# CHAPTER 8
# PROPERTY, PLANT AND EQUIPMENT (IND AS 16)

## QUESTIONS FROM ICAI STUDY MATERIAL

**Q1:** On 1st April 20X1, an item of property is offered for sale at ₹ 10 million, with payment terms being three equal installments of ₹ 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. ₹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.

**Ans:** 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:

| | | | |
|---|---|---|---|
| **On 1st April 20X1** | | (INR) | (INR) |
| Property, Plant and Equipment | Dr. | 95,00,000 | |
| To Cash | | | 33,33,333 |
| To Accounts Payable | | | 61,66,667 |
| (Initial recognition of property) | | | |
| **On 31st March 20X2** | | | |
| 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) | | | |
| **On 31st March 20X3** | | | |
| 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) | | | |

Working Notes:

1) Calculation of cash price equivalent at initial recognition

| Year | Payment | Discounting factor @ 5.36% | Present value |
|---|---|---|---|
| 1.4.20X1 | 33,33,333 | 1.000 | 33,33,333 |
| 31.3.20X2 | 33,33,333 | 0.949 | 31,63,333 |

| | | | |
|---|---|---|---|
| 31.3.20X3 | 33,33,334 | 0.901 | 30,03,334 |
| Initial date cash price equivalent | 1,00,00,000 | | 95,00,000 |

2) Calculation of interest expenses

| Year | Opening balance (a) | Interest @ 5.36% (b) = (a) x 5.36% | Total paymentat year beginning (c) | Principal amount in the instalment (d) = (c) – (b) | Closing balance (e) = (a) - (d) |
|---|---|---|---|---|---|
| 1.4.20X1 | 95,00,000 | - | 33,33,333 | 33,33,333 | 61,66,667 |
| 31.3.20X2 | 61,66,667 | 3,30,533 | 33,33,333 | 30,02,800 | 31,63,867 |
| 31.3.20X3 | 31,63,867 | 1,69,467* | 33,33,334 | 31,63,867 | Nil |

*Difference of116 [(31,63,867 x 5.36%) – (33,33,334 - 31,63,867)] is due to approximation.

**Q2:** 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 and pass Journal Entry.

**Ans:** Provided that the transaction has commercial substance, the entity should recognised the private jet at a cost of ₹ 18 million (its fair value) and should recognise a profit on disposal of the land and building of ₹ 5 million, calculated as follow:

| | | (₹ 000) |
|---|---|---|
| Fair value of Asset acquired | | 18,000 |
| Less: Carrying amount of land and building disposed | | (10,000) |
| Cash Paid | | (3,000) |
| Profit on exchange of assets | | 5,000 |
| 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 |

**Q3:** Jupiter Ltd. has an item of plant with an initial cost of ₹ 100,000. 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 for revelation of PPE?

**Ans:** **Method – I:**

| | | | |
|---|---|---|---|
| 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:**

| | | | |
|---|---|---|---|
| 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 |

**Q4:** Venus 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. Venus's Ltd. management want to apply the Ind AS 16 revaluation model to the 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?

**Ans:** Venus's Ltd. management can apply the revaluation model to just 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.

Ind AS 16 permits assets to be revalued on a class-by-class basis (Ind AS 16).

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. Separate disclosure of the two classes must be given in accordance with Ind AS 16.

**Q5:** An item of PPE was purchased for ₹ 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 ₹ 9,60,000. The useful life remains unchanged at ten years.

Show the necessary treatment as per Ind AS 16 to calculate depreciation and revaluation surplus for 2003-2004 if entity has availed the option given by IND AS of transferring some of the surplus as the assets is used by the entity.

**Ans:** **Calculation of Additional Depreciation:**

| | |
|---|---|
| Actual depreciation for 20X3-20X4 based on revalued amount (9,60,000/8) | 1,20,000 |
| Depreciation for 20X3-20X4 based on historical cost (9,00,000/10) | (90,000) |
| Additional Depreciation | 30,000 |

In the profit or loss for 20X3-20X4, a depreciation expense of ₹ 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 31 March 20X4 will therefore be as follows:

| | |
|---|---|
| Balance arising on revaluation (9,60,000 – 7,20,000) | 2,40,000 |
| Transfer to retained earnings | (30,000) |
| | 2,10,000 |

**Q6:** An asset which cost ₹ 10,000 was estimated to have a useful life of 10 years and residual value ₹ 2000. After two years, useful life was revised to 4 remaining years. Calculate the depreciation charge.

**Ans:**

| | **Year-1** | **Year-2** | **Year-3** |
|---|---|---|---|
| Cost | 10,000 | 10,000 | 10,000 |
| Less: Accumulated Depreciation | (800) | (1,600) | (3,200) |
| Carrying Amount | 9,200 | 8,400 | 6,800 |
| Charges for year | (10,000-2000)/10 | (10,000-2000)/10 | (8,400-2,000)/4 |
| | 800 | 800 | 1,600 |

**Q7:** An entity acquired an asset 3 years ago at a cost of ₹ 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.

**Ans:** 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 1 to 11 will be as follows:**

| | |
|---|---|
| Year 1 | ₹ 500,000 |
| Year 2 | ₹ 450,000 |
| Year 3 | ₹ 405,000 |
| Year 4 to Year 11 (36,45,000 /8) | ₹ 455,625 p.a. |

Note: In the given question reassessment is the done at the end of year 3 for the remaining useful life, hence depreciation is reassessed from 4th year.

Working Note:

| Year | Opening balance of asset (a) | Depreciation @ 10% on (a) | Closing balance of asset (c) = (a)- (b) |
|---|---|---|---|
| 1 | 50,00,000 | 5,00,000 | 45,00,000 |
| 2 | 45,00,000 | 4,50,000 | 40,50,000 |
| 3 | 40,50,000 | 4,05,000 | 36,45,000 |

Year 3 onwards method of depreciation has been changed from reducing balance method to straight line method for which it is assessed that the remaining useful life is 8 years. Hence revised depreciation would be calculated as follows:

Revised depreciation as per straight line method = (Carrying amount as at the end of the 3rd year

= Residual value) / Remaining useful life

= 36,45,000 / 8 years =

= 4,55,625 per annum (for year 4 to year 11)

**Q8:** MS Ltd. has acquired a heavy machinery at a cost of ₹ 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 ₹ 45,00,000. The discount rate is assumed to be 5%.

Can the cost of the new turbine be recognised as an asset, and, if so, what treatment should be used? **[MTP Nov 2023]**

**Ans:** 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 — ₹ 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, ₹ 45,00,000 discounted back six years amounts to ₹ 33,57,900 [₹ 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 ₹ 13,43,160 would be derecognised from the books of account, (i.e., Original Cost ₹ 33,57,900 as reduced by accumulated depreciation for past 6 years ₹ 20,14,740, assuming depreciation is charged on straight-line basis.)

The cost of the new turbine, ₹ 45,00,000 would be added to the cost of machine, resulting in a revision of carrying amount of machine to ₹ 71,56,840. (i.e., ₹ 40,00,000* – ₹ 13,43,160 + ₹ 45,00,000).

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

**Q9:** Flywing 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 20X1, 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** | **Amount ₹'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 June 20X1 | 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 20X1.

The other overheads were incurred in the two months period ended on 31 May 20X1. 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 Re.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 20X2.

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, 20X2. **[MTP May 20; May 25]**

**Ans: Statement showing Cost of production line:**

| Particulars | Amount ₹'000 |
|---|---|
| Purchase cost | 10,000 |
| Goods and services tax – recoverable goods and services tax not included | - |
| Employment costs during the period of getting the production line ready for use (1,200 x 2 months / 3 months) | 800 |
| Other overheads – abnormal costs | 600 |
| Payment to external advisors – directly attributable cost | 500 |
| Dismantling costs – recognized at present value where an obligation exists (2,000 x 0.68) | 1,360 |
| Total | 13,260 |

**Carrying value of production line as on 31st March, 20X2:**

| Particulars | Amount ₹ '000 |
|---|---|
| Cost of Production line | 13,260 |
| Less: Depreciation (W.N.1) | (1,694) |
| Net carrying value carried to Balance Sheet | 11,566 |

**Provision for dismantling cost:**

| Particulars | Amount ₹ '000 |
|---|---|
| Non-current liabilities | 1,360 |
| Add: Finance cost (WN3) | 57 |
| Net book value carried to Balance Sheet | 1,417 |

**Extract of Statement of Profit & Loss**

| Particulars | Amount ₹ '000 |
|---|---|
| Depreciation (W.N.1) | 1,694 |
| Finance cost (W.N.2) | 57 |
| Amounts carried to Statement of Profit & Loss | 1,751 |

**Extract of Balance Sheet**

| Particulars | Amount ₹ '000 |
|---|---|
| **Assets**<br>Non-current assets | |
| Property, plant and equipment | 11,566 |
| **Equity and liabilities** | |
| Non-current liabilities | |
| Other liabilities | |
| Provision for dismantling cost | 1417 |

**1. Calculation of depreciation charge**

| Particulars | Amount ₹ '000 |
|---|---|
| In accordance with Ind AS 16 the asset is split into two depreciable components: Out of the total capitalization amount of 13,260,<br>Depreciation for 3,000 with a useful economic life (UEL) of four years (3,000x ¼ x10/12).<br>This is related to a major overhaul to ensure that it generates economic benefits for the second half of its useful life | 625 |
| For balance amount, depreciation for 10,260 with an useful economic life (UEL) of eight years will be : 10,260 x 1/8 x 10/12 | 1,069 |
| Total (To Statement of Profit & Loss for the year ended 31st March 20X2) | 1,694 |

**2. Finance costs**

| Particulars | Amount ₹ '000 |
|---|---|
| **Unwinding of discount (Statement of Profit and Loss – finance cost)**<br>1,360 x 5% x 10/12 | 57 |
| To Statement of Profit & Loss for the year ended 31st March 20X2 | 57 |

| **Q10:** | **On April 1, 20X1, 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 | 5,00,000 |
| | Purchase of a 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 April 20, 20X1.

The machines were operating below capacity for 4 months. During this period, production cost of ₹ 2,00,000 per month was being incurred. The proceeds from sales was ₹ 1,50,000 per month. Similarly, the proceeds of sales from pre-production testing was ₹ 1,00,000.

At what cost the asset will be recognised? **[IBS CS2]**

**Ans:** In accordance with Ind AS 16, all costs required to bring an asset to its present location and condition for its intended use should be capitalised. Therefore, the initial purchase price of the asset should be:

| | ₹ |
|---|---|
| List price | 80,00,000 |
| Less: trade discount (10%) | (8,00,000) |
| | 72,00,000 |
| Import duty | 5,00,000 |
| Delivery fees | 1,00,000 |
| Electrical installation costs | 10,00,000 |
| Pre-production testing (Net of Sale Proceeds of ₹ 1,00,000) | 4,00,000 |
| Total amount to be capitalised at April 1, 20X1 | **92,00,000** |

Maintenance contract is a separate contract to get service, therefore, the maintenance contract cost of ₹ 7,00,000 should be taken as a prepaid expense and charged to the profit or loss over a period of 5 years.

In addition the settlement discount received of ₹ 3,60,000 (₹ 72,00,000 x 5%) is to be shown as other income in the profit or loss.

The operating loss incurred after commercial launch cannot be capitalised. Hence those figures are being ignored.

**Q11:** X Limited started construction on a building for its own use on April 1, 20X0. 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 20X0 and it is estimated that ₹ 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 ₹ 40,00,000 on April 1, 20X0 for construction of the building. 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?

**Ans:** 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.

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

| | |
|---|---|
| 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 | Nil |
| Total to be capitalized | 45,78,000 |

*Period for Construction of building is not a substantial period (i.e. 9 months), borrowing cost are not eligible for capitalisation.

**Q12:** XYZ Ltd. purchased an asset on January 1, 20X0, for ₹ 1,00,000 and the asset had an estimated useful life of ten years and a residual value of ₹ nil. The company has charged depreciation using the straight-line method at ₹ 10,000 per annum. On January 1, 20X4, 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?

**Ans:** Change in useful economic life of an asset is change in accounting estimate, which is to be applied prospectively, i.e., the depreciation charge will need to be recalculated. On January 1, 20X4, when the asset's net book value is ₹ 60,000. The company should amend the annual provision for depreciation to charge the unamortised cost (namely, ₹ 60,000) over the revised remaining life of four years. Consequently, it should charge depreciation for the next four years at ₹ 15,000 per annum.

**Q13:** On 1 April 20X1, Sun ltd purchased some land for ₹ 10 million (including legal costs of ₹ 1 million) 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 – ₹ 3,00,000.
- Purchase of materials for the construction – ₹ 6·08 million 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 – ₹ 300,000.
- Costs of the opening ceremony on 31 January 20X1 – ₹ 150,000.

The factory was completed on 30 November 20X1 (which is considered as substantial period of time as per Ind AS 23) 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 ₹ 20 million. 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 4·6 cents.

The construction of the factory was partly financed by a loan of ₹ 17·5 million 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 ₹ 100,000 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.

**[Exam Nov 2018 (8 Marks); MTP Nov 2021]**

**Ans: Computation of the cost of the factory**

| Description | Included in P.P.E. ₹'000 | 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 levelling | 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 | 612.50 | Capitalise the interest cost incurred in a seven-month period (purchase of land would not trigger off capitalisation since land is not a qualifying asset. Infact, the construction started from 1st May, 2011) |
| Investment income on temporary investment of the loan proceeds | (100) | offset against the amount capitalised |
| Demolition cost recognised as a provision | 920 | Where an obligation must recognise as part of the initial cost |
| Total | 19,912.50 | |
| **Computation of accumulated depreciation** | | |
| Total depreciable amount | 9,912.50 | All of the net finance cost of 512.50 (612.50 – 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: | 49.56 | 9,912.50 x 30% x 1/20 x 4/12 |
| Depreciation of roof component | 57.82 | 9,912.50 x 70% x 1/40 x 4/12 |
| Total depreciation | 107.38 | |
| Computation of carrying amount | 19,805.12 | 19,912.50 – 107.38 |

**Q14:** H Limited purchased an item of PPE costing ₹ 100 million which has useful life of 10 years. The entity has a contractual decommissioning and site restoration obligation, estimated at ₹ 5 million to be incurred at the end of 10th year. The current market based discount rate is 8%.

The company follows SLM method of depreciation. H Limited follows the Cost Model for accounting of PPE.

Determine the carrying value of an item of PPE and decommissioning liability at each year end when

a) There is no change in the expected decommissioning expenses, expected timing of incurring the decommissioning expense and / or the discount rate

b) At the end of Year 4, the entity expects that the estimated cash outflow on account of decommissioning and site restoration to be incurred at the end of the useful life of the asset will be ₹ 8 million (in place of ₹ 5 million, estimated in the past).

Determine in case (b), how H Limited need to account for the changes in the decommissioning liability?

**Ans:** The present value of such decommissioning and site restoration obligation at the end of 10th year is ₹ 2.32 million [being 5 / (1.08)10]. H Limited will recognise the present value of decommissioning liability of ₹ 2.32 million as an addition to cost of PPE and will also recognize a corresponding decommissioning liability. Further, the entity will recognise the unwinding of discount as finance charge.

a) The following table shows the relevant computations, if there is no change in the expected decommissioning expenses, expected timing of incurring the decommissioning expense and / or the discount rate:

| Year | Opening Amount of PPE | Depreciation Charge (on SLM) for 10 Years | Carrying Amount of PPE at the end of the year | Opening Decommissioning Liability | Unwinding of Interest @ 8% | Closing Decommissioning Liability |
|---|---|---|---|---|---|---|
| 1 | 102.32 | 10.23 | 92.08 | 2.32 | 0.19 | 2.50 |
| 2 | 92.08 | 10.23 | 81.85 | 2.50 | 0.20 | 2.70 |
| 3 | 81.85 | 10.23 | 71.62 | 2.70 | 0.22 | 2.92 |
| 4 | 71.62 | 10.23 | 61.39 | 2.92 | 0.23 | 3.15 |
| 5 | 61.39 | 10.23 | 51.16 | 3.15 | 0.25 | 3.40 |
| 6 | 51.16 | 10.23 | 40.93 | 3.40 | 0.27 | 3.68 |
| 7 | 40.93 | 10.23 | 30.69 | 3.68 | 0.29 | 3.97 |
| 8 | 30.69 | 10.23 | 20.46 | 3.97 | 0.32 | 4.29 |
| 9 | 20.46 | 10.23 | 10.23 | 4.29 | 0.34 | 4.63 |
| 10 | 10.23 | 10.23 | - | 4.63 | 0.37 | 5.00 |
| **Total** | | **102.32** | | | **2.68** | |

b) The changes to the estimate of expected decommissioning obligation:

- The present value of the decommissioning liability at the end of Year 4 works out to be ₹ 5.04 million [being 8 / (1.08)6].

- As against this, the carrying amount of decommissioning liability at the end of Year 4 is ₹ 3.15 million (as computed above).
- The changes in the decommissioning liability of ₹ 1.89 million (being ₹ 5.04 million less ₹ 3.15 million) shall be added to the cost of the asset in the current period and the related provision for decommissioning liability is also adjusted.
- The journal entry will be:

| | | |
|---|---|---|
| PPE | Dr. | ₹ 1.89 million |
| To Provision for decommissioning liability | | ₹ 1.89 million |

The following table shows the calculations for years 5 - 10:

| Year | Opening Amount of PPE | Depreciation Charge SLM – 10 Years | Carrying Amount of PPE at end of the year | Opening Decommissioning Liability | Unwinding of Interest @8% | Closing Decommissioning Liability |
|---|---|---|---|---|---|---|
| 5 | 63.28 | 10.55 | 52.73 | 5.04 | 0.40 | 5.44 |
| 6 | 52.73 | 10.55 | 42.19 | 5.44 | 0.44 | 5.88 |
| 7 | 42.19 | 10.55 | 31.64 | 5.88 | 0.47 | 6.35 |
| 8 | 31.64 | 10.55 | 21.09 | 6.35 | 0.51 | 6.86 |
| 9 | 21.09 | 10.55 | 10.55 | 6.86 | 0.55 | 7.41 |
| 10 | 10.55 | 10.55 | - | 7.41 | 0.59 | 8.00 |
| **Total** | | **63.28** | | | **2.96** | |

Note that in the above table:

- Opening amount of PPE at the beginning of Year 5 is computed as ₹ 63.28 million (being carrying amount of ₹ 61.39 million at the end of Year 4 plus increase of ₹ 1.89 million arising due to increase in the present value of the decommissioning liability at the end of Year 4).
- The revised carrying amount of PPE (at ₹ 63.28 million) at the beginning of Year 5 will be depreciated over the balance 6 years of the useful life).
- Opening decommissioning liability at the beginning of Year 5 is computed as ₹ 5.04 million (being carrying amount of ₹ 3.15 million at the end of Year 4 plus increase of ₹ 1.89 million).
- Since the entity has adjusted the increase in the decommissioning liability against the carrying amount of PPE, it needs to evaluate whether the new carrying amount (in this case, ₹ 63.28 million) is recoverable. If not, it will give rise to impairment loss, to be accounted for under Ind AS 36.

**Q15:** ABC Ltd. is 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 for deferred credit | ₹2,00,000 |
| 6. | Estimated dismantling costs to be incurred after 7 years | ₹3,00,000 |
| 7. | Operating losses before commercial production | ₹4,00,000 |

**Ans:** According to Ind AS 16, these costs can be capitalized:

| | | |
|---|---|---|
| 1. | Cost of the plant | ₹ 25,00,000 |
| 2. | Initial delivery and handling costs | ₹ 2,00,000 |
| 3. | Cost of site preparation | ₹ 6,00,000 |
| 4. | Consultants' fees | ₹ 7,00,000 |
| 5. | Estimated dismantling costs to be incurred after 7 years | ₹ 3,00,000 |
| | | ₹ 43,00,000 |

- Note: Interest charges paid on "Deferred credit terms" to the supplier of the plant (not a qualifying asset) of ₹ 2,00,000 and operating losses before commercial production amounting to ₹ 4,00,000 are not regarded as directly attributable costs and thus cannot be capitalized. They should be written off to the Statement of Profit and Loss in the period they are incurred.

**Q16:** B Ltd. owns an asset with an original cost of ₹ 2,00,000. On acquisition, management determined that the useful life was 10 years and the residual value would be ₹ 20,000. The asset is now 8 years old, and during this time there have been no revisions to the assessed residual value.

At the end of year 8, management has reviewed the useful life and residual value and has determined that the useful life can be extended to 12 years in view of the maintenance program adopted by the company. As a result, the residual value will reduce to ₹ 10,000.

How would the above changes in estimates be made by B Ltd.?

**Ans:** The above changes in estimates would be effected in the following manner:

- The asset has a carrying amount of ₹ 56,000 at the end of year 8 [₹ 2,00,000 – ₹ 1,44,000] i.e. Accumulated Depreciation.
- Accumulated depreciation is calculated as
- Depreciable amount {Cost less residual value} = ₹ 2,00,000 – ₹ 20,000 = ₹ 1,80,000.
- Annual depreciation = Depreciable amount / Useful life = 1,80,000 / 10 = ₹ 18,000.
- Accumulated depreciation = 18,000 × No. of years (8) = ₹ 1,44,000.
- Revision of the useful life to 12 years results in a remaining useful life of 4 years (12 – 8).
- The revised depreciable amount is ₹ 46,000. (56,000 – 10,000)

- Thus, depreciation should be charged in future at ₹ 11,500 per annum (₹ 46,000/4 years).

**Q17:** X Ltd. has a machine which got damaged due to fire as on January 31, 20X1. 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 March 31, 20X1, 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?

**Ans:** 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 ₹ 90,000. (i.e., carrying amount of ₹ 1,00,000 – realised amount of ₹ 10,000)

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

**Q18:** 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 ₹ 1,20,000 which included an amount for decommissioning costs of ₹ 10no,000, which represented ₹ 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 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?

**Ans:** On March 31, 2027, the plant is 10 years old. Accumulated depreciation is ₹ 30,000 (₹ 120,000 × 10/years). Because of the unwinding of discount (5 per cent) over the 10 years, the decommissioning liability has increased from ₹ 10,000 to ₹ 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 ₹ 8,000. Accordingly, the entity adjusts the decommissioning liability from ₹ 16,300 to ₹ 8,300. On this date, the entity makes the following journal entry to reflect the change:

| | | ₹ | ₹ |
|---|---|---|---|
| Decommissioning liability | Dr. | 8,000 | |
| To Cost of asset | | | 8,000 |

Following this adjustment, the carrying amount of the asset is ₹ 82,000 (₹ 1,20,000 – ₹ 8,000 – ₹ 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 ₹ 2,733 (₹ 82,000 ÷ 30). The next year's finance cost for the unwinding of the discount will be ₹ 415 (₹ 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.

**Q19:** An entity has a nuclear power plant and a related decommissioning liability. The nuclear power plant started operating on April 1, 20X1. 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 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 ₹ 1,15,000 is obtained at March 31, 20X4. 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 March 31, 20X5, 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 March 31, 20X5, 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? **[MTP May 2019]**

**Ans:**

| At March 31, 20X4: | ₹ |
|---|---|
| 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 ₹ 1,15,000 plus decommissioning costs of ₹ 11,600, allowed for in the valuation but recognised as a separate liability = ₹ 1,26,600.

(2) Three years' depreciation on original cost ₹ 1,20,000 × 3/40 = ₹ 9,000 plus cumulative discount on ₹ 10,000 at 5 per cent compound = ₹ 1,600; total ₹ 10,600.

(3) Revalued amount ₹ 1,26,600 less previous net book value of ₹ 1,11,000 (cost ₹ 120,000 less accumulated depreciation ₹ 9,000).

The depreciation expense for 20X4-20X5 is therefore ₹ 3,420 (₹ 1,26,600 × 1/37) and the discount expense for 20X5 is ₹ 600. On March 31, 20X5, the decommissioning liability (before any adjustment) is ₹ 12,200. However, as per estimate of the entity, the present value of the decommissioning liability has decreased by ₹ 5,000. Accordingly, the entity adjusts the decommissioning liability from ₹ 12,200 to ₹ 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:

| | | ₹ | ₹ |
|---|---|---|---|
| Decommissioning liability | Dr. | 5,000 | |
| To Revaluation surplus | | | 5,000 |

As at March 31, 20X5, the entity revalued its asset at ₹ 1,07,000, which is net of an allowance of ₹ 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 ₹ 1,14,200. The following additional journal entry is needed:

Notes:

| | | ₹ | ₹ |
|---|---|---|---|
| Accumulated depreciation (1) | Dr. | 3,420 | |
| To Asset at valuation | | | 3,420 |
| Revaluation surplus (2) | Dr. | 8,980 | |
| To Asset at valuation (3) | | | 8,980 |

Note:

(1) Eliminating accumulated depreciation of ₹ 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) ₹ 1,26,600, less cumulative depreciation ₹ 3,420, less new valuation (before allowance for decommissioning costs) ₹ 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) ₹ 10,600 at March 31, 20X4, plus depreciation expense of ₹ 3,420 and discount expense of ₹ 600 = ₹ 14,620.

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

**Q20:** A Ltd. purchased some Property, Plant and Equipment on 1st April, 20X1, and estimated their useful lives for the purpose of financial statements prepared on the basis of Ind AS: Following were the original cost, and useful life of the various components of property, plant, and equipment assessed on 1st April, 20X1:

| Property, Plant and Equipment | Original Cost | Estimated useful life |
|---|---|---|
| Buildings | ₹ 15,000,000 | 15 years |
| Plant and machinery | ₹ 10,000,000 | 10 years |
| Furniture and fixtures | ₹ 3,500,000 | 7 years |

A Ltd. uses the straight-line method of depreciation. On 1st April, 20X4, the entity reviewed the following useful lives of the property, plant, and equipment through an external valuation expert:

| | |
|---|---|
| Buildings | 10 years |
| Plant and machinery | 7 years |
| Furniture and fixtures | 5 years |

There were no salvage values for the three components of the property, plant, and equipment either initially or at the time the useful lives were revised.

Compute the impact of revaluation of useful life on the Statement of Profit and Loss for the year ending 31st March, 20X4. **[RTP May 2018; MTP Nov 2021; Nov 2024]**

**Ans:** The annual depreciation charges prior to the change in useful life were

| | | |
|---|---|---|
| Buildings | ₹ 1,50,00,000/15 = | ₹ 10,00,000 |
| Plant and machinery | ₹ 1,00,00,000/10 = | ₹ 10,00,000 |
| Furniture and fixtures | ₹ 35,00,000/7 = | ₹ 5,00,000 |
| Total = | | ₹ 25,00,000 (A) |

The revised annual depreciation for the year ending 31st March, 20X4, would be

| | | |
|---|---|---|
| Buildings | [₹1,50,00,000 – (₹ 10,00,000 × 3)] / 10 | ₹ 12,00,000 |
| Plant and machinery | [₹ 1,00,00,000 – (₹ 10,00,000 × 3)] / 7 | ₹ 10,00,000 |
| Furniture and fixtures | [₹ 35,00,000 – (₹ 5,00,000 × 3)] / 5 | ₹ 4,00,000 |
| Total | | ₹ 26,00,000 (B) |

The impact on Statement of Profit and Loss for the year ending 31st March, 20X4

= ₹ 26,00,000 – ₹ 25,00,000 = ₹ 1,00,000

This is a change in accounting estimate which is adjusted prospectively in the period in which the estimate is amended and, if relevant, to future periods if they are also affected. Accordingly, from 20X4-20X5 onward, excess of ₹ 1,00,000 will be charged in the Statement of Profit and Loss every year till the time there is any further revision.

**Q21:** 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 raised following query 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. How should the finance controller respond to the query from the managing director?

**Ans:** Ongoing through the query raised by the Managing Director Mr. Y, the financial controller Mr. X explained the notes and reasons for their disclosures as follows:

The accounting treatment of the majority of tangible non-current assets is governed by Ind AS 16 'Property, Plant and Equipment'. Ind AS 16 states that the accounting treatment of PPE is determined on a class by class basis. For this purpose, property and plant would be regarded as separate classes. Ind AS 16 requires that PPE is measured using either the cost model or the revaluation model. This model is applied on a class by class basis and must be applied consistently within a class. Ind AS 16 states that when the revaluation model applies, surpluses are recorded in other comprehensive income, unless they are cancelling out a deficit which has previously been reported in profit or loss, in which case it is reported in profit or loss. Where the revaluation results in a deficit, then such deficits are reported in profit or loss, unless they are cancelling out a surplus which has previously been reported in other comprehensive income, in which case they are reported in other comprehensive income.

According to Ind AS 16, all assets having a finite useful life should be depreciated over that life. Where property is concerned, the only depreciable element of the property is the buildings element, since land normally has an indefinite life. The estimated useful life of a building tends to be much longer than for plant. These two reasons together explain why the depreciation charge of a property as a percentage of its carrying amount tends to be much lower than for plant.

Properties which are held for investment purposes are not accounted for under Ind AS 16, but under Ind AS 40 'Investment Property'. As per Ind AS 40, investment properties should be accounted for under a cost model. ABC Ltd. had applied the cost model and thus our investment properties are treated differently from the owner occupied property.

**Q22:** Company X performed a revaluation of all of its plant and machinery at the beginning of 2018-2019. The following information relates to one of the machinery:

| Amount | ('000) |
|---|---|
| Gross carrying amount | ₹ 200 |
| Accumulated depreciation (straight-line method) | ₹ 80 |

| | |
|---|---|
| Net carrying amount | ₹ 120 |
| Fair value | ₹ 150 |

The useful life of the machinery is 10 years and the company uses Straight line method of depreciation. The revaluation was performed at the end of the 4th year.

How should the Company account for revaluation of plant and machinery and depreciation subsequent to revaluation? Also pass journal entries in relation to the above.

**[RTP May 2019; Nov 24 Exams (5 Marks)]**

**Ans:** According to paragraph 35 of Ind AS 16, when an item of property, plant and equipment 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:

(a) The gross carrying amount is adjusted in a manner that is consistent with the revaluation of the carrying amount of the asset. For example, the gross carrying amount may be restated by reference to observable market data or it may be restated proportionately to the change in the carrying amount. The accumulated depreciation at the date of the revaluation is adjusted to equal the difference between the gross carrying amount and the carrying amount of the asset after taking into account accumulated impairment losses; or

(b) The accumulated depreciation is eliminated against the gross carrying amount of the asset.

The amount of the adjustment of accumulated depreciation forms part of the increase or decrease in carrying amount that is accounted for in accordance with the paragraphs 39 and 40 of Ind AS 16.

**If the Company opts for the treatment as per option (a),** then the revised carrying amount of the machinery will be:

| | | |
|---|---|---|
| Gross carrying amount | ₹ 250 | [(200/120) x 150] |
| Net carrying amount | ₹150 | |
| Accumulated depreciation | ₹ 100 | (₹ 250 – ₹ 150) |

**Journal entry**

| | | | |
|---|---|---|---|
| Plant and Machinery A/c (Gross Block) | Dr. | ₹ 50 | |
| To Accumulated Depreciation | | | ₹ 20 |
| To Revaluation Reserve | | | ₹ 30 |

**If the balance of accumulated depreciation is eliminated as per option (b),** then the revised carrying amount of the machinery will be as follows:

Gross carrying amount is restated to ₹150 to reflect the fair value and Accumulated depreciation is set at zero.

**Journal entry**

| | | | |
|---|---|---|---|
| Accumulated Depreciation | Dr. | ₹ 80 | |

| | | | |
|---|---|---|---|
| To Plant and Machinery A/c (Gross Block) | | | ₹ 80 |
| Plant and Machinery A/c (Gross Block) | Dr. | ₹30 | |
| To Revaluation Reserve | | | ₹ 30 |

Depreciation

**Option (a)** –Since the Gross Block has been restated, the depreciation charge will be ₹ 25 per annum (₹ 250 / 10 years).

**Option (b)** – Since the Revalued amount is the revised Gross Block, the useful life to be considered is the remaining useful life of the asset which results in the same depreciation charge of ₹ 25 per annum as per Option A (₹ 150 / 6 years).

**Q23:** An entity has the following items of property, plant and equipment:

- **Property A** — a vacant plot of land on which it intends to construct its new administration headquarters;
- **Property B** — a plot of land that it operates as a landfill site;
- **Property C** — a plot of land on which its existing administration headquarters are built;
- **Property D** — a plot of land on which its direct sales office is built;
- **Properties E1–E10** — ten separate retail outlets and the land on which they are built;
- **Equipment A** — computer systems at its headquarters and direct sales office that are integrated with the point of sale computer systems in the retail outlets;
- **Equipment B** — point of sale computer systems in each of its retail outlets;
- Furniture and fittings in its administrative headquarters and its sales office;
- Shop fixtures and fittings in its retail outlets.

How many classes of property, plant and equipment must the entity disclose? [**RTP May 2021]**

**Ans:** To answer this question one must make a materiality judgement.

Class of assets is defined as a grouping of assets of a similar nature and use in an entity's operations.

The nature of land without a building is different to the nature of land with a building. Consequently, land without a building is a separate class of asset from land and buildings. Furthermore, the nature and use of land operated as a landfill site is different from vacant land. Hence, the entity should disclose Property A separately. The entity must apply judgement to determine whether the entity's retail outlets are sufficiently different in nature and use from its office buildings, and thus constitute a separate class of land and buildings.

The computer equipment is integrated across the organisation and would probably be classified as a single separate class of asset.

Furniture and fittings used for administrative purposes could be sufficiently different to shop fixtures and fittings in retail outlets. Hence, they should be classified in two separate classes of assets.

**Q24:** Heaven Ltd. had purchased a machinery on 1.4.2X01 for ₹ 30,00,000, which is reflected in its books at written down value of ₹ 17,50,000 on 1.4.2X06. The company has estimated an upward revaluation of 10% on 1.4.2X06 to arrive at the fair value of the asset. Heaven Ltd. availed the option given by Ind AS of transferring some of the surplus as the asset is used by an enterprise.

On 1.4.2X08, the machinery was revalued downward by 15% and the company also re-estimated the machinery's remaining life to be 8 years. On 31.3.2X10 the machinery was sold for ₹ 9,35,000. The company charges depreciation on straight line method.

Prepare machinery account in the books of Heaven Ltd. over its useful life to record the above transactions. Also, Compute depreciation each after upward and downward revaluation. Also compute amount transferred from revaluation reserve till 1.4.20X8.

**[RTP Nov 2021; MTP May 2025; Exam May 2025 (6 Marks)]**

Ans: **In the books of Heaven Ltd. Machinery A/c**

| Date | Particulars | Amount | Date | Particulars | Amount |
|---|---|---|---|---|---|
| 1.4.2X01 | To Bank/ Vendor | 30,00,000 | 31.3.2X02 | By Depreciation (W.N.1) | 2,50,000 |
| | | | 31.3.2X02 | By Balance c/d | 27,50,000 |
| | | 30,00,000 | | | 30,00,000 |
| 1.4.2X02 | To Balance b/d | 27,50,000 | 31.3.2X03 | By Depreciation | 2,50,000 |
| | | | 31.3.2X03 | By Balance c/d | 25,00,000 |
| | | 27,50,000 | | | 27,50,000 |
| 1.4.2X03 | To Balance b/d | 25,00,000 | 31.3. 2X04 | By Depreciation | 2,50,000 |
| | | | 31.3.2X04 | By Balance c/d | 22,50,000 |
| | | 25,00,000 | | | 25,00,000 |
| 1.4.2X04 | To Balance b/d | 22,50,000 | 31.3.2X05 | By Depreciation | 2,50,000 |
| | | | 31.3.2X05 | By Balance c/d | 20,00,000 |
| | | 22,50,000 | | | 22,50,000 |
| 1.4.2X05 | To Balance b/d | 20,00,000 | 31.3.2X06 | By Depreciation | 2,50,000 |
| | | | 31.3.2X06 | By Balance c/d | 17,50,000 |
| | | 20,00,000 | | | 20,00,000 |
| 1.4.2X06 | To Balance b/d | 17,50,000 | 31.3.2X07 | By Depreciation (W.N.2) | 2,75,000 |

| | | | | | |
|---|---|---|---|---|---|
| 1.4.2X06 | To Revaluation Reserve @ 10% | 1,75,000 | 31.3.2X07 | By Balance c/d | 16,50,000 |
| | | 19,25,000 | | | 19,25,000 |
| 1.4.2X07 | To Balance b/d | 16,50,000 | 31.3.2X08 | By Depreciation | 2,75,000 |
| | | | 31.3.2X08 | By Balance c/d | 13,75,000 |
| | | 16,50,000 | | | 16,50,000 |
| 1.4.2X08 | To Balance b/d | 13,75,000 | 1.4.2X08 | By Revaluation Reserve (W.N.4) | 1,25,000 |
| | | | 31.3.2X09 | By Profit and Loss | 81,250 |
| | | | | A/c (W.N.5) | |
| | | 13,75,000 | 31.3.2X09 | By Depreciation (W.N.3) | 1,46,094 |
| | | | 31.3.2X09 | By Balance c/d | 10,22,656 |
| | | | | | 13,75,000 |
| 1.4.2X09 | To Balance b/d | 10,22,656 | 31.3.2X10 | By Depreciation | 1,46,094 |
| 31.3.2X10 | To Profit and Loss A/c (balancing figure) | 58,438* | 31.3.2X10 | By Bank A/c | 9,35,000 |
| | | 10,81,094 | | | 10,81,094 |

**Working Notes:**

1. Calculation of useful life of machinery on 1.4.2X01

   Depreciation charge in 5 years = (30,00,000 – 17,50,000) = ₹ 12,50,000 Depreciation per year as per Straight Line method = 12,50,000 / 5 years = ₹ 2,50,000

   Remaining useful life = ₹ 17,50,000 / ₹ 2,50,000 = 7 years Total useful life = 5 years + 7 years = 12 years

2. Depreciation after upward revaluation as on 31.3.2X06 ₹

   | | |
   |---|---|
   | Book value as on 1.4.2X06 | 17,50,000 |
   | Add: 10% upward revaluation | 1,75,000 |
   | Revalued amount | 19,25,000 |

   Remaining useful life 7 years (Refer W.N.1)

   Depreciation on revalued amount = 19,25,000 / 7 years = ₹ 2,75,000 lakh

3. Depreciation after downward revaluation as on 31.3.2X08 ₹

   | | |
   |---|---|
   | Book value as on 1.4.2X08 | 13,75,000 |
   | Less: 15% Downward revaluation | (2,06,250) |
   | Revalued amount | 11,68,750 |

Revised useful life 8 years

Depreciation on revalued amount = 11,68,750 / 8 years = ₹ 1,46,094

4. Amount transferred from revaluation reserve

| | |
|---|---|
| Revaluation reserve on 1.4.2X06 (A) | ₹ 1,75,000 |
| Remaining useful life | 7 years |
| Amount transferred every year (1,75,000 / 7) | ₹25,000 |
| Amount transferred in 2 years (25,000 x 2) (B) | ₹ 50,000 |
| Balance of revaluation reserve on 1.4.2X08 (A-B) | ₹ 1,25,000 |

5. Amount of downward revaluation to be charged to Profit and Loss Account

| | |
|---|---|
| Downward revaluation as on 1.4.2X08 (W.N.3) | ₹ 2,06,250 |
| Less: Adjusted from Revaluation reserve (W.N.4) | (₹ 1,25,000) |
| Amount transferred to Profit and Loss Account | ₹ 81,250 |

## QUESTIONS FROM RTP/MTP/EXAMS

**Q25:** On 1st October, 2017, A Ltd. completed the construction of a power generating facility. The total construction cost was ₹ 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 at 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 a reputation for conducting its business in an environmentally 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' time (based on prices prevailing at that time) would be ₹ 1,00,00,000. A relevant annual discount rate to use in any discounting calculations is 5%. When the annual discount rate is 5%, the present value of ₹ 1 receivable in 40 years' time is approximately 0.142.

Analyse 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. **[RTP Nov 2018; Nov 2024]**

**Ans:** All figures are ₹ in '000.

The power generating facility should be depreciated from the date it is ready for use, rather than when it would actually start being used. In this case, then, the facility should be depreciated from 1st October, 2017.

Although A Ltd. has no legal obligation to restore the piece of land, it does have a constructive obligation, based on its past practice and policies.

The amount of the obligation will be 1,420, being the present value of the anticipated future restoration expenditure (10,000 x 0.142).

This will be recognised as a provision under non-current liabilities in the Balance Sheet of A Ltd. at 31st March, 2018.

As time passes the discounted amount unwinds. The unwinding of the discount for the year ended 31st March, 2018 will be 35.5 (1,420 x 5% x 6/12).

The unwinding of the discount will be shown as a finance cost in the statement of profit or loss and the closing provision will be 1,455.50 (1,420 + 35.5).

The initial amount of the provision is included in the carrying amount of the non-current asset, which becomes 21,420 (20,000 + 1,420).

The depreciation charge in profit or loss for the year ended 31st March, 2018 is 267.75 (21,420 x 1/40 x 6/12).

The closing balance included in non-current assets will be 21,152.25 (21,420 – 267.75).

**Q26:** ABC Ltd is setting up a new refinery outside the city limits. In order to facilitate the construction of the refinery and its operations, ABC Ltd. is required to incur expenditure on the construction/development of railway siding, road and bridge. Though ABC 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 ABC Ltd. can capitalise expenditure incurred on these items as property, plant and equipment (PPE)?

If yes, how should these items be depreciated and presented in the financial statements of ABC Ltd. as per Ind AS? **[RTP Nov 2018; Exam Nov 2019]**

**Ans:** Paragraph 7 of Ind AS 16 states that the cost of an item of property, plant and equipment shall be recognised as an asset if, and only if:

(a) it is probable that future economic benefits associated with the item will flow to the entity; and

(b) the cost of the item can be measured reliably.

Further, paragraph 9 provides that the standard does not prescribe the unit of measure for recognition, i.e., what constitutes an item of property, plant and equipment. Thus, judgement is required in applying the recognition criteria to an entity's specific circumstances.

Paragraph 16, inter alia, states that the cost of an item of property, plant and equipment comprise any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

In the given case, railway siding, road and bridge are required to facilitate the construction of the refinery and for its operations. Expenditure on these items is required to be incurred in order to get future economic benefits from the project as a whole which can be considered as the unit of measure for the purpose of capitalisation of the said expenditure even though the company cannot restrict the access of others for using the assets individually. It is apparent that the aforesaid expenditure is 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.

In view of this, even though ABC Ltd. may not be able to recognize expenditure incurred on these assets as an individual item of property, plant and equipment in many cases (where it cannot restrict others from using the asset), expenditure incurred may be capitalised as a part of overall cost of the project. From this, it can be concluded that, in the extant case the expenditure incurred on these assets, i.e., railway siding, road and bridge, should be considered as the cost of constructing the refinery and accordingly, expenditure incurred on these items should be allocated and capitalised as part of the items of property, plant and equipment of the refinery.

**Depreciation**

As per paragraph 43 and 47 of Ind AS 16, if these assets have a useful life which is different from the useful life of the item of property, plant and equipment to which they relate, it should be depreciated separately. However, if these assets have a useful life and the depreciation method that are the same as the useful life and the depreciation method of the item of property, plant and equipment to which they relate, these assets may be grouped in determining the depreciation charge. Nevertheless, if it has been included in the cost of property, plant and equipment as a directly attributable cost, it will be depreciated over the useful lives of the said property, plant and equipment.

The useful lives of these assets should not exceed that of the asset to which it relates.

**Presentation**

These assets should be presented within the class of asset to which they relate.

**Q27:** Entity X has a warehouse which is closer to factory of Entity Y and vice versa. The factories are located in the same vicinity. Entity X and Entity Y agree to exchange their warehouses. The carrying value of warehouse of Entity X is ₹ 1,00,000 and its fair value is ₹ 1,25,000. It exchanges its warehouse with that of Entity Y, the fair value of which is ₹ 1,20,000. It also receives cash amounting to ₹ 5,000. How should Entity X account for the exchange of warehouses? **[RTP Nov 2020; RTP Jan 26]**

**Ans:** Paragraph 24 of Ind AS 16, inter alia, provides that when an item of property, plant and equipment is acquired in exchange for a non-monetary asset or assets, or a combination of monetary and non-monetary assets, the cost of such an item of property, plant and equipment is measured at fair value unless (a) the exchange transaction lacks commercial substance or (b) the fair value of neither the asset received nor the asset given up is reliably measurable. If the acquired item is not measured at fair value, its cost is measured at the carrying amount of the asset given up.

Further as per paragraph 25 of Ind AS 16, an entity determines whether an exchange transaction has commercial substance by considering the extent to which its future cash flows are expected to change as a result of the transaction. An exchange transaction has commercial substance if:

**a)** the configuration (risk, timing and amount) of the cash flows of the asset received differs from the configuration of the cash flows of the asset transferred; or

**b)** the entity-specific value of the portion of the entity's operations affected by the transaction changes as a result of the exchange; and

**c)** the difference in (a) or (b) is significant relative to the fair value of the assets exchanged.

In the given case, the transaction lacks commercial substance as the company's cash flows are not expected to significantly change as a result of the exchange because the factories are located in the same vicinity i.e. it is in the same position as it was before the transaction. Hence, Entity X will have to recognise the assets received at the carrying amount of asset given up, i.e., ₹ 1,00,000 being carrying amount of existing warehouse of Entity X and ₹ 5,000 received will be deducted from the cost of property, plant and equipment.

Therefore, the warehouse of Entity Y is recognised as property, plant and equipment with a carrying value of ₹ 95,000 in the books of Entity X.

**Q28:** On 1st April 2019, an entity purchased an office block (building) for ₹ 50,00,000 and paid a non-refundable property transfer tax and direct legal cost of ₹ 2,50,000 and ₹ 50,000 respectively while acquiring the building.

During 2019, the entity redeveloped the building into two -story building. Expenditures on re-development were:

- ₹ 1,00,000 Building plan approval;
- ₹ 10,00,000 construction costs (including ₹ 60,000 refundable purchase taxes); and
- ₹ 40,000 due to abnormal wastage of material and labour.

When the re-development of the building was completed on 1st October 2019, the entity rents out Ground Floor of the building to its subsidiary under an operating lease in return for rental payment. The subsidiary uses the building as a retail outlet for its products. The entity kept first floor for its own administration and maintenance staff usage. Equal value can be attributed to each floor.

How will the entity account for all the above-mentioned expenses in the books of account?

Also, discuss how the above building will be shown in Consolidated financial statement of the entity as a group and in its separate financial statements as per relevant Ind AS]

**[Exam JAN 2021 (5 Marks); IBS CS 16]**

**Ans:** In accordance with Ind AS 16, all costs required to bring an asset to its present location and condition for its intended use should be capitalised. Therefore, the initial purchase price of the building would be:

| **Particulars** | **Amount (₹)** |
|---|---|
| Purchase amount | 50,00,000 |
| Non-refundable property tax | 2,50,000 |
| Direct legal cost | 50,000 |
| | 53,00,000 |
| Expenditures on redevelopment: | |

| | |
|---|---|
| Building plan approval | 1,00,000 |
| Construction costs (10,00,000 – 60,000) | 9,40,000 |
| Total amount to be capitalised at 1st October 2019 | 63,40,000 |

**Treatment of abnormal wastage of material and labour:**

As per Ind AS 16, the cost of abnormal amounts of wasted material, labour, or other resources incurred in self-constructing an asset is not included in the cost of the asset. It will be charged to Profit and Loss in the year it is incurred. Hence, abnormal wastage of ₹ 40,000 will be expensed off in Profit & Loss in the financial year 2019 -2020.

**Accounting of property- Building**

When the property is used as an administrative centre, it is not an investment property, rather it is an 'owner occupied property'. Hence, Ind AS 16 will be applicable.

When the property (land and/or buildings) is held to earn rentals or for capital appreciation (or both), it is an Investment property. Ind AS 40 prescribes the cost model for accounting of such investment property.

Since equal value can be attributed to each floor, Ground Floor of the building will be considered as Investment Property and accounted as per Ind AS 40 and First Floor would be considered as Property, Plant and Equipment and accounted as per Ind AS 16.

Cost of each floor = ₹ 63,40,000 / 2 = ₹ 31,70,000

As on 1st October 2019, the carrying value of building vis-à-vis its classification would be as follows:

(i) **In Separate Financial Statements:** The Ground Floor of the building will be classified as investment property for ₹ 31,70,000, as it is property held to earn rentals. While First Floor of the building will be classified as item of property, plant and equipment for ₹ 31,70,000.

(ii) **In Consolidated Financial Statements:** The consolidated financial statements present the parent and its subsidiary as a single entity. The consolidated entity uses the building for the supply of goods. Therefore, the leased-out property to a subsidiary does not qualify as investment property in the consolidated financial statements. Hence, the whole building will be classified as an item of Property, Plant and Equipment for ₹ 63,40,000.

**Q29:** On 1st January, 20X1 an entity purchased an item of equipment for ₹ 600,000, including ₹ 50,000 refundable purchase taxes. The purchase price was funded by raising a loan of ₹ 605,000. In addition, the entity has to pay ₹ 5,000 in loan raising fees to the Bank. The loan is secured against the equipment.

In January 20X1 the entity incurred costs of ₹ 20,000 in transporting the equipment to the entity's site and ₹ 100,000 in installing the equipment at the site. At the end of the equipment's 10-year useful life the entity is required to dismantle the equipment and restore the building

housing the equipment. The present value of the cost of dismantling the equipment and restoring the building is estimated to be ₹ 100,000.

In January 20X1 the entity's engineer incurred the following costs in modifying the equipment so that it can produce the products manufactured by the entity:

- Materials – ₹ 55,000
- Labour – ₹ 65,000
- Depreciation of plant and equipment used to perform the modifications – ₹ 15,000

In January 20X1, the entity's production staff were trained in how to operate the new item of equipment. Training costs included:

- Cost of an expert external instructor – ₹ 7,000
- Labour – ₹ 3,000

In February 20X1 the entity's production team tested the equipment and the engineering team made further modifications necessary to get the equipment to function as intended by management. The following costs were incurred in the testing phase:

- Materials, net of ₹ 3,000 recovered from the sale of the scrapped output – ₹ 21,000
- Labour – ₹ 16,000

The equipment was ready for use on 1st March, 20X1. However, because of low initial order levels the entity incurred a loss of ₹ 23,000 on operating the equipment during March. Thereafter the equipment operated profitably.

What is the cost of the equipment at initial recognition? **[RTP May 2022]**

**Ans:**

| Description | Calculation or reason | ₹ |
|---|---|---|
| Purchase price | ₹ 600,000 purchase price minus ₹ 50,000 refundable purchase taxes | 5,50,000 |
| Loan raising fee | Offset against the measurement of the liability | - |
| Transport cost | Directly attributable expenditure | 20,000 |
| Installation costs | Directly attributable expenditure | 1,00,000 |
| Environmental restoration costs | The obligation to dismantle and restore the environment arose from the installation of the equipment | 1,00,000 |
| Preparation costs | ₹ 55,000 materials + ₹ 65,000 labour + ₹ 15,000 depreciation | 1,35,000 |
| Training costs | Recognised as expenses in profit and loss account. The equipment was capable of operating in the manner intended by management without incurring the training costs. | |
| Cost of testing | ₹ 21,000 materials (ie net of the ₹ 3,000 recovered | 37,000 |

| | | |
|---|---|---|
| Operating loss<br>Borrowing costs | from the sale of the scrapped output) + ₹ 16,000 labour<br>Recognised as expenses in profit and loss account<br>Recognised as expenses in profit and loss account | |
| **Cost of equipment** | | **9,42,000** |

**Q30.** Company A incurred ₹ 20,000 as cost for restoring the site on which the item of PPE was located. This item was used for manufacturing of goods and the requirement for restoring will arise due to manufacturing of goods. What will the treatment of this ₹ 20,000 in the books of Company A? Analyse on the basis of the provisions of relevant Ind AS. **[RTP Nov 2022]**

**Ans:** Paragraph 16 of Ind AS 16, Property, Plant and Equipment, inter alia states that the cost of an item of property, plant and equipment comprises the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which an entity incurs either when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period.

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

Paragraph 16 of Ind AS 16 clarifies that decommissioning costs that meet the recognition criteria under Ind AS 37, Provisions, Contingent Liabilities and Contingent Assets, for a provision are added to the cost of an item of property, plant and equipment if such costs are not incurred through the asset's use to produce inventories. Paragraph 18 fills the gap by clarifying where such costs are incurred through the asset's use to produce inventories, they are added to the cost of inventories.

Where the obligation to restore the asset arises due to the use of the asset to produce inventories but not due to the asset's installation, construction or acquisition, the costs are added to the costs of inventories.

Based on the above provisions and discussion, cost of restoring the site ₹ 20,000 incurred during the period of production as a consequence of having used the item to produce inventories during that period should be added to the cost of inventories. However, later the inventories are measured at the lower of cost and net realisable value in accordance with paragraph 9 of Ind AS 2.

**Q31:** Company X built a new plant that was brought into use on 1st April, 20X1. The cost to construct the plant was ₹ 1.5 crore. The estimated useful life of the plant is 20 years and Company X accounts for the plant using the cost model.

The initial carrying amount of the plant included an amount of ₹ 10 lakh for decommissioning, which was determined using a discount rate of 10%. On 31st March, 20X2, Company X remeasures the provision for decommissioning to ₹ 13 lakh.

Provide necessary journal entries at the end of the year i.e. 31st March, 20X2 for recording of depreciation and decommissioning provision. **[RTP May 2023]**

**Ans:** Journal Entries in the books of Company X for the year ending ended 31st March, 20X2

| | ₹ in lakh | ₹ in lakh |
|---|---|---|
| Depreciation (profit or loss) Dr. | 7.5 | |
| To Accumulated depreciation (plant) | | 7.5 |
| (Being depreciation on plant recognised under straight-line method (1,50,00,000 x 1/20)) | | |
| Interest expense (profit or loss) Dr. | 1.0 | |
| To Provision for decommissioning | | 1.0 |
| (Being unwinding of decommissioning provision @10% recognised in the books) | | |
| Plant Dr. | 2.0 | |
| To Provision for decommissioning | | 2.0 |
| (Being increase in decommissioning provision rognised [13,00,000 – (10,00,000 +1,00,000)] at the end of the year) | | |

**Q32:** On 1st May, 2022, Sanskar Limited purchased ₹ 42,00,000 worth of land for construction of a new warehouse for stocking new products.

The land purchased had an old temporary structure which was to be demolished for the purpose of construction of warehouse. The salvaged material from the demolition was to be sold as scrap. The company started the construction work of the warehouse on 1st June, 2022. Following costs were incurred by the company with regard to purchase of land and construction of warehouse:

| **Particulars** | **Amount (₹)** |
|---|---|
| Legal fees for purchase contract of land and recording ownership | 1,50,000 |
| Architect and consultant's fee | 2,70,000 |
| Cost of demolishing existing structure on the purchased land | 1,35,000 |
| Site preparation charges for the warehouse | 1,00,000 |
| Purchase of cement and other materials for the construction (including GST of ₹ 1,00,000 and GST credit is 50% of the payment) | 15,00,000 |
| Employment costs of the construction workers | 8,00,000 |
| General overhead costs allocated to the construction work per month | 30,000 |
| Overhead costs incurred directly on the construction of warehouse per month | 35,000 |
| Income received from land used as temporary parking during construction phase | 80,000 |

**Additional Information:**

a) Receipt of ₹ 35,000 being proceeds from sale of salvaged and scrapped materials from demolition of existing structure.

b) Materials costing ₹ 40,000 was wasted and further ₹ 1,20,000 was spent to rectify the wrong design work.

c) The employment costs are for 10 months i.e. from 1st June 2022 till 31st March, 2023.

d) The construction of factory was completed on 28th February, 2023 (which is considered as substantial period of time as per Ind AS 23)

e) The use of warehouse commenced on 1st March, 2023.

f) The overall useful life of factory building was estimated at 25 years from the date of completion; however, it is estimated that the roof of the warehouse will need to be replaced 15 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.

g) At the end of the 25-year period, Sanskar Limited is legally bound to demolish the factory and restore the site to its original condition. The directors of the company estimate that the cost of demolition in 25 years' time (based on prices prevailing at that time) will be ₹ 80,00,000. An annual risk adjusted discount rate which is appropriate to this project is 10% per annum. The present value of ₹ 1 payable in 25 years' time at an annual discount rate of 10% per annum is ₹ 0.092.

h) Sanskar Limited raised a loan of ₹ 60 lakhs @ 10% per annum rate of interest on 1st June, 2022. The building of warehouse meets the definition of a qualifying asset in accordance with Ind AS 23 Borrowing Costs. Sanskar Limited received an investment income of ₹ 25,000 on the temporary investment of the proceeds.

i) Assume that cost of demolition of old structure is directly attributable to the cost of land.

j) The company follows straight line method of depreciation.

You are required to compute:

a) Cost of construction of the warehouse

b) Depreciation charge for the year ended 31st March, 2023

c) Carrying value of warehouse to be taken to Balance Sheet of the Company on 31st March, 2023.

You should explain your treatment of all the amounts referred to in this question as part of your answer. **[Exam May 2023 (8 Marks)]**

**Ans:**

**i) Computation of the cost of construction of the warehouse**

| Description | Included in P.P.E. ₹ | Explanation |
|---|---|---|
| Purchase of land | 42,00,000 | Separately capitalised as cost of land and do not form part of cost of construction of warehouse |
| Legal fee for purchase of contract of land | 1,50,000 | Associated legal costs are direct costs for purchasing the land. Hence, separately capitalised as cost of land and do not form part of cost of construction of warehouse |
| Net cost of demolishing the existing structure | 1,00,000 | Given in the question to assume it as directly attributable to the cost of land. However, it will be adjusted with the proceeds from sale of salvaged material from demolition (1,35,000 – 35,000). Further, it will be separately capitalised as cost of land and do not form part of cost of construction of warehouse. |
| **Total cost of land** | **44,50,000** | |
| Architect and consultant's fee | 2,70,000 | |
| Site preparation charges | 1,00,000 | A direct cost of constructing the warehouse |
| Cement and other materials | 14,10,000* | A direct cost of constructing the warehouse net GST credit and wastage (15,00,000 – 50,000 – 40,000) |
| Expense to rectify the wrong design work | Nil | Assumed to be abnormal cost |
| Employment costs of the construction workers | 7,20,000 | A direct cost of constructing the warehouse for a nine-month period till 28th February, 2023 [(8,00,000/10) x 9] |
| Direct overhead costs | 3,15,000 | A direct cost of constructing the warehouse for a nine-month period (35,000 x 9) |
| Allocated overhead costs | Nil | Not a direct cost of construction |
| Income from temporary use of land as car parking area | Nil | Not essential to the construction so recognised directly in profit or loss |

| | | |
|---|---|---|
| Finance costs | 4,50,000 | Capitalise the interest cost incurred in a nine-month period (from 1st June, 2022 to 28th February, 2023) |
| Investment income on temporary investment of the loan proceeds | (25,000) | Offset against the interest amount capitalised |
| Demolition cost recognised as a provision | 7,36,000 | Recognised as part of the initial cost at present value (i.e 80,00,000 x 0.092) |
| **Total cost of construction of a warehouse** | **39,76,000** | |

**ii) Computation of depreciation charges for the year ended 31 st March, 2023**

**Note: Land is not depreciated as per Ind AS 16. Hence, only cost of warehouse is subject to depreciation.**

| | | |
|---|---|---|
| Total depreciable amount as on | | |
| 1st March, 2023 | 39,76,000 | |
| Depreciation for 1 month must | | |
| be in two parts: | | |
| (a) Depreciation on roof | | |
| component | 5,522 | 39,76,000 x 25% x 1/15 x 1/12 |
| (b) Depreciation of remaining | | |
| Item | 9,940 | 39,76,000 x 75% x 1/25 x 1/12 |
| Total depreciation for the year | | |
| 2022-2023 | 15,462 | |

**iii) Computation of carrying value of the warehouse on 31 st March, 2023** ₹

| | |
|---|---|
| Cost of the warehouse as on 1st March, 2023 [computed in (i) above] | 39,76,000 |
| *Less:* Depreciation for 1 month as computed in (ii) above | (15,462) |
| Carrying value of the warehouse as on 31st March, 2023 | 39,60,538 |

***Note:** In the above solution, it has been assumed that amount spent for rectifying the faulty design is not included in the cement and other material cost. However, ***alternatively,*** it may be considered as part of gross cement and material cost and in such a case, the cost of material will further be reduced with the amount of rectifying the faulty design as follows:

**i) Computation of the cost of construction of the warehouse**

| Description | Included in P.P.E. ₹ | Explanation |
|---|---|---|
| Purchase of land | 42,00,000 | Separately capitalised as cost of land and do not form part of cost of construction of warehouse |
| Legal fee for purchase of contract of land | 1,50,000 | Associated legal costs are direct costs for purchasing the land. Hence, separately capitalised as cost of land and do not form part of cost of construction of warehouse |
| Net cost of demolishing the existing structure | 1,00,000 | Given in the question to assume it as directly attributable to the cost of land. However, it will be adjusted with the proceeds from sale of salvaged material from demolition (1,35,000 – 35,000). Further, it will be separately capitalised as cost of land and do not form part of cost of construction of warehouse. |
| **Total cost of land** | **44,50,000** | |
| Architect and consultant's fee | 2,70,000 | A direct cost of constructing the warehouse |
| Site preparation charges | 1,00,000 | A direct cost of constructing the warehouse |
| Cement and other materials | 12,90,000* | A direct cost of constructing the warehouse net GST credit, wastage and rectification cost (15,00,000 – 50,000 – 40,000 – 1,20,000) |
| Employment costs of the construction workers | 7,20,000 | A direct cost of constructing the warehouse for a nine-month period till 28th February, 2023 [(8,00,000/10) x 9] |
| Direct overhead costs | 3,15,000 | A direct cost of constructing the warehouse for a nine-month period (35,000 x 9) |
| Allocated overhead costs | Nil | Not a direct cost of construction |
| Income from temporary use of land as car parking area | Nil | Not essential to the construction so recognised directly in profit or loss |
| Finance costs | 4,50,000 | Capitalise the interest cost incurred in a nine-month period (from 1st June, 2022 to 28th February, 2023) |
| Investment income on temporary investment of the loan proceeds | (25,000) | Offset against the interest amount capitalised |

| | | |
|---|---|---|
| Demolition cost recognised as a provision | 7,36,000 | Recognised as part of the initial cost at present value (i.e 80,00,000 x 0.092) |
| Total cost of construction of a warehouse | 38,56,000 | |

**ii) Computation of depreciation charges for the year ended 31 st March, 2023**

**Note: Land is not depreciated as per Ind AS 16. Hence, only cost of warehouse is subject to depreciation.**

| | | |
|---|---|---|
| Total depreciable amount as on | | |
| 1st March, 2023 | 38,56,000 | |
| Depreciation for 1 month must be | | |
| in two parts: | | |
| (a) Depreciation on roof | | |
| component | 5,356 | 38,56,000 x 25% x 1/15 x 1/12 |
| (b) Depreciation of remaining | | |
| item | 9,640 | 38,56,000 x 75% x 1/25 x 1/12 |
| Total depreciation for the year | | |
| 2022-2023 | 14,996 | |

**iii) Computation of carrying value of the warehouse on 31st March, 2023** ₹

| | |
|---|---|
| Cost of the warehouse as on 1st March, 2023 [computed in (i) above] | 38,56,000 |
| *Less:* Depreciation for 1 month as computed in (ii) above | (14,996) |
| Carrying value of the warehouse as on 31st March, 2023 | 38,41,004 |

**Q33:** A shipping company is required by law to bring all its ships into dry dock every 5 years for a major inspection and overhaul. Overhaul expenditure might at first sight seem to be repair to the ships but is actually a cost incurred in getting the ship back into a seaworthy condition. As such the costs must be capitalised.

A ship that cost ₹ 40 Crore with 20-year life must have a major overhaul every 5 years. The estimated cost of the first overhaul is ₹ 10 Crores.

Calculate:

a) the depreciation charged for first five years;

b) the carrying amount at the end of 5th year **[Exam Nov 2023 (5 Marks)]**

**Ans:** (i) Computation of depreciation charged for the first 5 years

The depreciation charge for the first five years of the asset's life will be as follows:

| | Overhaul component (₹ in crores) | Ship (other than overhaul component) (₹ in crores) |
|---|---|---|
| Cost | 10 | 30 |
| Years | 5 | 20 |
| Depreciation per year | 2 | 1.50 |

Total accumulated depreciation for the first five years will be -

= (₹ 2 crores + ₹ 1.50 crores) x 5 years = ₹ 17.50 crores

(ii) Computation of carrying amount of the ship at the end of 5th year

Carrying amount of the ship at the end of 5th year = ₹ 40 crores - ₹ 17.50 crores

= ₹ 22.50 crores

**Q34:** On 1st April, 2020, Peacock Ltd. started its manufacturing operations by installing a machine in the rented premises. The estimated life of the machine is 4 years. As per the terms of the rent agreement, Peacock Ltd. has a present obligation to dismantle the machine and restore the premises into its original shape. The company estimates to incur ₹ 6,00,000 at the end of 4th year to restore the premises into the original shape. The borrowing rate applicable to the company is 8%. (Note: PV Factor for 4th year discounted @ 8% = 0.735) You are required to:

a) Advise the accounting treatment of the above; and

b) Pass necessary journal entries across all four years. **[Exam Nov 2024 (6 Marks)]**

**Ans:** (i) **Accounting Treatment**

The present value of such decommissioning and site restoration obligation at the end of 4th year is ₹ 4,41,000 [being 6,00,000 / (1.08)4]. Peacock Ltd. will recognize the present value of decommissioning liability of ₹ 4,41,000 as an addition to cost of PPE and will also recognize a corresponding decommissioning liability.

Further, the entity will recognize the unwinding of discount as finance charge every year till the estimated life of the machine.

**(ii) Journal Entries**

| Date | Particular | | Dr. (₹) | Cr. (₹) |
|---|---|---|---|---|
| 1st April, 2020 | Machine A/c (PPE) | Dr. | 4,41,000 | |
| | To Provision for decommissioning liability | | | 4,41,000 |
| | (Being the present value of DRSL recognized) | | | |
| 31st March, 2021 | Finance charge | Dr. | 35,280 | |
| | To Provision for decommissioning liability | | | 35,280 |
| | (Being finance charge recognized) | | | |

| | | | |
|---|---|---|---|
| | Profit and Loss A/c Dr. | 35,280 | |
| | To Finance charge | | 35,280 |
| | (Being Finance charge transferred to PL) | | |
| 31st March, 2022 | Finance charge Dr. | 38,102 | |
| | To Provision for decommissioning liability | | 38,102 |
| | (Being finance charge recognized) | | |
| | Profit and Loss A/c Dr. | 38,102 | |
| | To Finance charge | | 38,102 |
| | (Being Finance charge transferred to PL) | | |
| 31st March, 2023 | Finance charge Dr. | 41,151 | |
| | To Provision for decommissioning liability | | 41,151 |
| | (Being finance charge recognized) | | |
| | Profit and Loss A/c Dr. | 41,151 | |
| | To Finance charge | | 41,151 |
| | (Being Finance charge transferred to PL) | | |
| 31st March, 2024 | Finance charge Dr. | 44,467 | |
| | To Provision for decommissioning liability | | 44,467 |
| | (Being finance charge recognized) | | |
| | Profit and Loss A/c Dr. | 44,467 | |
| | To Finance charge | | 44,467 |
| | (Being Finance charge transferred to PL) | | |
| | Provision for decommissioning liability Dr. | 6,00,000 | |
| | To Bank A/c | | 6,00,000 |
| | (Being decommissioning liability incurred at the end of the life of the machine i.e. 4th year) | | |

Working Note: The following table shows the unwinding of discount (₹)

| Year | Opening Decommissioning Liability | Unwinding of Interest @ 8% | Closing Decommissioning Liability |
|---|---|---|---|
| 1 | 4,41,000 | 35,280 | 4,76,280 |
| 2 | 4,76,280 | 38,102 | 5,14,382 |
| 3 | 5,14,382 | 41,151 | 5,55,533 |
| 4 | 5,55,533 | 44,467* | 6,00,000 |

*Difference of ₹ 24 (44,467- 44,443) is due to rounding off.

cHP Nov 26

**Q35:** On 1st April 20X3, Jackson Ltd. purchased some land for ₹ 10 million. Jackson Ltd. purchased the land in order to build a Plant for manufacturing generator parts. During the six months from 1st April 20X3 to 30th September 20X3, Jackson Ltd. incurred costs totaling ₹ 3.5 million in preparing the land and erecting the structure of the Plant. This process caused some damage to the land for making it suitable for setting up the Plant. Jackson Ltd. began operations on 1st October 20X3 and the directors estimate that the Plant site would have useful economic life of 10 years from that date. Jackson Ltd. is legally obliged to rectify the damage caused to the land for setting up the Plant. The directors estimate that the costs of this rectification after 10 years on 30th September, will be as follows:

(i) ₹ 3 million to rectify the damage caused by the preparation of the land for setting up the Plant.

(ii) ₹ 0.2 million for each year to rectify the damage caused owing to effluent generated out of the production process of the Plant.

Following this rectification work the land could potentially be sold to a third party for no less than its original cost of ₹ 10 million. An annual discount rate appropriate for this project is 12%. The present value of ₹ 1 payable in 10 years' time with an annual discount rate of 12% is 32.2 paise. The present value of ₹ 1 payable in 9½ years' time with an annual discount rate of 12% is 34.1 paise.

What is the implication of rectification of damage of land mentioned in the case study? What is the relevant provision related to this concept under IFRS? **[MTP Jan 2026]**

**Ans:** The treatment related to the transactions of Jackson Ltd, under relevant IFRS is explained as under: In accordance with the principles of IAS 16 'Property, Plant and Equipment', costs of ₹13.5 million (₹10 million + ₹3.5 million) will be debited to property, plant and equipment as cost of Plant. From 1 October 20X3, an obligation exists to rectify the damage caused by the Plant and this obligation should be provided for. The amount provided is the present value of the expected future payment, which is ₹0.966 million (₹3 million x 0.322). The amount provided is debited to property, plant and equipment and credited to provisions at 1 October 20X3. The costs of Plant (excluding the land) will be ₹4.466 million (₹3.5 million + ₹0.966 million). This cost will be depreciated over a 10-year period, giving a charge in the current period of ₹0.223 million in the current year (₹4.466 million x 1/10 x 6/12).

The closing balance in property, plant and equipment is ₹14.243 million (₹13.5 million + ₹0.966 million – ₹ 0.223 million). As the date of settlement of the liability draws closer the discount unwinds. The unwinding of the discount in the current year is ₹0.058 million (₹0.966 million x 12% x 6/12).

The land rectification process itself creates an additional liability based on the damage caused by the reporting date. The additional amount provided is ₹0.034 million (₹0.20 million x 6/12 x 0.341). This additional provision causes an extra charge to the statement of comprehensive income.

The carrying amount of the provision at the year-end is ₹1.058 million (₹0.966 million + ₹0.058 million + ₹0.034 million).