurred:

	₹
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 1,00,000 had been spoiled and therefore wasted and a further 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, 2015 and it is estimated that 22,000 of the labour cost relate to that period. The building was completed on 1st January, 2016 and brought in use on 1st April, 2016. X Limited had taken a loan of 40,00,000 on 1st April, 2015 for construction of the building. The loan carried an interest rate of 8% per annum and is repayable on 1st April, 2017.

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

Illustration 5

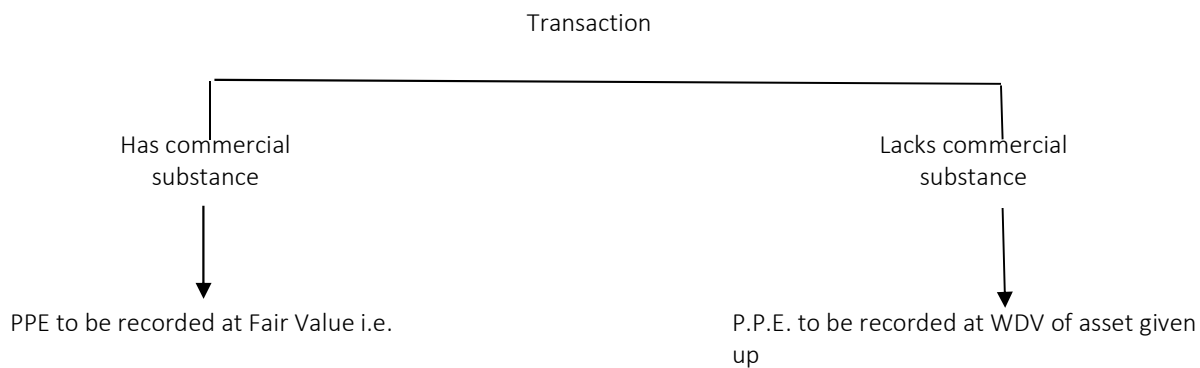
On 1st October, 2017, A ltd completed the construction of a power generating facility. The total construction cost was Rs 2,00,00,000. The facility was capable of being used from 1st October, 2017. But A ltd did not bring the facility into use until 1st January 2018. The estimated useful life of the facility on 1st October 2017 was 40 years. Under legal regulations in the jurisdiction in which A ltd operates, there are no requirements to restore the land on which power generating facilities stand to its original state at the end of the useful life of the facility. However, A ltd has reputation for conducting its business in an environmental friendly way and has previously chosen to restore similar land even in the absence of such legal requirements. The directors of A ltd estimated that the cost of restoring the land in 40 years will be 1,00,00,000. Relevant Discount rate is 5%, the present value of Rs 1 receivable in 40 years' time is approximately 0.142.

Analyze and present how the above events would be reported in the financial statements of A ltd for the year ended 31st March 2018 as per IND AS.

SPECIAL CASES**1. Exchange of Assets (Barter)**

One or more items of P.P.E. may be acquired in exchange for a non-monetary asset or combination of monetary & non-monetary. Therefore, asset which you are buying is to be recorded at cost. Here cost has to be determined by checking if exchange transaction has commercial substance or lacks commercial substance.

A transaction has commercial substance if position of company changes before and after barter i.e. nature of expenses and income are expected to change pre and post barter. If nothing is given, we will assume that transaction has commercial substance.



Fair Value of asset given up unless FV of asset received is more reliable

If Fair value differ and no info is given on reliability

Following order of preference as per ICAI to be followed

i. FV of asset given up

ii. FV of Asset received

iii. If (i) and (ii) is not available then WDV of asset given up

Illustration 6

Pluto Ltd. own land and building which are carried in its balance sheet at an aggregate carrying amount of ₹ 10 lakhs. The fair value of such asset is ₹ 15 Lakhs. It exchanges the land and building for a private jet, which has a fair value of ₹ 20 lakhs, and pays additional ₹ 3 lakhs in cash.

Show the necessary treatment as per IND AS 16.

Illustration 7

Entity A exchanges Car X with a book value of ₹ 13,00,000 and a fair value of ₹ 13,25,000 for cash of ₹ 15,000 and Car Y which has FV of 13,10,000. Assume transaction lacks commercial substance. What will be the measurement cost of asset received?

2. Deferred Payment Credit

Cost of P.P.E. is recognized at cash price. If payment is deferred beyond normal credit terms, the difference between cash price and total payment is recognized as Interest over period of credit.

Standard believes that if the payment terms are extreme (beyond normal credit) say 1 year maximum then here it is not credit but hidden loan transaction. You end up paying extra not because a product specification is higher but because of passage of time hence it is a finance cost. Finance cost (Borrowing Cost) can only be capitalized if it is for qualifying asset. Therefore if you show P.P.E. at full payment amount then you are capitalizing borrowing cost for non-qualifying asset.

If the difference between payment price and cash price is different but credit is not deferred beyond 12 month then standard believes in genuine cash discount and not interest. So hidden loan only when materiality is beyond 12 months.

Illustration 8

On 1st April, 2011, an item of property is offered for sale at ₹ 1,00,00,000 , with payment terms being three equal installments of ₹ 33,33,333 over a two-period (payments are made on 1st April 2011, 31st March, 2012 and 31st March, 2013). Implicit interest rate of 5.36 percent p.a. Show how the property will be recorded in accordance of IND AS 16.

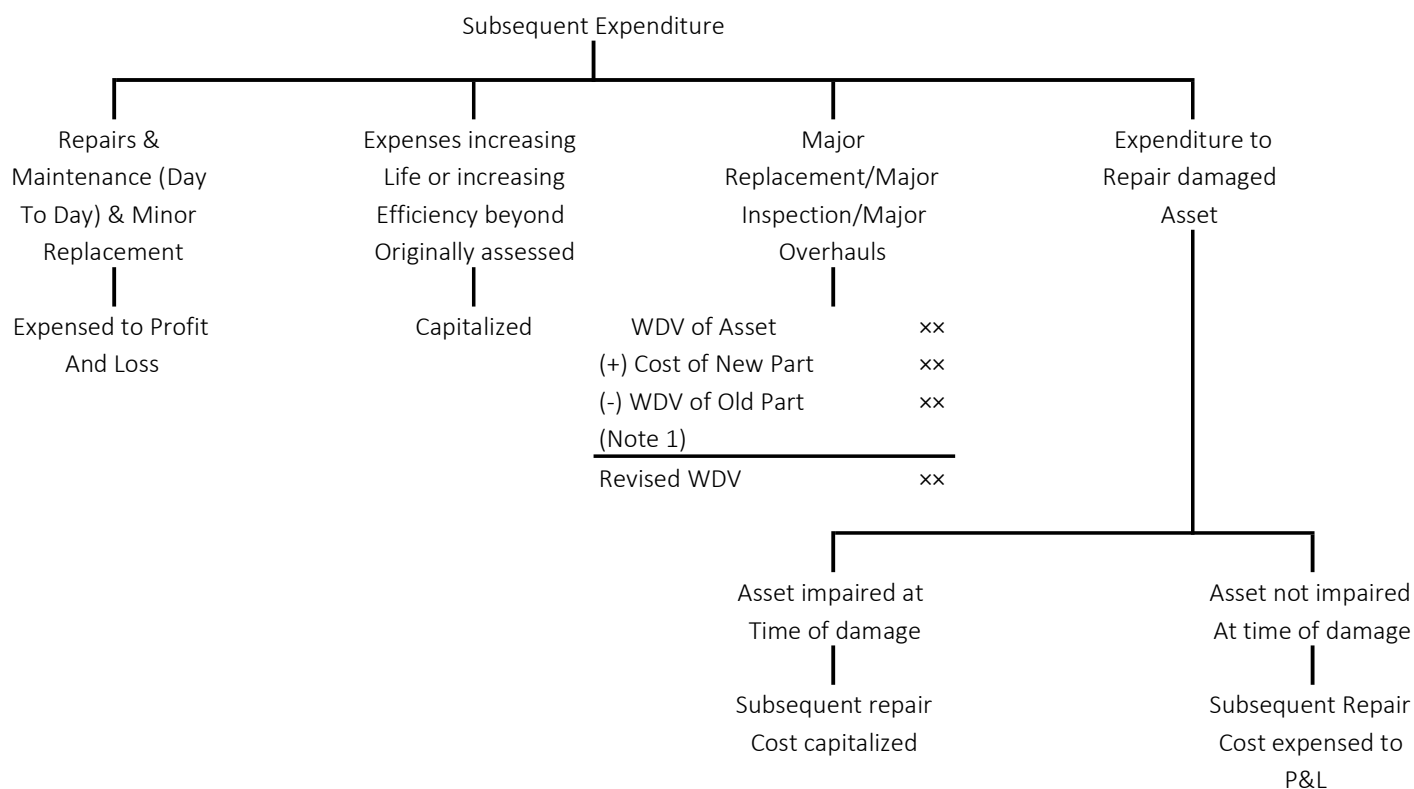
Illustration 9

ABC Ltd's installing a new plant at its production facility. It has incurred these costs:

1	Cost of the plant (cost per supplier's invoice plus taxes)	₹ 25,00,000
2	Initial delivery and handling costs	₹ 2,00,000
3	Cost of site preparation	₹ 6,00,000
4	Consultants used for advice on the acquisition of the plant	₹ 7,00,000
5	Interest charges paid to supplier of plant and deferred credit	₹ 2,00,000
6	Net present value of estimated dismantling costs to be incurred after 7 years	₹ 3,00,000
7	Operating losses before commercial production	₹ 4,00,000

Please advise ABC Ltd. on the costs that can be capitalized in accordance with IND AS 16.

II SUBSEQUENT EXPENDITURE



Standard extends the concept of Major Replacement to certain services like for Major Inspection and Major overhauls. Such services are considered at par with replacement.
(Discussed later)

Illustration 10

MS Ltd. has acquired heavy machinery at a cost of ₹ 1,00,000 (with no breakdown of the component parts). The estimated useful 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 ₹ 45,000. The discount rate assumed is 5%

Can the cost of the new turbine be recognized as an asset, and, if so, what treatment should be used?

Illustration 11

A Ltd has carried out certain works on various machines in their engineering plant, which manufactures high quality metal patterns and templates for use in industry.

Determine in each case whether the costs of the improvements can be added to the existing carrying value of the assets concerned?

1. The cost of an annual machine overhaul which will maintain the originally assessed standard of the performance of the machine for the coming 12 months.

2. The cost of repairs to a press machine, which was damaged by the emergency services while trying to extricate the arm of worker who had become trapped in the press.
3. Modification to a cutting machine which will increase its rate of output from 500 to 560 patterns per shift
4. Modifications to a lathe which will replace the current water cooling system with an oil based system, thereby extending the life of the lathe by a forecast 2 years.
5. The upgrading of a cutting machine with new software which will improve the accuracy of its measurement and cutting tolerances by number of microns, thereby raising the quality of output
6. Alterations to a production line which will allow automatic feeding from a machine to the next one in the production process, thereby removing the need for an employee to manually load the second machine.

III. Determination of Carrying amount of each Balance Date (Valuation Model)

Measurement after initial recognition shall be done by the entity either by adopting:

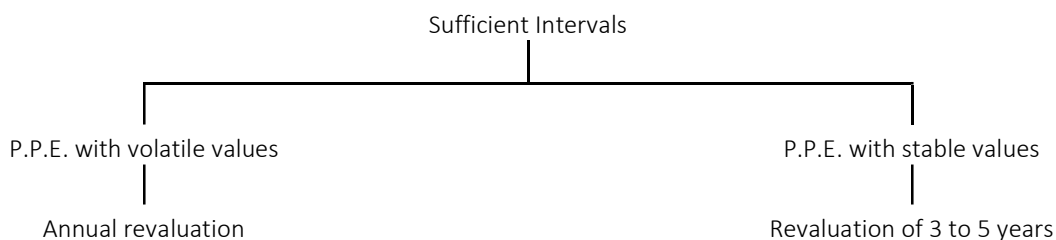
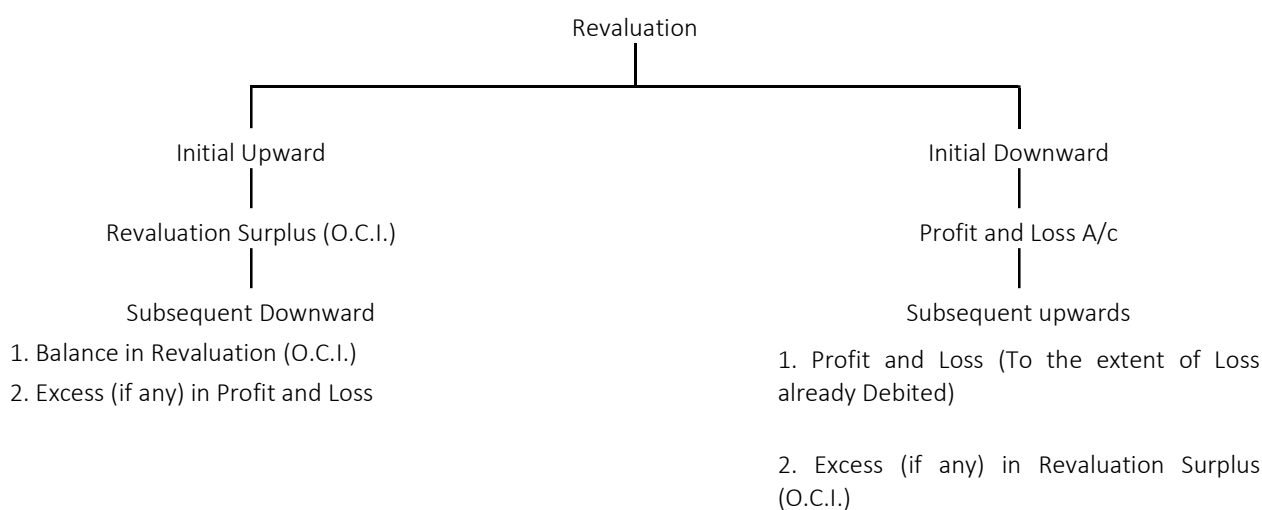
Valuation Model			
Cost Model		Revaluation Model (Note 1)	
Original Cost	xx		xx
(-) Accumulated Depreciation	xx	Fair Value (Determined at Sufficient Intervals)	
WDV/ Carrying Value	xx	(-) Subsequent Depreciation	xx
		Carrying Value	xx

Note 1: If following the cost model then disclose the fair value of P.P.E if materially different from carrying amount

Note 2: The valuation model should be selected for each class of P.P.E. separately. A class of P.P.E. would mean assets **having a similar nature and similar end use**. For. E.g. Furniture, Computer, Agricultural land, Industrial land, Bearer plants, motor vehicles, Plant & Machinery etc. are different classes. All assets within the same class should follow the same valuation model.

Nature and end use will determine the class in P.P.E

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

Note 3:**Accounting for Revaluation when company is maintaining PPE at Revaluation Model**

If an entity does revaluation for the first time and there is increase in carrying amount of an item of P.P.E as a result of such revaluation, it should be recognized in the other comprehensive income and accumulated in equity under the heading of revaluation surplus.

The balance in the revaluation surplus (O.C.I.) would be written off in the ratio of depreciation. However, the transfer from Revaluation surplus should be made directly to the Retained Earnings and should not be shown as income in the statement of Profit and Loss.

At the time of sale, the balance in Revaluation surplus should be transferred to Retained Earnings.

Accounting for Revaluation when company has prepared PPE at original cost and there is a separate accumulated depreciation account (Cost Model)

Revaluation can be adjusted in any one of the following two ways:

- i. Proportionately increase the original cost and accumulated depreciation OR
- ii. Write off the entire accumulated depreciation against the original cost of P.P.E., thereby bringing the asset to WDV and the directly revaluing the asset.

Illustration 12

Hiranandani Ltd is a large manufacturing group. It owns a considerable 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. Hiranandani's Ltd. management wants to apply the IND AS 16 revaluation model to subsequent measurement of the office buildings but continue to apply the historical cost model to the industrial buildings. Is this acceptable under IND AS 16, Property, Plant and Equipment?

Illustration 13

Jupiter Ltd. has an item of property, plant and equipment with an initial cost of ₹ 1,00,000. At the date of revaluation accumulated depreciation amounted to ₹ 55,000. The fair value of asset, by reference to transactions in similar assets, is assessed to be ₹ 65,000. Find out the entries to be passed?

Illustration 14

An item of P.P.E. was purchased for ₹ 9,00,000 on 1st April, 2011. It is estimated to have a useful life of 10 years and is depreciated on a straight line basis. On 1st April, 2013, the asset is revalued to ₹ 9,60,000. The useful life remains unchanged as ten years. Ignore impact of deferred taxes.

Show the necessary treatment as per IND AS 16.

IV Depreciation

The depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity

- i. Depreciation can be provided under any of the following Methods :
 - a. Straight Line Method
(Results in a constant charge over the useful life if the residual value of the asset does not change)
 - b. Written Down value Method
(Results in decreasing charge over the useful life)
 - c. Units of Production Method
(Results in a charge based in the expected use or output)

(If nothing specified follow SLM)
- ii. Useful life, salvage to be annually reviewed and any change will be change in accounting estimates. Hence should be prospectively applied.
- iii. The depreciation method applied to an asset is reviewed at least at each financial year-end and, if there has been a significant change in the expected pattern of consumption of the future economic benefits embodied in the asset, the method should be changed to reflect the changed pattern. Such a change is accounted for as a change in an accounting estimate in accordance with Ind AS 8 and therefore treated as change in accounting estimate hence should be prospectively applied.

Illustration 15

An entity acquired an asset 3 years ago at a cost of ₹ 50,00,000. 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.

Illustration 16

An asset which cost ₹ 10,000 was estimated to have a useful life of 10 years and residual value ₹ 2,000. After two years, useful life was revised to 4 remaining years.

Calculate the depreciation charge.

Illustration 17

XYZ Ltd. purchased an asset on 1st January, 2010 for ₹ 1,00,000 and the asset had an estimated useful life of ten year and a residual value of nil. The company has charged depreciation using the straight-line method at ₹ 10,000 per annum. On 1st January, 2014, the management of XYZ Ltd. reviews the estimated life and decides that the asset will probably be useful for a further four years and therefore, the total life is revised to eight years. How should the asset be accounted for remaining years?

Component Method of Depreciation

If a single asset is made up of various components with different useful life then you have to record depreciation based on components separately.

Component method of Deprecation to be applied if:

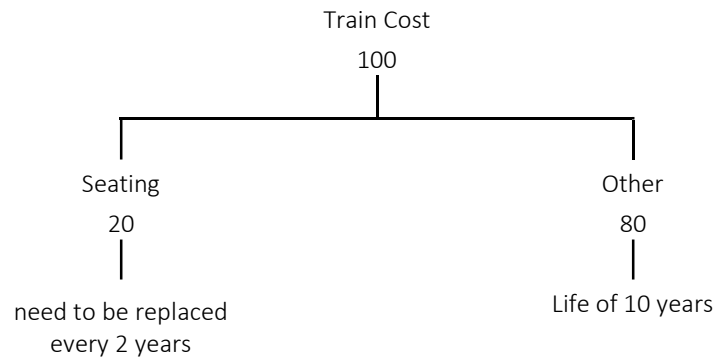
- a. Components are major (unless given, a component should always be assumed to be major)
- AND
- b. Components have separate useful life.

Example: In Railways if you see Trains have long life as compared to seats. Therefore they should be depreciated separately.

Depreciation on each part should be based on useful life of that part. If life of part exceeds life of asset then it will be appropriate to depreciate the part over life of the asset.

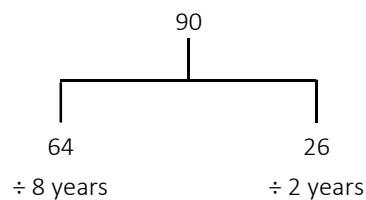
Hence life of the part or remaining useful life of asset whichever is shorter

Application of Component method of Depreciation in case of Subsequent Major Replacement:



Train	100
(-) Depreciation $\left(\frac{80}{10} + \frac{20}{2}\right)$	18
WDV Y1	82
(-) Depreciation	(18)
WDV Y2	64

Now 2 years over replacement will happen
 + Cost of new seat 26
 (-) WDV of old seat - (Asset is fully depreciated)



(-) Depreciation $\left(\frac{64}{8} + \frac{26}{2}\right)$	21
	69

The component method also applies to major inspections and major overhauls

When discussing Major Replacement the Standard extends the concept of replacement to major Inspections and major overhauls.

When each major inspection is performed, its cost is recognized in the carrying amount of the item of P.P.E as a replacement i.e Major Inspection is considered at par with replacement.

Example: Train purchased at initial price of 100. Initial inspection needs to be done and repeated every 4 years. Life of aircraft is 10 years cost of inspection is 20, 30 and 40 respectively.

Original Cost (Purchase Price)	100
(+) Inspection	20
Y.0 Initial Cost	120
(-) Depreciation Y1-Y4 $\left(\frac{100}{10} + \frac{20}{4}\right) \times 4$	60
Y4 WDV	60
(+) New inspection $\left(20 - \frac{20}{4} \times 4\right)$	-
Y4 Revised WDV	90
(-) Depreciation $\left(\frac{60}{6} + \frac{30}{4}\right) \times 4$	(70)
Y8 WDV	20
(+) New Inspection	40
(-) Old Inspection $\left(30 - \frac{30}{4} \times 4\right)$	-
Y8 Revised WDV	60
(-) Depreciation $\left(\frac{20}{2} + \frac{40}{2}\right) \times 2$	(60)
	xx

Here though life of inspection is 4 years but life of asset remaining is only 2 years. Therefore, we depreciate over life whichever is shorter

Illustration 18

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 capitalized.

A ship which cost ₹ 20 lakhs with a 20 year life must have major overhaul every five years. The estimated cost of the overhaul at the five year point is ₹ 5 lakhs. The actual overhaul costs incurred at the end of year 5 are ₹ 6 lakhs

Illustration 19

M Ltd. is setting up a new factory outside the Delhi city limits. In order to facilitate the construction of the factory and its operations, M Ltd. is required to incur expenditure on the construction/ development of electric-substation. Though M Ltd. incurs (or contributes to) the expenditure on the construction/development, it will not have ownership rights on these items and they are also available for use to other entities and public at large. Whether M Ltd. can capitalize expenditure incurred on these items as property, plant and equipment (PPE)? If yes, then how these items should be depreciated and presented in the financial statements of M Ltd. A's per IND AS?

Illustration 20

Flying Airways Ltd is a company which manufactures aircraft parts and engines and sells them to large multinational companies like Boeing and Airbus Industries.

On 1 April 2011, the company began the construction of a new production line in its aircraft parts manufacturing shed. Costs relating to the production line are as follows:

Details	₹ in '000
Costs of the basic materials (list price ₹ 12.5 million less a 20% trade discount)	10,000
Recoverable goods and services taxes incurred not included in the purchase cost	1,000
Employment costs of the construction staff for the three months to 30 th June, 2011	1,200
Other overheads directly related to the construction	900
Payments to external advisors relating to the construction	500
Expected dismantling and restoration costs	2,000

Additional Information:

The construction staff was engaged in the production line, which took two months to make ready for use and was brought into use on 31 May 2012.

The other overheads were incurred in the two months period ended on 31 May 2011. They included an abnormal cost of ₹3,00,000 caused by a major electrical fault.

The production line is expected to have a useful economic life of eight years. At the end of that time Flywing Airways Ltd is legally required to dismantle the plant in a specified manner and restore its location to an acceptable standard. The amount of ₹2 million mentioned above is the amount that is expected to be incurred at the end of the useful life of the production line. The appropriate rate to use in any discounting calculations is 5%. The present value of Re.1 payable in eight years at a discount rate of 5% is approximately ₹ 0.68.

Four years after being brought into use, the production line will require a major overhaul to ensure that it generates economic benefits for the second half of its useful life. The estimated cost of the overhaul, at current prices, is ₹ 3 million.

The Company computes its depreciation charge on a monthly basis. No impairment of the plant had occurred by 31 March 2012.

Analyze the accounting implications of costs related to production line to be recognized in the balance sheet and profit and loss for the year ended 31 March, 2012.

Illustration 21

On 1st April, 2011, Sun Ltd. purchased some land for ₹ 1,00,00,000 (including legal costs of ₹ 10,00,000) in order to construct a new factory. Construction work commenced on 1st May, 2011. Sun Ltd. incurred the following costs in relation with its construction:

- Preparation and leveling of the land - ₹ 3,00,000
- Purchase of materials for the construction - ₹ 60,80,000 in total
- Employment costs of the construction workers - ₹ 2,00,000 per month
- Overhead costs incurred directly on the construction of the factory - ₹ 1,00,000 per month
- Ongoing overhead costs allocated to the construction project using the company's normal overhead allocation model - ₹ 50,000 per month
- Income received during the temporary use of the factory premises as a car park during the construction period - ₹ 50,000
- Costs of relocating employees to work at the new factory - ₹ 3,00,000
- Costs of the operating ceremony on 31st January, 2012 - ₹ 1,50,000

The factory was completed on 30th November, 2011 (which is considered as substantial period of time as per IND AS 23) and production began on 1st February, 2012. The overall useful life of the factory building was estimated at 40 years from the date 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 price 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 direction estimates that the cost of demolition in 40 years time (based on prices prevailing at that time) will be ₹ 2,00,00,000. An annual risk adjusted discount rate which is appropriate to this project is 8%. The present value of ₹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 ₹ 1,75,00,000 taken out on 1st April, 2011. The loan was at an annual rate of interest of 6%. Sun Ltd. received investment income of ₹ 1,00,000 on the temporary investment of the proceeds.

Required:

Compute the carrying amount of the factory in the Balance Sheet of Sun Ltd. at 31st March, 2012. You should explain your treatment of all the amounts referred to in this part in your answer.

Change in Provision for Site Restoration/Decommissioning (Under Cost Model)

An Entity is required to include in the cost of items of P.P.E the initial estimate of costs of dismantling and removing the item and restoring the site on which it is located. The initial estimate is correspondingly recognized as liability in accordance with IND AS 37. Initial measurement thus is as per the provisions of IND AS 37.

In previous example of site restoration the change in provision value was happening because of passage of time. Therefore that change we recognized as Finance Cost

What if estimate of site restoration obligation is changing?

In such a case, the change is not only because of change in time but because estimate amount is itself changing. In such case present value of the change in estimate should be adjusted against the cost of P.P.E. in the year when estimate change. This is because, the change in provision is due to an increase in the estimated expenditure and not due to passage of time merely.

The change in provision makes asset more expensive or cheaper as higher/lower amount will have to be paid in future. Therefore, the present value of these changes needs to be adjusted against P.P.E. and cannot be shown as Finance cost.

In our example, we initially estimate at 50

Year	Op	Interest @ 10%	C.C.
1	19.25	1.93	21.18
	(50 × 0.385)		
2	21.18	2.11	23.30
			(50 × 0.4665)

Now in Y2 estimates is changed to 60

Now in Y2 calculating amount of provision should be 60 × 0.4665 i.e. 27.99

Difference between 23.30 and 27.99 i.e. 4.60 is attributable to change in estimate or you can say P.V. of Rs 10 to 8 years is 4.68. We can say our cost increased by 10, but not 10 but P.V. of 10 over 8 years.

Journal Entry:

P.P.E. A/c.....	Dr.	4.68	
To Provision for Depreciation A/c			4.68

Illustration 22

An entity has a nuclear power plant and a related decommissioning liability. The nuclear power plant started operating on 1st April, 2001. The plant has a useful life of 40 years. Its initial cost was ₹ 1,20,000 which included an amount for decommissioning costs of ₹ 10,000, which represented ₹ 70,400 estimated cash flows payables in 40 years discounted at a risk-adjusted rate of 5 per cent. The entity's financial year ends on 31st March. On March, 2011, the net present 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 in the year 2011, if it adopts cost model?

Change in Provision for Site Restoration/Decommissioning under Revaluation model

Let's understand this concept with help of an example:

Mr A purchased a property
 OC → ₹ 100 (Site Restoration ₹ 10 CPU)
 Life 10 years

Initial Recognition of Asset is always at cost

Y0

P.P.E. A/c.....	Dr.	110	
To Bank A/c			100
To Provision A/c			10

Balance Sheet end of the year

Provision	10	P.P.E.	110
(+) Finance Cost	1	(-) Depreciation	(11)
	11		99

(Y1 WDV)

Now if we follow Revaluation model and FV given is 99

While calculating the amount of revaluation during the year, we usually compare the Fair Value 99 with the WDV 99. However when there are dismantling obligations, buyer will quote the Fair value considering asset for value as well as present value of decommissioning liability. This is because buyer purchases the asset; he would also take over the dismantling obligations. Therefore Fair value of 99 which is quoted by buyer will be fair value for Net Assets (Asset- Decommissioning Obligation) unless otherwise given

FV of Asset	110	(This is the amount buyer is really paying for the asset)
(-) P.V. of Liability	11	(Note 1)
Net	99	This is FV at which he is buying Asset and Liability Both

Note 1

The value of dismantling liability at each Balance Sheet date should be first calculated after considering unwinding and PV of change in estimate if any and the revised value after considering the above adjustments should be used to calculate fair value of asset. In Previous sum since you know about some better method because of which liability can be reduced by 8,000. So even he must be aware of the technique and must have quoted 99 after remeasuring liabilities.

Therefore,

Fair Value of Asset only	xx
(-) PV of Decommissioning Liability	(xx)

FV of Net Assets (Given in Question) xx

The fair value of the asset can be back calculated by substituting the given fair value for net assets and the present value of dismantling liability.

1. The value of dismantling liability at each balance sheet date should first be calculated after considering the unwinding and the present value of changes in estimate (if any) and the revised value after considering the above adjustments can be used to back calculate the Fair value of Asset only.

Illustration 23

An entity has a nuclear power plant and a related decommissioning liability. The nuclear power plant started operating on 1st April, 2001. The plant has a useful life of 40 years. Its initial cost was ₹ 1,20,000. This included an amount for decommissioning costs of ₹ 10,000, which represented ₹ 70,400 in estimated cash flows payables in 40 years discounted at a risk adjusted rate of 5 per cent. The entity's financial year ends on 31st March. Assume that a market-based discounted cash flow valuation of ₹ 1,15,000 is obtained at 31st March, 2004. This valuation is after deduction of an allowance of ₹ 11,600 for decommissioning costs, which represents no change to the original estimate, after the unwinding of three years discount. On 31st March, 2005, the entity estimates that as a result of technological advances, the present value of the decommissioning liability has decreased by ₹ 5,000. The entity decides that a full valuation of the asset is needed at 31st March, 2005, in order to ensure that the carrying amount does not differ materially from fair value. The asset is now valued at ₹ 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?

Impairment

To determine whether an item of P.P.E is impaired, an entity applies Ind AS 36, *Impairment of Assets*. Ind AS 36 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

Compensation for Impairment

Compensation from third parties for items of P.P.E. impaired, lost or given up shall be included in profit and loss when compensation becomes receivables.

Impairment loss of P.P.E.
Impairment
↓
As per IND AS 36

Derecognition
↓
As per IND AS 16

Related Claims
Compensation
↓
P/L when becomes receivables

Subsequent Purchase
Cost of PPE restored Purchase
↓
IND AS 16

Illustration 24

X Ltd. has a machine which got damaged due to fire as on 31st January, 2011. The carrying amount of machine was ₹ 1,00,000 on that date. X Ltd. sold the damaged asset as scrap for ₹ 10,000. X Ltd. has insured the same asset against damage. As on 31st March, 2011, the compensation proceeds was still in process but the insurance company has confirmed the claim. Compensation of ₹ 50,000 is receivable from the insurance company. How X Ltd. will account for the above transaction?

Derecognition

The carrying amount of an item of P.P.E should be derecognized when it is:

- Disposed
- No future economic benefits are expected from its use or disposal.

Disposal of an asset take place by Sale, by donation or by entering into financial lease (When asset is given on finance lease, it is derecognized and a finance lease receivable is recognized in accordance with IND AS 116)

The resultant gain or losses should be included in profit or loss (calculated as the difference between net disposal proceeds, if any and the carrying amount of the asset)

Illustration 25

Mr. X is the financial controller of ABC Ltd., a listed entity which prepares consolidated financial statements in accordance with IND AS. Mr. X has recently produced the final draft of the financial statements of ABC Ltd. for the year ended 31st March, 2018 to the managing director Mr. Y for approval. Mr. Y, who is not an accountant, had risen following queries from Mr. X after going through the draft financial statements:

The notes to the financial statements state that plant and equipment is held under the 'cost model'. However, property which is owner occupied is revalued annually to fair value. Changes in fair value are sometimes reported in profit or loss but usually in 'other comprehensive income'. Also, the amount of depreciation charged on plant and equipment as a percentage of its carrying amount is much higher than for owner occupied property. Another note states that property owned by ABC Ltd. but rent out to others is depreciated annually and not fair valued. Mr. Y is of the opinion that there is no consistent treatment of PPE items in the accounts.