

CONCEPT OF DEPRECIATION

Tangible Assets are physical assets, meaning they can be seen, touched, and used in the production or provision of goods and services, for renting to others, or for administrative purposes. The useful life of a tangible asset is determined by its expected usage.

Property, plant, and equipment are examples of tangible assets that meet the following criteria:

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

These assets are commonly referred to as *fixed assets*. When a fixed asset is acquired, it is initially recorded in the accounting books at its *Cost of Acquisition*. However, fixed assets are expected to generate revenue or cost savings over several accounting periods, using the same acquisition cost and disclosing the same amount in Balance Sheet until the asset is sold or retired isn't justified.

Since the useful life of these assets extends beyond one year, it is necessary to allocate a portion of the acquisition cost as an expense in each accounting period in which the asset is used. This allocated amount is known as *depreciation*.

Why Does Value of Fixed Assets decreases over time..???

Various Factors are responsible for the same namely,

1. *Wear and tear* from business use.
2. The *passage of time*, even when not in use.
3. *Obsolescence* caused by technological or other changes.
4. *Decrease in market value*.
5. *Depletion*, primarily in the case of mines and other natural resources.

It's essential to recognize a portion of the asset's cost used in generating this income or cost savings to account during an accounting year to determine the true income.

As per Schedule II under the Companies Act, 2013,

Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life. The depreciable amount is the asset's cost or another amount substituted for cost (e.g., in the case of asset revaluation), minus its residual value. The useful life of an asset is the period it is expected to be available for use by an entity, or the number of production or similar units the entity expects to obtain from the asset.

Therefore, there are **three key factors in calculating depreciation**:

- ❑ The estimated useful life of the asset.
- ❑ The cost of the asset.
- ❑ The asset's residual value at the end of its estimated useful life.

Depreciation of an asset commences when it is available for use, meaning it is in the necessary location and condition to operate as intended by management. **An asset doesn't have to be actively used, it just needs to be available for use.**

Example:

Fire extinguishers installed in Premises will be depreciated even though they are not used because to use them we need to intentionally fire up the premises

Depreciation for a given period helps to match a portion of the asset's cost against the revenues earned in that period, following the matching principle.

In other words, the **total cost of the asset is reflected as both "expired cost" (depreciation i.e. in PL A/c) and "unexpired cost," (i.e. Written Down Value) in the balance sheet.** Additionally, annual depreciation reduces distributable profits, ensuring funds are available when replacements are needed.

In essence, the cost of an asset used for business purposes must be gradually written off over its economic (not physical) life, which needs to be estimated. It's important to note that, typically, at the end of the asset's economic life, it may still have some residual value, such as scrap value. The annual write-off amount should be such that it reduces the asset's book value to its estimated scrap value at the end of its economic life.

Depreciation on components of an assets

It's worth mentioning that both **Accounting Standards and the Companies Act, 2013** mandate the practice of allocating depreciation on a component basis. A business should **divide the initial amount recognized for an item of Property, Plant, and Equipment into its significant components and then apply separate depreciation for each of these components based on their individual useful life and residual value.**

Example:

An aircraft, which is a typical example of such an asset. The aircraft comprises distinct components like the airframe (the body of the aircraft), engines, and interiors, each having different expected useful lives. If the airframe has the longest useful life among these major components and is chosen as the basis for the aircraft's overall life, it's crucial to depreciate the other two major components, namely the engines and interiors, over their respective individual useful lives rather than using the airframe's life as a reference. Smaller, low-value components that require frequent replacement can be depreciated over the airframe's useful life, and the costs of their frequent replacements can be expensed as they occur.

It's important to note that, for a part of Property, Plant, & Equipment to be recognized as a separate component, it must meet two criteria:

- (a) Component should have a **significant cost compared to the total cost of the entire item of Property, Plant, and Equipment.**
- (b) It should have an **estimated useful life or depreciation method that differs from the other**

parts of the Property, Plant, and Equipment.

In some cases, a significant component of an item of Property, Plant, and Equipment may have the same useful life and depreciation method as another significant component of that same item. In such situations, these components may be grouped together when calculating the depreciation charge.

Objectives for Providing Depreciation

The primary goals of applying depreciation are as follows:

1. **Accurate income assessment (i.e. Net Profit or Net Loss)** : Depreciation is essential for the proper determination of periodic profit or loss. Without accounting for depreciation on Property, Plant & Equipment, a business would overlook the decline in the value of these assets resulting from their use in production or operations. This omission would fail to reflect the true profit or loss for the period.
2. **Genuine financial position representation (i.e. Networth)** : The value of Property, Plant & Equipment should be adjusted for the depreciation incurred to portray the actual financial status. Incorrect accounting for depreciation would lead to the disclosure of these assets in financial statements at a value higher than their true worth. It is crucial to present them at their remaining cost, which is the value after deducting the expired cost as depreciation.
3. **Provision for asset replacement (As Depn. is Non-Cash Expense)** : Depreciation aids in accumulating sufficient funds within the business for the replacement of assets at the end of their useful life. Depreciation serves as a useful indicator of the amount that an enterprise should reserve to replace a fixed asset when its economic utility is exhausted. Nevertheless, the replacement cost of a fixed asset may also be influenced by factors like inflation and technological advancements.
4. **Determining the actual production cost** : To ascertain the production cost, it is imperative to include depreciation as a component of the cost of production.

“You will understand impact of determination on production cost in CA-Inter”

Furthermore, it's important to note that depreciation is a non-cash expense, unlike other regular expenditures such as wages and rent, and it doesn't result in an immediate outflow of cash. Depreciation, by itself, doesn't generate funds but rather highlights the necessity to allocate a portion of gross revenue receipts for the replacement of assets used in business operations. This is achieved through the application of depreciation, which reduces distributable profits.

FACTORS IN THE MEASUREMENT OF DEPRECIATION

Determining the precise amount of depreciation is a complex process that involves several estimates. Typically, the calculation of depreciation takes into account the following factors:

1. The **total cost of the asset**, which includes expenses for installation, commissioning, trial runs, and related costs.
2. The **estimated useful life of the asset**, considering both the duration in time and the anticipated utility or usage in units.

3. The **estimated scrap value**, if any, at the end of the asset's useful life.

Estimating the accurate depreciation amount involves a significant degree of estimation due to these factors.

The above mentioned factors can be explained, in detail, as follows:

- (a) The cost of a depreciable asset encompasses the financial expenditure associated with its acquisition, installation, commissioning, and any enhancements made to enhance its efficiency.
- (b) The concept of "Useful Life" can be defined as either
 - (i) the duration for which a depreciable asset is anticipated to be utilized by the enterprise or
 - (ii) the number of production units or similar measures that the enterprise expects to derive from the asset's use. The determination of an asset's useful life involves estimation and is typically based on a range of factors, including past experience with similar asset types. In certain cases, factors such as estimated working hours, production capacity, anticipated repairs and renewals, among others, are also taken into account.
- (c) Estimating the residual value can often be a challenging task. When the residual value is considered to be insignificant, it is typically treated as zero. However, if the residual value is expected to be significant, it is typically estimated either at the time of acquisition/ installation or during a subsequent revaluation of the asset.

The cost of Property, Plant, and Equipment includes:

- (a) The purchase price, which includes non-refundable import duties and purchase taxes, after accounting for trade discounts and rebates.
- (b) Any expenses directly related to preparing the asset for operation in the intended manner, including bringing it to the required location and condition.
- (c) The initial estimation of expenses associated with dismantling, removal of the item, and restoring the site where the asset is situated.

Examples of directly related costs include:

- (a) Employee benefits costs directly arising from the acquisition or construction of the property, plant, and equipment.
- (b) Costs of site preparation.
- (c) Initial delivery and handling costs.
- (d) Installation and assembly expenses.
- (e) Testing costs to ensure the asset functions correctly, net of any proceeds generated from items produced during testing, such as test samples.
- (f) Professional fees, such as fees for engineers hired to assist in machine installation.

In summary, any expenses that are essential to bring the asset into the desired condition and location for its intended use become part of the asset's cost.

However, certain expenses should not be considered part of the asset's cost, including:

- (a) Costs associated with opening a new facility or business, such as **inauguration expenses**.
- (b) Costs associated with introducing a new product or service, such as **advertising or promotional activities cost**.
- (c) Costs associated with conducting business in a new location or with a new class of customers, including **staff training costs**.
- (d) **General administration and other overhead expenses**.

Once an asset has been prepared for its intended use, no further costs should be recognized as part of the asset's cost, unless

- 1) a major repair or
- 2) addition significantly extends the asset's useful life or
- 3) enhances its production capacity.

Therefore, costs incurred while an item is capable of functioning as intended but is not yet in use or is used at less than full capacity should not be capitalized as part of the asset's cost. Similarly, the cost of relocating an asset should not be capitalized.

Maintaining an asset register with asset-specific details, such as cost, depreciation rate, and capitalization date, is crucial. This information is necessary for any additions to existing assets. Without adequate information, calculating annual depreciation expenses becomes challenging. It also becomes difficult to determine gains or losses upon disposal or retirement of a particular asset.

METHODS FOR PROVIDING DEPRECIATION

Usually, depreciation methods are formulated based on an analysis of how assets behave over several years, making it easier to calculate the depreciation incurred by various asset types. However, it's essential to apply each method thoughtfully, taking into account the asset's characteristics and its usage conditions. It's worth noting that, for income tax purposes, the Diminishing Balance Method is prescribed, except for assets of a power generation and distribution undertaking.

Straight Line Method

Under this approach, an identical sum is deducted each year throughout the operational life of an asset with the aim of ultimately reducing the asset's cost to either zero or its residual value by the end of its useful life. This method is known for its simplicity and precise outcomes, particularly when dealing with leases, as well as plant and machinery. It is also referred to as the "Fixed Installment Method."

$$\text{Straight line depreciation} = \frac{(\text{Cost of an asset} - \text{scrap value})}{\text{Useful life}}$$

$$\text{Straight line depreciation (in \%)} = \frac{\text{Depreciation Amount}}{\text{Cost of asset}} \times 100$$

This method assumes that a specific tangible asset provides consistent utility throughout its lifespan, although this may not always hold true.

In reality, repair and maintenance expenses tend to be lower in the earlier years and increase as the asset ages, just as the asset's capacity may vary over time. However, for assets

with minimal repair and maintenance costs, the straight-line method may still be suitable otherwise it should be ignored.

When employing this method, it's crucial to consider the period an asset is utilized in a given year. In the year of asset purchase, it may be available for use only for part of the year, so depreciation should be adjusted to reflect the period it was available for use. For instance, if an asset was acquired on March 1, 2022, and the enterprise's financial year ends on March 31, 2022, depreciation would be calculated for a period of just one month. A similar situation arises in the year when an asset is retired from its intended use or sold.

Reducing or Diminishing Balance Method or Written Down Value (WDV) Method

In this system, a fixed percentage of the diminishing value (WDV) of the asset is allocated each year to reduce the asset's value to its residual value at the end of its lifespan. Repairs and minor renewals are considered as regular expenses. This depreciation method is commonly applied to assets like plants and fixtures. It's important to note that under this method, the annual depreciation charge decreases from year to year, meaning that earlier years bear a larger depreciation burden compared to later years. Unlike the Straight Line Method, which results in a complete extinguishing of the asset's value, this method ensures that the asset retains some value.

The rationale behind this method lies in the assumption that repair costs tend to increase as an asset ages. Therefore, higher depreciation charges are incurred in the earlier years when repair expenses are expected to be lower, and lower depreciation charges in later years when higher repair costs are anticipated. This approach aims to distribute a nearly consistent burden over the asset's entire useful life, as depreciation decreases while repair costs increase over time. In contrast, the Straight Line Method maintains a constant depreciation charge while repair costs tend to rise with the asset's age.

However, there are drawbacks to this method, such as the risk of adopting a too low depreciation rate, which might result in insufficient depreciation over the asset's life. Additionally, when assets are grouped in a way that individual assets are hard to identify, there could be residual values remaining in the asset accounts even after the assets have been retired. This latter challenge can be mitigated by maintaining a Plant register.

The rate of depreciation for this method can be determined using the following formula.

$$\sqrt[n]{\frac{1 - n}{\dots}}$$

where, n = useful life

Much like the straight-line method, in this approach, it's also essential to take into account the period of usage in a given year, such as the year when an item of property, plant, and equipment is purchased or sold, when calculating the depreciation amount.

Accounting Treatment under Straight Line and Reducing Balance Methods:

There are two alternatives for accounting treatment of depreciation.

be adjusted periodically to account for changes in economic and technological conditions, ensuring that the depreciation provision aligns with the appropriate amount given the altered circumstances. This approach is a variation of the Straight Line Method, in which depreciation is determined annually. In contrast, under this method, depreciation is calculated for each hour the machine is in operation.

Schedule II to the Companies Act 2013, which specifies the estimated useful life of various assets for companies, also acknowledges this method to some extent. It recommends charging depreciation based on the estimated useful life it suggests. However, for certain categories of plant and machinery, it recommends a higher depreciation charge when these assets are used for 2 or 3 shifts. In a way, Schedule II combines elements of both the straight-line method and the machine hour method.

Production Units Method

In this method, the depreciation of the asset is ascertained by comparing the annual production to the estimated overall production. The depreciation amount is calculated using the following approach.

$$\text{Depreciable Amount} \times \frac{\text{Production during the period}}{\text{Estimated total production}}$$

This approach is suitable for machines that manufacture products with consistent specifications.

Depletion Method

Depletion is the allocation of the cost of wasting natural resources such as oil, gas, timber, and minerals to the production process. This method is used in case of mines, quarries etc. containing only a certain quantity of product. The depreciation rate is calculated by dividing the cost of the asset by the estimated quantity of product likely to be available to be extracted. Annual depreciation will be the quantity extracted multiplied by the rate per unit.

PROFIT OR LOSS ON THE SALE/DISPOSAL OF PROPERTY, PLANT AND EQUIPMENT

When a **depreciable asset** is sold during the year, depreciation is recorded for the period it was utilized within that year. The written down value, after accounting for this depreciation, is used to determine the profit or loss from the sale of the asset. **Any resulting profit or loss on the sale of the asset is then reflected in the profit and loss account. Consequently, all transactions related to the sale and the profit or loss from the asset sale are recorded in the corresponding asset account.**

Alternatively, an **alternative approach** is to create a new account titled “**Asset Disposal Account**” in the ledger to specifically track the profit or loss on the sale of the asset. In this scenario, the book value of the asset is transferred from the asset account to the Asset Disposal Account, and all sale-related entries, such as sale proceeds and profit or loss calculations, are documented within the Asset Disposal Account.

Example: The book value of the asset as on 1st January, 2022 is Rs 50,00,000. Depreciation is charged on the asset @10%. On 1st July 2022, the asset is sold for Rs 32,00,000.

Calculate Profit/loss

(ICAI Study Material)

Book value of asset as on 1st Jan., 2022	50,00,000
Less: Depreciation for six months @10% p.a. (from 1st Jan., 2022 to 30th June, 2022)	(2,50,000)
WDV as on 1st July, 2022	47,50,000
Less: Sale proceeds on 1st July, 2022	(32,00,000)
Loss on sale of asset	15,50,000

CHANGE IN THE METHOD OF DEPRECIATION

The depreciation method used for an asset should undergo an annual review, and if there's a substantial alteration in the anticipated pattern of utilizing the asset's future economic benefits, the method should be adjusted to align with the revised pattern. Whenever a change in the depreciation method occurs, it's treated as a modification in accounting estimate in accordance with Accounting Standards. The impact of this alteration should be quantified and disclosed separately. Such a change in an accounting estimate can have an impact on either the current period exclusively or on both the current period and future periods (i.e. Change in method of Depreciation will not have retrospective effect)

REVISION OF THE ESTIMATED USEFUL LIFE OF PROPERTY, PLANT AND EQUIPMENT

The residual value and the anticipated useful life of an asset should be evaluated annually, and if these expectations deviate from prior estimates, any adjustments should be treated as changes in accounting estimates in accordance with Accounting Standards.

In the event of a revision to the estimated useful life of the asset, the written down value or the remaining depreciable amount should be expensed over the updated estimated useful life of the asset.

REVALUATION OF PROPERTY, PLANT AND EQUIPMENT

(Refer Class Diagram for Better understanding)

Upon initially recognizing an asset, if its fair value can be reliably determined, it may be reported at the revalued amount, which is the fair value at the revaluation date, adjusted for accumulated depreciation and any accumulated impairment losses (in cases of a permanent decline in value), if applicable. If an entity chooses to revalue:

- (a) Revaluations should occur at regular intervals, such as yearly, to ensure that the carrying amount does not substantially deviate from what would be determined using the fair value at the end of the reporting period.
- (b) When one item of Property, Plant, and Equipment is revalued, the entire class to which the asset belongs should also be revalued.
- (c) If the carrying amount of an asset increases due to revaluation, this increase should be credited to the revaluation surplus and accumulated in equity. However, this increase

should be recognized in the Profit and Loss statement to the extent of reversing a prior decrease in the asset that was previously recognized in the Profit and Loss statement.

- (d) If the carrying amount of an asset decreases due to revaluation, this decrease should be recognized in the Profit and Loss account. However, this decrease should be debited to the revaluation surplus to the extent of reversing a prior increase in the asset, which was previously recognized in the revaluation surplus.
- (e) The Revaluation Surplus can be transferred directly to retained earnings when the asset is derecognized. This may involve transferring the entire surplus when the asset is retired or disposed of. Such a transfer from Revaluation Surplus to Retained Earnings cannot be achieved through the Profit or Loss.
- (f) Alternatively, in the case of an upward revaluation, any excess depreciation due to such revaluation can be transferred from Revaluation Surplus to Retained Earnings. Again, this transfer from Revaluation Surplus to Retained Earnings cannot be made through the Profit or Loss.

It is essential to note that the revaluation of Property, Plant, and Equipment is an accounting policy choice and not mandatory under accounting standards or the Companies Act, 2013.

INTANGIBLE ASSETS

An *intangible asset* is a discernible, non-monetary asset that lacks physical substance, maintained for the purpose of contributing to the production or provision of goods or services, for leasing to others, or for administrative functions. Examples:-

- (a) Streaming rights of Films / songs on platforms like Netflix, Hotstar, Prime Video, Spotify, Gaana etc
- (b) Patents (e.g. patents of vaccines)
- (c) Trademarks (e.g. McDonaldsTM, DominozTM etc)
- (d) Copyright
- (e) Goodwill (purchased)
- (f) Computer Softwares like Tally, Windows

Intangible assets constitute a significant portion of a company's balance sheet. It's important to note that there are situations where intangible assets can hold more value for entities than their tangible counterparts.

For example, a multi-year customer contract guaranteeing over 75% of a company's revenue can be a substantial asset, at times surpassing the value of tangible assets. Likewise, during the acquisition of Air India, the tangible assets mainly comprised older planes requiring significant maintenance. However, one of the primary factors that made Air India an appealing target was its prime landing slots (an intangible asset) at various airports around the world.

Intangible assets can be included in financial statements if they meet the following criteria:

- (i) The *intangible asset is identifiable*, meaning the entity can rent, sell, exchange, or distribute the specific future economic benefits associated with the asset without compromising benefits from other assets used in the same revenue-earning activity.

- (ii) It is likely that the future economic benefits associated with the asset will accrue to the enterprise.
- (iii) The enterprise has control over the intangible asset, which means it has the ability to derive economic benefits from the asset while also being able to restrict others' access to those benefits.
- (iv) The cost of the intangible asset can be measured reliably.

When acquired separately, intangible assets are usually initially measured at cost since the cost can be reliably determined in such cases. The cost of the intangible asset comprises the purchase price, any import duties and taxes (except those subsequently recoverable from tax authorities), and any directly attributable expenditures related to making the asset ready for its intended use, such as professional fees for legal services. Trade discounts and rebates are subtracted when determining the cost, similar to how the cost of a tangible asset is calculated.

Intangible assets acquired as part of an acquisition, government grants, internally generated goodwill/intangible assets, or through asset exchanges are treated differently at an intermediate level.

Derecognition (removal from the balance sheet) of an intangible asset occurs upon disposal or when no future economic benefits are expected from its use and subsequent disposal. Gains or losses arising from the retirement or disposal of an intangible asset are determined as the difference between the net disposal proceeds and the carrying amount (book value) of the asset. These gains or losses should be recognized as income or expenses in the statement of profit and loss (i.e P&L A/c).

Difference between Tangible and Intangible Assets

Tangible Assets	Intangible Assets
Tangible assets are assets that possess a material form, meaning they can be visually perceived and physically touched. They are utilized in the production or provision of goods or services, for leasing to third parties, or for administrative functions.	These assets can be identified but lack physical form and are maintained for utilization in the production or provision of goods or services, for leasing to external parties, or for administrative purposes.
Tangible Assets have a limited lifespan determined by anticipated utilization.	Intangible Assets have a defined duration typically determined by contractual terms. However, in certain situations, intangible assets may possess an indefinite lifespan, like purchased goodwill.
The useful life is determined by anticipated usage, without any predefined assumptions.	The anticipated useful life of Intangible Assets is generally considered <u>not to exceed 10 years unless</u> there is evidence indicating a different timeframe.

Tangible Assets undergo depreciation throughout their useful life, which means the gradual reduction in the value of these assets each year is referred to as depreciation.	Intangible Assets are subject to amortization over their useful life. In simpler terms, the annual reduction in the value of intangible assets is referred to as amortization.
Examples- Furniture, Machinery, Computer for office use etc.	Examples- include softwares, purchased goodwill, trademarks, patents etc.

AMORTISATION

Amortization in the context of intangible assets is similar to the concept of depreciation for tangible assets. In essence, the process of reducing the value of an intangible asset annually is referred to as amortization.

Amortization can be defined as the systematic allocation of the depreciable amount of an intangible asset over its expected useful life. The depreciable amount is the asset's cost minus its anticipated residual value.

The useful life of an intangible asset is either:

- (a) the period during which the asset is anticipated to be utilized by the enterprise; or
- (b) the number of production units or similar measures expected to be derived from the asset by the enterprise.

Residual value represents the amount an enterprise expects to receive for an asset at the end of its useful life, after accounting for anticipated disposal costs.

Amortization begins when the asset is available for use. It is generally assumed that the useful life of an intangible asset does not exceed ten years from the asset's availability for use, unless contrary evidence exists.

Similar to depreciation, the method of amortization employed should mirror the consumption pattern of the asset's economic benefits by the enterprise. If this pattern cannot be reliably determined, the straight-line method should be utilized. The amortization expense for each period is recognized as an expenditure, unless there is permission or requirement to include it in the carrying amount of another asset.

Given the nature of intangible assets, it is typically assumed that the residual value is zero, unless:

- (a) a third party has committed to purchasing the asset at the end of its useful life; or
- (b) there is an active market for the asset, and:
 - (i) the residual value can be determined based on that market; and
 - (ii) it is probable that such a market will exist at the end of the asset's useful life.

The amortization period and method should be reviewed at least at the end of each financial year. If the expected useful life significantly differs from previous estimates, the amortization period should be adjusted accordingly. If there is a substantial change in the expected pattern of economic benefits from the asset, the amortization method should be modified to reflect the altered pattern.

TEST YOUR KNOWLEDGE

True and False

1. Increase in market value of a fixed asset is one of the reasons for depreciation being charged.

(ICAI Study Material)

Sol. False: Depreciation is associated with a reduction in an asset's market value, while an increase in market value can lead to the process of revaluation

2. Depreciation is a cash expenditure like other normal expenses.

(ICAI Study Material)

Sol. False: Depreciation differs from typical expenses as it does not involve a cash outflow.

3. Cost of property, plant and equipment includes purchase price, refundable taxes & import duties after deducting any discount or rebate.

(ICAI Study Material)

Sol. False: Non-refundable taxes & duties are included in the cost.

4. Cost of fixed asset should also include the cost of opening a new facility such as inauguration costs.

(ICAI Study Material)

Sol. False: Inauguration costs are not the part of the cost.

5. Depreciation is charged with a constant amount under straight line method and charged with a constant percentage under diminishing balance method.

(ICAI Study Material)

Sol. True: The Straight Line Method (SLM) yields a consistent depreciation amount, while the Diminishing Balance Method maintains a constant depreciation rate.

6. In case an item of Property, Plant & Equipment is revalued, whole class of assets to which that asset being revalued belongs should be revalued.

(ICAI Study Material)

Sol. True: Revaluation is done for the entire class of assets.

7. In case the carrying amount of an asset is decreased due to revaluation, such decrease should always be recognized in the Profit and Loss account.

(ICAI Study Material)

Sol. False: If an asset's value decreases due to revaluation, it should initially be charged to any existing Revaluation Reserve and then to the Profit & Loss account.

8. Akash purchased a machine for Rs 12,00,000. Estimated useful life is 10 years and scrap value is Rs 1,00,000. Depreciation for the first year using sum of the years digit method shall be Rs 2,00,000.

(ICAI Study Material)

Sol. True: The depreciation using the Sum of Years Digits method can be calculated as follows:
 $10/55 \times (12,00,000 - 1,00,000) = 2,00,000$.

9. Depreciation cannot be provided in case of loss, in a financial year.

(ICAI Study Material)

Sol. False: Depreciation is an expense that is deducted from revenue to calculate profit. Hence, it must be accounted for, even in instances where a financial year results in a loss.

10. Providing for depreciation also helps in providing for accumulation of funds to facilitate

the replacement at the end of its useful life.

(ICAI Study Material)

Sol. True: Depreciation, as a non-cash expense, lowers the amount of profits available for distribution, which, in turn, helps accumulate funds for asset replacement when necessary

11. If the equipment account has a balance of Rs 12,50,000 and the accumulated depreciation account has a balance of Rs 4,00,000, the written down value of same shall be ₹16,50,000. (ICAI Study Material)

Sol. False: WDV will be = ₹8,50,000 (₹12,50,000 – ₹4,00,000)

12. Sum of the years digit method is an example of an accelerated method of charging depreciation. (ICAI Study Material)

Sol. True: The sum of the years digit method results in a higher depreciation charge during the initial years.

13. Over the life of an asset subject to depreciation, the accelerated method will result in less Depreciation Expense in early years and more depreciation in later years of its life.

(ICAI Study Material)

Sol. False: Conversely, in the diminishing balance method, higher depreciation is applied in the initial years.

14. While depreciating land cost, Straight line method shall give more depreciation than the written down value. (ICAI Study Material)

Sol. False: Land is not a depreciable asset.

15. Provision for depreciation account is debited at the time of recording the depreciation on an asset. (ICAI Study Material)

Sol. False: The Provision for Depreciation account is attributed with a credit entry during the depreciation charge.

16. If adequate maintenance expenditure is incurred with relation to running repairs of an asset, we need not charge any depreciation. (ICAI Study Material)

Sol. False: Depreciation entails distributing the asset's cost over its anticipated useful life. Routine maintenance and repairs, which may be necessary throughout its lifespan, are treated as expenses, and depreciation is applied regardless.

17. When a property, plant or equipment is sold then provision for depreciation account is debited, asset account is credited and any gain or loss is recorded to profit and loss account. (ICAI Study Material)

Sol. True: When selling an asset, the respective asset account is credited, the provision for depreciation account is debited, and any resulting gain or loss is charged to the profit & loss account.

18. While calculating the depreciation as per diminishing balance method, the salvage value of the asset at the end of its life is reduced from its cost. (ICAI Study Material)

Sol. False: Under the diminishing balance method, salvage value is not considered initially, as it assumes that at the end of the asset's life, the remaining value shall be its salvage value.

19. Any change in the estimated useful life of an asset should be accounted for as a change

in an accounting estimate in accordance with Accounting Standards.

(ICAI Study Material)

Sol. True: Any change in the useful life of an asset is accounted for as a change in estimate

20. An intangible asset is a non-identifiable, non-monetary asset.

(ICAI Study Material)

Sol. False: An intangible asset is an identifiable non-monetary asset used in the production and supply of goods and services

21. Land can be considered as an asset subject to depreciation.

Sol. False: Land is ineligible for depreciation under AS-10, as it does not meet the criteria for depreciation.

22. Depreciation, like regular expenses, involves a cash outflow.

Sol. False: Depreciation is considered a non-cash cost since it does not entail any actual cash disbursement.

23. Depreciation is an expense that is systematically allocated over time.

Sol. True: Depreciation is applied to the fixed asset's value throughout its useful life, allowing the gradual amortization of any initial capital investment over that period.

24. Depreciation cannot be recorded during a financial year if the company incurs a loss.

Sol. False: Depreciation is an expense deducted from profit, and it must be accounted for in the financial year of the business, regardless of whether there is a profit or a loss.

25. The depreciable amount is the variance between the asset's historical cost and its market value.

Sol. False: The depreciable amount is calculated as the historical cost minus the salvage value.

26. Depreciation represents a non-cash cost and does not lead to any cash disbursement.

Sol. True: Depreciation is a non-cash expenditure that does not involve any cash outflow within the business.

MULTIPLE CHOICE QUESTIONS

1. Original cost = Rs 12,60,000; Salvage value = Nil; Useful life = 6 years. Depreciation for the first year under sum of years digits method will be

(ICAI Study Material)

(a) Rs 3,60,000

(b) Rs 1,20,000

(c) Rs 1,80,000

(d) None of the above

Sol. (a) Rs 3,60,000

2. Obsolescence of a depreciable asset may be caused by:

I. Technological changes.

II. Improvement in production method.

III. Change in market demand for the product or service output.

IV. Legal or other restrictions.

(ICAI Study Material)

- (a) Only (I) above (b) Both (I) and (II) above
(c) All (I), (II), (III) and (IV) above (d) None of the above

Sol. (c) All (I), (II), (III) and (IV) above

3. The number of productions of similar units expected to be obtained from the use of an asset by an enterprise is called as

(ICAI Study Material)

- (a) Unit life (b) Useful life
(c) Production life (d) None of the above

Sol. (b) Useful life

4. If a concern proposes to discontinue its business from March 2018 and decides to dispose of all its plants within a period of 4 months, the Balance Sheet as on March 31, 2018 should indicate the plants at their

(ICAI Study Material)

- (a) Historical cost (b) Net realizable value
(c) Cost less depreciation (d) None of the above

Sol. (b) Net realizable value

5. In the case of downward revaluation of a plant which is for the first time revalued, the account to be debited is

(ICAI Study Material)

- (a) Plant account (b) Revaluation Reserve
(c) Profit & Loss account (d) None of the above

Sol. (c) Profit & Loss account

6. The portion of the acquisition cost of the tangible asset, yet to be allocated is known as

(ICAI Study Material)

- (a) Written down value (b) Accumulated value
(c) Realisable value (d) None of the above

Sol. (a) Written down value

7. The main objective of providing depreciation is to

(ICAI Study Material)

- (a) Create secret reserve (b) Reduce the book value of assets
(c) Allocate cost of the assets (d) None of the above

Sol. (c) Allocate cost of the assets

8. Original cost of a machine was Rs 25,20,000 salvage value was Rs 1,20,000, useful life was 6 years. Annual depreciation under Straight Line Method

(ICAI Study Material)

- (a) ₹4,20,000 (b) ₹4,00,000
(c) ₹3,00,000 (d) None of the above

Sol. (b) ₹4,00,000

9. The cost of a machine is Rs 20,00,000. Two years later the book value is Rs 10,00,000. The Straight-line percentage depreciation is

(ICAI Study Material)

- (a) 50% (b) 33-1/3%
(c) 25% (d) None of the above

Sol. (c) 25%

10. A machinery with original cost of Rs 10,00,000 and Nil Salvage value acquired on 1st April 2019 with 4 years useful life was depreciated using Straight Line Method. It was decided to sell the machinery on 1st October 2021 for Rs 1,20,000. What shall be the gain or (loss) on the sale of Machinery?

(ICAI Study Material)

- (a) Loss of Rs 1,30,000 (b) Gain of Rs 1,20,000
(c) Loss of Rs 5,000 (d) None of the above

Sol (c) Loss of Rs 5,000

11. Which of the following assets does not depreciate?

- (a) Machinery and equipment (b) Patents
(c) Land (d) None of the above

Sol. (c) Land

12. A company purchased a machinery on April 01, 2017, for Rs 15,00,000. It is estimated that the machinery will have a useful life of 5 years after which it will have no salvage value. The depreciation charged during the year 2021-22 was

- (a) ₹5,00,000 (b) ₹4,00,000
(c) ₹3,00,000 (d) None of the above

Sol. (c) ₹3,00,000

13. If the equipment account has a balance of Rs 22,50,000 and the accumulated depreciation account has a balance of Rs 14,00,000, the book value of the equipment is

- (a) ₹36,50,000 (b) ₹8,50,000
(c) ₹14,00,000 (d) None of the above

Sol. (b) ₹8,50,000

14. A plant with original cost of Rs 50,00,000 was revalued after 2 years resulting in credit to Revaluation Surplus account of Rs 4,00,000. Towards the year end of 2019-20, due to COVID-19 the plan value had gone down by Rs 5,00,000 and accordingly management decided to revalue the same. What shall be the impact of this downwards revaluation on the Profit & Loss Account?

- (a) Debit of Rs 5,00,000

- (b) Debit of Rs 1,00,000
- (c) Credit of Rs 5,00,000
- (d) None of the above

Sol. (b)

15. In respect of intangible assets, there is a presumption that the useful life of an intangible asset will not exceed
- (a) 2 years
 - (b) 3 years
 - (c) 10 years
 - (d) None of the above

Sol. (c)

16. A company developed a technology to enhance the battery life of mobile phones. The cost of development have been capitalized as an intangible asset at 5,00,000. The company estimates the life of the technology developed to be 3 years. The company has forecasted that 50% of sales will be in year 1, 35% in year 2 and 15% in year 3. What should be the amortisation charge in third year?
- (a) 2,50,000
 - (b) 75,000
 - (c) 1,75,000
 - (d) None of the above

Sol. (b)

17. An intangible asset is an asset
- (a) with no physical existence
 - (b) generated internally by the business
 - (c) cannot be sold
 - (d) None of the above

Sol. (a)

THEORETICAL QUESTIONS

1. Distinguish between Straight line method of depreciation and Written down value method of depreciation.

Sol. The straight-line depreciation method evenly allocates depreciation expenses over the entire useful life of a depreciable tangible asset, ultimately reducing its book value to zero or its salvage value. In contrast, the reducing balance method applies a fixed percentage to the diminishing asset balance each year to reach its salvage value by the end of its useful life. The key differences between these methods are as follows:

1. The straight-line method maintains a consistent annual depreciation expense, while the reducing balance method reduces depreciation charges over time as the asset ages.
2. Under the straight-line method, it's possible to fully depreciate the asset, but with the reducing balance method, the asset can never reach a fully depreciated state.
3. In the straight-line method, depreciation expenses remain constant, while repair costs increase as the asset ages, resulting in non-uniform total expenses throughout the

asset's life. Conversely, the reducing balance method starts with higher depreciation charges in the initial years, generally accompanied by lower repair expenses. As the asset ages, depreciation charges decrease, while repair expenses increase, leading to a more balanced distribution of costs throughout the asset's life.

2. Write short note on Depletion method of depreciation

Sol. Natural resources includes tangible assets such as mineral deposits, oil and gas reserves, and timber. These resources diminish as they are utilized. The calculation of depletion per unit is determined by the following formula:

$$\frac{\text{Acquisition cost} - \text{residual Value}}{\text{Estimate life in terms of production units}}$$

3. What factors are considered for calculation of depreciation of a plant?

(ICAI Study Material)

Sol. The elements taken into account in the depreciation calculation encompass:

- (i) The total cost of the asset, which includes installation, commissioning, and trial run expenses.
- (ii) The estimated useful lifespan of the asset.
- (iii) The projected scrap value, if applicable, at the conclusion of the asset's useful life.

□□□

PRACTICAL QUESTIONS

1. A company purchased a machinery for ₹1,30,000 on 1st April, 2019 and paid ₹20,000 for freight & installation charges. On 1st October, 2021 another machine was purchased for ₹50,000 and sold old machinery for ₹1,00,000. The machine purchased on 1st October, 2021 was installed on 1st January, 2022.

Under existing practice, the company is charging depreciation @ 20% p.a. on the original cost. However, from 1st April, 2021 it decided to adopt WDV method and charge depreciation @15% p.a. You are required to prepare Machinery A/c from 1st April, 2019 to 31st March, 2022. [Dec. 2022, 4 Marks]

Sol.

Machinery A/c

Date	Particulars	Amount	Date	Particulars	Amount
1.4.2019	To Bank A/c-(M1)	1,30,000	31.3.2020	By Depn. A/c-(M1)	30,000
	To Bank A/c-(M1)	20,000		By Balance c/d-(M1)	1,20,000
	Total	1,50,000		Total	1,50,000
1.4.2020	To Bal. b/d-(M1)	1,20,000	31.3.2021	By Depn. A/c-(M1)	30,000
				By Balance c/d-(M1)	90,000
	Total	1,20,000		Total	1,20,000
1.4.2021	To Bal. b/d-(M1)	90,000	1.10.2021	By Depn. A/c -(M1)	6,750
1.10.2021	To P&L A/c (Profit)	16,750		By Bank A/c	1,00,000
1.01.2022	To Bank A/c -(M2)	50,000		(sale) -(M1)	
			31.3.2022	By Depn. A/c-(M2)	1,875
				By Balance c/d-(M2)	48,125
	Total	1,56,750		Total	1,56,750

Working Note:

I Machinery	₹	II Machinery	₹
1st April 2019	1,50,000	1st Jan, 2022	50,000
Less: Depreciation @ 20%		Less Depreciation @ 15%	

On 31st Mar. 2020	(30,000)	On 31st Mar 2021	(1,875)
1st April 2020	1,20,000	Balance on 31st Mar, 2022	₹48,125
Less Depreciation @ 20%			
On 31st Mar 2021	(30,000)		
1st April 2021	90,000		
Less Depreciation @ 15%			
On 1st Oct, 2021	(6,750)		
	₹83,250		
Less: Sold	1,00,000		
Profit on sale	₹16,750		

*Machinery purchased on 1 Oct. 2021 was put in use on 1 Jan, 2022 so depreciation has been charged from this date only.

2. A firm purchased second hand machinery on 1st January, 2019 for ₹3,00,000, subsequent to which ₹60,000 and ₹40,000 were spent on its repairs and installation, respectively. On 1st July, 2020 another machinery was purchased for ₹2,60,000. On 1st July, 2021, the first machinery having become outdated was auctioned for ₹3,20,000 and on the same date, another machinery was purchased for ₹2,50,000.

On 1st July, 2022, the second machinery was also sold off and it fetched ₹2,30,000.

Depreciation was provided on machinery @ 10% on the original cost annually on 31st December, under the straight line method.

Required:

Prepare the following A/cs in the books of the company: (i) Machinery A/c for the years ending Dec. 31, 2019 to 2022 and (ii) Machinery Disposal A/c. (ICAI Study Material)

Sol.

Dr.		Machinery A/c		Cr.	
Date	Particulars	₹	Date	Particulars	₹
01.01.2019	To Bank A/c (A)	3,00,000	31.12.2019	By Depn. (A)	40,000
	– Cost			By Balance c/d (A)	3,60,000
	– Repairs	60,000			
	– Installation	40,000			
		4,00,000			4,00,000
01.01.2020	To Balance b/d	3,60,000	31.12.2020	By Depn.	
				(A) 40,000	
				(B) <u>13,000</u>	53,000
01.07.2020	To Bank A/c (B)	2,60,000		By Balance c/d	
				(A) 3,20,000	
				(B) <u>2,47,000</u>	5,67,000
		6,20,000			6,20,000

01.01.2021	To Balance b/d	5,67,000	01.07.2021	By Machinery Disposal A/c (A)	3,00,000
01.07.2021	To Bank A/c (C)	2,50,000		By Depn. A/c (A) 20,000	
				(B) 26,000	
				(C) <u>12,500</u>	58,500
				By Balance c/d (B) 2,21,000	
		8,17,000		(C) <u>2,37,500</u>	4,58,500
01.01.2022	To Balance b/d	4,58,500	01.07.2022	By Machinery Disposal A/c (B)	2,08,000
				By Depn. A/c (B) 13,000	
				(C) <u>25,000</u>	38,000
				By Balance c/d	2,12,500
		4,58,500			4,58,500

Machinery Disposal A/c

Date	Particulars	₹	Date	Particulars	₹
01.07.2021	To Machinery A/c (A)	3,00,000	01.07.2021	By Bank A/c	3,20,000
	To Profit Loss A/c (Profit)	20,000			
		<u>3,20,000</u>			<u>3,20,000</u>
01.07.2022	To Machinery A/c (B)	2,08,000	01.07.2022	By Bank A/c	2,30,000
	To P & L A/c (Profit)	22,000			
		<u>2,30,000</u>			<u>2,30,000</u>

3. The LG Transport company purchased 10 trucks at ₹45,00,000 each on 1st April 2019. On October 1st, 2021, one of the trucks is involved in an accident and is completely destroyed and ₹27,00,000 is received from the insurance in full settlement. On the same date another truck is purchased by the company for the sum of ₹50,00,000. The company write off 20% on the original cost per annum. The company observe the calendar year as its financial year.

Give the motor truck A/c for two year ending 31 Dec, 2022. (ICAI Study Material)

Sol.

Date	Particulars	Amount	Date	Particulars	Amount
2021			2021		
Jan-01	To balance b/d	2,92,50,000	Oct-01	By bank A/c	27,00,000
Oct-01	To Profit & Loss A/c (Profit on settlement of Truck)	4,50,000	Oct-01	By Depn. on lost assets	6,75,000
Oct-01	To Bank A/c	50,00,000	Dec-31	By Depn. A/c	83,50,000
			Dec-31	By balance c/d	2,29,75,000
		3,47,00,000			3,47,00,000
2022			2022		
Jan-01	To balance b/d	2,29,75,000	Dec-31	By Depn. A/c	91,00,000
			Dec-31	By balance c/d	1,38,75,000
		2,29,75,000			2,29,75,000

Working Note:

- Profit on settlement of truck

	₹
Original cost as on 1.4.2019	45,00,000
Less: Depn. for 2019	(6,75,000)
	38,25,000
Less: Depn. for 2020	(9,00,000)
	29,25,000
Less: Depn. for 2021 (9 months)	(6,75,000)
	22,50,000
Less: Amount received from Insurance company	(27,00,000)
	4,50,000

- The Machinery A/c of a Factory showed a balance of ₹19,00,000 on 1st January, 2022. Its A/cs were made up on 31st December each year and depreciation is written off at 10% p.a. under the Diminishing Balance Method.

On 1st June 2022, a new machinery was acquired at a cost of ₹2,80,000 and installation charges incurred in erecting the machine works out to ₹8,920 on the same date. On 1st June, 2022 a machine which had cost ₹4,37,400 on 1st January 2020 was sold for

₹75,000. Another machine which had cost ₹4,37,000 on 1st January, 2021 was scrapped on the same date and it realised nothing.

Write a machinery A/c for the year 2022, allowing the same rate of depreciation as in the past, calculating depreciation to the nearest multiple of a Rupee.

Sol.

Plant and Machinery A/c

		₹			₹
2022			2022		
Jan. 1	To Balance b/d	19,00,000	June 1	By Bank (Sales)	75,000
June. 1	To Bank (2,80,000 + 8,920)	2,88,920		By Depn. (on sold machine)	14,762
				By Loss on sale	2,64,532
				By Loss on scrapping the machine	3,76,912
				By Depn. (on scrapped machinery)	16,388
				By Depn. (Note iii)	1,32,094
				By Balance c/d	13,09,232
		21,88,920			21,88,920

Working Note:

(i) Calculation of loss on sale of machine on 1-6-2022		₹
Cost on 1-1-2020		4,37,400
Less: Depreciation @ 10% on ₹4,37,400		(43,740)
W.D.V. on 31-12-2020		3,93,660
Less: Depreciation @ 10% on ₹3,93,660		(39,366)
W.D.V. on 31-12-2021		3,54,294
Less: Depreciation @ 10% on ₹3,54,294 for 5 months		(14,762)
		3,39,532
Less: Sale proceeds on 1-6-2022		(75,000)
Loss		2,64,532
(ii) Calculation of loss on scrapped machine		₹
Cost on 1-1-2021		4,37,000
Less: Depreciation @ 10% on ₹4,37,000		(43,700)
W.D.V. on 1-1-2022		3,93,300
Less: Depreciation @ 10% on ₹3,93,300 for 5 months		(16,388)
Loss		3,76,912
(iii) Depreciation		
Balance of machinery A/c on 1-1-2022		19,00,000
Less : W.D.V of machinery sold	3,54,294	

W.D.V. of machinery scrapped	3,93,300	(7,47,594)
W.D.V. of other machinery on 1-1-2022		11,52,406
Depreciation @ 10% on ₹11,52,406 for 12 months		1,15,240
Depreciation @ 10% on ₹2,88,920 for 7 months		16,854
		1,32,094

5. A firm's plant and machinery A/c at 31st December, 2021 and the corresponding depreciation provision A/c, broken down by year of purchase are as follows:

Year of Purchase	Plant and Machinery at cost ₹	Depn. Provision ₹
2005	2,00,000	2,00,000
2011	3,00,000	3,00,000
2012	10,00,000	9,50,000
2013	7,00,000	5,95,000
2020	5,00,000	75,000
2021	3,00,000	15,000
	30,00,000	21,35,000

Depreciation is at the rate of 10% per annum on cost. It is the Company's policy to assume that all purchases, sales or disposal of plant occurred on 30th June in the relevant year for the purpose of calculating depreciation, irrespective of the precise date on which these events occurred.

During 2022 the following transactions took place:

1. Purchase of plant and machinery amounted to ₹15,00,000
2. Plant that had been bought in 2011 for ₹170,000 was scrapped.
3. Plant that had been bought in 2012 for ₹90,000 was sold for ₹5,000.
4. Plant that had been bought in 2013 for ₹2,40,000 was sold for ₹15,000.

You are required to:

Calculate the provision for depreciation of plant and machinery for the year ended 31st December, 2022. In calculating this provision you should bear in mind that it is the company's policy to show any profit or loss on the sale or disposal of plant as a completely separate item in the Profit and Loss A/c. You are also required to prepare the following ledger A/cs during 2022.

- (i) Plant and machinery at cost;
- (ii) Depreciation provision;
- (iii) Sales or disposal of plant and machinery.

(ICAI Study Material)

Sol. Calculation of provision for depreciation of plant and machinery for the year ended 31st December,

2022.

Plant purchased in		₹	₹
2005		nil	
2011		nil	
2012			50,000
2013	1/2 year at 10% on ₹2,40,000	12,000	
	1 year at 10% on ₹4,60,000	46,000	58,000
2020	10% on ₹5,00,000		50,000
2021	10% on ₹3,00,000		30,000
2022	1/2 year at 10% on ₹15,00,000		75,000
			2,63,000

Plant and Machinery A/c (for 2022) at Cost

	₹		₹
To Balance b/d	30,00,000	By Disposals A/c:	
To Bank A/c	15,00,000	Scrapped	1,70,000
		Sold	3,30,000
		By Balance c/d	40,00,000
	45,00,000		45,00,000

Depreciation Provision A/c (for 2022)

		₹		₹
To Disposal A/c			By Balance b/d	21,35,000
Scrapped - 2011 assets	1,70,000		By Profit and Loss A/c	2,63,000
Sold - 2012 assets	90,000			
Sold - 2013 assets	2,16,000	4,76,000		
To Balance c/d		19,22,000		
		23,98,000		23,98,000

Disposal A/c (for 2022)

	₹		₹
To Plant and Machinery:		By Provision for Depn.	4,76,000
Scrapped	1,70,000	By Cash-Sales Proceeds	20,000
Sold	3,30,000	By Loss on sales	4,000

5,00,000

5,00,000

6. On 1.1.2020 machinery was purchased for ₹40,000. On 1.7.2021 addition were made to the amount of ₹20,000. On 31.3.2022 machine purchased on 1.7.2021 costing ₹6,000 was sold for ₹5,500 & on 30.6.2022 machinery purchased on 1.1.2020 costing ₹16,000 was sold for ₹13,350. On 1.10.2022 addition were made to the amount of ₹10,000.

Show Machinery A/c, Depreciation provision A/c, and Asset disposal A/c for 3 years 2020, 2021, 2022. Depreciate Machinery at 10% p.a. by W.D.V. method

Sol.

Machinery A/c

Date	Particulars	₹	Date	Particulars	₹
1.1.2020	To Bank A/c	40,000	31.12.2020	By Balance c/d	40,000
		40,000			40,000
1.1.2021	To Balance b/d	40,000	31.12.2021	By Balance c/d	60,000
1.7.2021	To Bank A/c	20,000			60,000
		60,000			60,000
1.1.2022	To Balance b/d	60,000	31.3.2022	By Asset disposal A/c	6,000
1.10.2022	To Bank A/c	10,000	30.6.2022	By Asset disposal A/c	16,000
			31.12.2022	By Balance c/d	48,000
		70,000			70,000

Provision for Depreciation A/c (WDV 10%)

Date	Particulars	₹	Date	Particulars	₹
31.12.2020	To Balance c/d	4,000	31.12.2020	By Depn. A/c	4,000
		4,000			4,000
31.3.2022	To Balance c/d	8,600	1.1.2021	By Balance b/d	4,000
		8,600	31.12.2021	By Depn. A/c	4,600
					8,600
31.12.2021	To Asset disposal A/c	300	1.1.2022	By balance b/d	8,600
30.6.2022	To Asset disposal A/c	3040	31.12.2022	By Depn. A/c	3,524
31.12.2022	To Balance c/d	8,784			12,124
		12,124			12,124

Depreciation A/c

Date	Particulars	₹	Date	Particulars	₹
31.12.2020	To Depn. provision A/c	4,000	31.12.2020	By P&L A/c	4,000
		4,000			4,000

31.12.2021	To Deprn. provision A/c	4,600	31.12.2021	By P&L A/c	4,600
		4,600			4,600
31.3.2022	To Asset disposal A/c	142	31.12.2022	By P&L A/c	4,314
30.6.2022	To Asset disposal A/c	648			
31.12.2022	To Deprn. provision A/c	3,524			
		4,314			4,314

Asset Disposal A/c

Date	Particulars	₹	Date	Particulars	₹
31.3.2022	To Machinery A/c	6,000	31.12.2022	By Bank A/c (sale)	5,500
				By Deprn. provision A/c	300
				By Deprn. A/c	142
				By P&L A/c (loss)	58
30.6.2022	To Machinery A/c	16,000	30.6.2022	By Bank A/c (sale)	13,350
30.6.2022	To P&L A/c	1,038		By Deprn. provision A/c	3,040
				By Deprn. A/c	648
		23,038			23,038

- ❑ Depreciation upto the date of disposal is directly credited to asset disposal A/c alternatively it can be routed through depreciation provision A/c.
- ❑ Similarly asset sold can be A/ced through asset Disposal A/c in earlier Question also

Working notes:

(1) Sold on 31.3.2022			(2) Sold on 30.6 .2022			(3) Depreciation on 31.12.2022	
1.7.2021	Cost	6000	1.1.2020	Cost	1600.0	Balance of old machine on 1.1.2022	51400
31.12.2021	Depreciation	300	31.12.2020	Depreciation	1600	(-) sold	5700
1.1.2022	Balance	5700	1.1.2021	Balance	14400	(-)sold	12960
31.3.2022	Depreciation	142	31.12.2021	Depreciation	1440		
31.3.2022	Balance	5,558	1.1.2022	Balance	12960	Balance	32740
	Sold' for	5,500	30.6.2022	Depreciation	648	Depreciation @10%	3274
	Loss	58		Balance	12312	On new machine	250

			Sold for	13350	$10,000 \times 10 \div 100 \times 3 \div 12$	
			Profit	1038		3524

7. Shobhit purchased a machinery on 1st January 2017 for ₹4,80,000 and spent ₹20,000 on its installation. On July 1, 2017 another machinery costing ₹2,00,000 was purchased. On 1st July, 2018 the machinery purchased on 1st January, 2017 having become scrapped and was sold for ₹2,90,000 and on the same date fresh machinery was purchased for ₹5,00,000. Depreciation is provided annually on 31st December at the rate of 10% p.a. on written down value. Prepare Machinery A/c for the years 2017 and 2018. [Nov. 2019, 4 Marks]

Sol.

Machinery A/c

Date	Particulars	Amount ₹	Date	Particulars	Amount ₹
2017			2017		
Jan 1	To Bank A/c(I)	4,80,000	31 Dec.	By Depreciation	
	To Bank A/c (I)- Installation charges	20,000		I 50,000	
				II 10,000	60,000
July 1	To Bank A/c(II)	2,00,000	31 Dec.	By Balance c/d	
				I 4,50,000	
				II 1,90,000	6,40,000
	Total	7,00,000		Total	7,00,000
2018			2018		
1 Jan.	By Balance c/d		1 July	By Depreciation (I)	22,500
	I 4,50,000			By Bank A/c	2,90,000
	II 1,90,000	6,40,000		By Profit & Loss A/c(Loss)	1,37,500
1 July	To Bank A/c (III)	5,00,000	31 Dec.	By Depreciation	
				I 19,000	44,000
				III 25,000	
			31 Dec.	By Balance c/d	
				I 1,71,000	6,46,000
				III 4,75,000	
	Total	11,40,000		Total	11,40,000

Working Note:

Format II (i.e. Direct Calculation - Pros: Time Effective, Cons: High Accuracy Needed)

I		II		III	
Year	Amount ₹	Year	Amount ₹	Year	Amount ₹
1 Jan. 2017	5,00,000	1 July. 2017	2,00,000	1 July 2018	5,00,000
31 Dec. 2017	-50,000	31 Dec. 2017	-10,000	31 Dec. 2018	-25,000

1 Jan. 2018	4,50,000	1 Jan. 2018	1,90,000		
1 July 2018	-22,500	31 Dec. 2018	-19,000		
Sold	4,27,500	Balance	1,71,000	Balance	4,75,000
	2,90,000				
(Loss)	1,37,500				

8. On 1st January, 2019 a firm purchased a Bus for ₹8,00,000. On 1st July, 2020 this bus was damaged due to fire and was completely destroyed and ₹6,00,000 were received by a cheque from the Insurance Company in full settlement on 1st October, 2020. On 1st July, 2020 another Bus was purchased by the firm for ₹10,00,000.

The firm charges Depreciation @ 20% per annum under the WDV Method. Calculate the amount of depreciation for the year ended 31st March, 2021 and gain or loss on the destroyed Bus. [Dec. 2021, 5 Marks]

Sol.

Calculation of Depreciation on Buses

(i) On 1st Bus	₹
Cost on 1.1.2019	8,00,000
Less: Depreciation @ 20% upto 31.3.2019	40,000
WDV as on 31.03.2019 or WDV as on 1.4.2019	7,60,000
Less: Depreciation @ 20% upto 31.3.2020	1,52,000
WDV as on 31.03.2020 or WDV as on 1.4.2020	6,08,000
Less: Depreciation @ 20% upto 1.7.2020 for 3 months	30,400
WDV as on 1.7.2020 on date of Accident	5,77,600
Claim Recd. from Insurance Company	6,00,000
Gain Due to Accident of Bus	22,400
Cost On 1st July, 2020 on New Bus	10,00,000
Less: Depreciation @ 20% for 9 months	1,50,000
WDV as on 31.3.2021	8,50,000

Total Depreciation for the year ended 31st March, 2021 = 30,400 + 1,50,000 i.e ₹1,80,400

9. Jain Bros. acquired a machine on 1st July, 2021 at a cost of ₹14,00,000 and spent ₹1,00,000 on its installation. The firm writes off depreciation at 10% p.a. every year. The books are closed on 31st December every year.

Required:

Show the Machinery A/c on diminishing balance method for the year 2021 and 2022.

(ICAI Study Material)

Sol. As per Reducing Balance Method

Machinery A/c

Date	Particulars	₹	Date	Particulars	₹
2021			2021		
July 1	To Bank A/c	14,00,000	Dec. 31	By Depn. A/c	75,000
July 1	To Bank A/c - Installation Expenses	1,00,000		(₹15,00,000 x 10% x 6/12) for 6 months	
			Dec. 31	By Balance c/d	14,25,000
		15,00,000			15,00,000
2022			2022		
Jan. 1	To Balance b/d	14,25,000	Dec. 31	By Depn. A/c	1,42,500
				(₹14,25,000 x 10%)	
			Dec. 31	By Balance c/d	12,82,500
		14,25,000			14,25,000

10. On 1.1.2020 machinery was purchased for ₹40,000. On 1.7.2021 addition were made to the amount of ₹20,000. On 31.3.2022 machine purchased on 1.7.2021 costing ₹6,000 was sold for ₹5,500 & on 30.6.2022 machinery purchased on 1.1.2020 costing ₹16,000 was sold for ₹13,350. On 1.10.2022 addition were made to the amount of ₹10,000.

Show Machinery A/c & Depreciation A/c for 3 years 2020, 2021, 2022. Depreciate Machinery at 10% p.a. by S.L.M.

Sol.

Machinery A/c (SLM 10%)

Date	Particulars	₹	Date	Particular	₹
1.1.2020	To Bank A/c	40,000	31.12.2020	By Depn. A/c	4,000
				By Balance c/d	36,000
		40,000			40,000
1.1.2021	To Balance b/d	36,000	31.12.2021	By Depn. A/c	5,000
1.7.2021	To Bank A/c	20,000		(4000 + 1000)	
				By Balance c/d	51,000
		56,000			56,000
1.1.2022	To Balance b/d	51,000	31.3.2022	By Bank A/c	5,500
30.6.2022	To Profit on sale of Machinery A/c	1,350		By Depn. A/c	150
				By Loss on sale of Machinery A/c	50
1.10.2022	To Bank A/c	10,000	30.6.2022	By Bank A/c	13,350
				By Depn. A/c	800

			By Depn. A/c (3800 + 250)	4050
			By Balance c/d	38,450
		62,350		62,350

Depreciation A/c

Date	Particulars	₹	Date	Particulars	₹
31.12.2020	To Machinery A/c	4,000	31.12.2020	By P&L A/c	4,000
		4,000			4,000
31.12.2021	To Machinery A/c	5,000	31.12.2021	By P&L A/c	5,000
		5,000			5,000
31.3.2022	To Machinery A/c	150	21.3.2022	By P&L A/c	5,000
30.6.2022	To Machinery A/c	800			
31.12.2022	To Machinery A/c	4,050			
		5,000			5,000

Working notes

(1) Sold on 31.3.2022			(2) Sold on 30.6.2022		
1.7.2021	Cost	6,000	1.1.2020	Cost	16000
31.12.2021	Depreciation	300	31.12.2020	Depreciation	1600
1.1.2022	Balance	5,700	1.1.2021	Balance	14400
31.3.2022	Depreciation	150	31.12.2021	Depreciation	1600
31.3.2022	Balance	5,550	1.1.2022	Balance	12800
	Sold' for	5,500	30.6.2022	Depreciation	800
	Loss	50		Balance	12000
				Sold for	13350
				Profit	1350

(3) Depreciation on 31.12.2022	
Original cost of remaining old machine	
40,000 - 16,000 =	24,000
20,000 - 6,000 =	14,000
	38,000
Depreciation @10%	3,800
One new machine	
$10,000 \times 10 \div 100 \times 3 \div 12$	250
	4050

11. On 1st January, 2020 Shankar purchased 6 machines for ₹7500 each. His Accounting year ends on 31st December. Depreciation at the rate of 10% on initial cost has been charged to profit and loss A/c and credited to a separate depreciation provision A/c.

On 1st January, 2021 one machine was sold for ₹6,250 and on 1st January, 2022 a second machine was sold for ₹6,250. An improved model which cost ₹14,000 was purchased on 1st July, 2021. The same rate of depreciation was decided for the new machine as well. You are required to show:

1. The asset A/c
2. The asset disposal A/c
3. The depreciation provision A/c.

Sol.

Ledger of Shankar

Dr.			Cr.		
Machinery A/c					
Date	Particulars	₹	Date	Particulars	₹
2020 Jan 1	To Bank A/c	45,000	2020 Dec. 31	By Balance c/d	45,000
		45,000			45,000
2021 Jan 1	To Balance b/d	45,000	2021 Jan. 1	By Machinery disposal A/c	7,500
2021 July 1	To Bank A/c	14,000	2021 Dec. 31	By Balance c/d	51,500
		59,000			59,000
2022 Jan 1	To Balance b/d	51,500	2022 Jan. 1	By Machinery disposal A/c	7,500
		51,500	2022 Dec. 31	By Balance c/d	44,000
					51,500

Note: The balance in the asset A/c at any time represents the cost of assets retained by the firm.

Machinery Disposal A/c

Date	Particulars	₹	2021	Particulars	₹
2021 Jan. 1	To Machinery A/c	7,500	2021 Jan. 31	By provision for Depn. A/c	750
			2021 Jan. 1	By Bank A/c	6,250
				By Profit and loss A/c (loss)	500
		7,500			7,500
		₹			₹
2022 Jan. 1	To Machinery A/c	7,500	2022 Jan. 1	By Provision for Depn. A/c	1,500
	To P&L A/c (profit)	250	2022 Jan. 1	By Bank A/c	6,250
		7,750			7,750

Note: Machinery disposal A/c is not a continuous A/c like machinery A/c. It must be prepared separately for each year.

Dr.			Provision for Depreciation A/c (SLM 10%)			Cr.		
Date	Particulars	₹	Date	Particulars	₹			
2020	To Balance c/d	4,500	2020	By Depn. A/c	4,500			
Dec. 1		4,500	Dec. 31		4,500			
2021	To Machinery disposal A/c (transfer)	750	2021	By Balance b/d	4,500			
Jan 1			Jan. 1					
	To Balance c/d	8,200		By Depn. A/c (3750 + 700)	4,450			
Jan 1			Dec. 31					
		8,950			8,950			
2022	To Machinery disposal A/c transfer	1,500	2022	By Balance b/d	8,200			
Jan 1			Jan. 1					
	To Balance c/d	11,100		By Depn. A/c (3000 + 1400)	4,400			
Dec. 31		12,600	Dec. 31					
					12,600			

Note: The balance in the provision A/c at any time shows the balance of accumulated depreciation in respect of retained assets.

	₹
Depreciation for 2021	
(1) On ₹37,500 (₹45,000 – ₹7,500) @ 10% per annum	3,750
On ₹14,000 @ 10% p.a. for 6 months	700
	4,450
Depreciation for the year 2022	
(2) On ₹30,000 (₹37,500 – ₹7,500) @ 10% p.a.	3,000
On ₹14,000 @ 10% p.a. for one year	1,400
	4,400

12. A firm purchased on 1st January, 2020 certain machinery for ₹5,82,000 and spent ₹18,000 on its erection. On July 1, 2020 another machinery for ₹2,00,000 was acquired. On 1st July, 2021 the machinery purchased on 1st January, 2020 having become obsolete was auctioned for ₹3,86,000 and on the same date fresh machinery was purchased at a cost of ₹4,00,000.

Depreciation was provided for annually on 31st December at the rate of 10 per cent p.a. on written down value.

Required Prepare machinery A/c.

(ICAI Study Material)

Sol.

Machinery A/c

Date	Particulars	Amount ₹	Date	Particulars	Amount ₹
2020			2020		
Jan. 1	To Bank A/c	5,82,000	Dec. 31	By Depn. A/c	70,000
Jan. 1	To Bank A/c – erection charges	18,000		By Balance c/d	7,30,000
July 1	To Bank A/c	2,00,000			
		8,00,000			8,00,000
2021			2021		
Jan. 1	To Balance b/d	7,30,000	July 1	By Depn. on sold machine	27,000
July 1	To Bank A/c	4,00,000		By Bank A/c	3,86,000
				By Profit and Loss A/c	1,27,000
			Dec. 31	By Depn. A/c	39,000
				By Balance c/d	5,51,000
		11,30,000			11,30,000

Working Note:-

Book Value of Machines

	Machine I ₹	Machine II ₹	Machine III ₹
Cost	6,00,000	2,00,000	4,00,000
Depreciation for 2020	(60,000)	(10,000)	
Written down value	5,40,000	1,90,000	
Depreciation for 2021	(27,000)	(19,000)	(20,000)
Written down value	5,13,000	1,71,000	3,80,000
Sale Proceeds	(3,86,000)		
Loss on Sale	1,27,000		

13. A machine of cost ₹12,00,000 is depreciated straight-line assuming 10 year working life and zero residual value for three years. At the end of third year, the machine was revalued upwards by ₹60,000 the remaining useful life was reassessed at 9 years.
(ICAI Study Material)

Required:

Calculate depreciation for the fourth year.

Sol. Depreciation per year charged for three years = ₹12,00,000 / 10 = ₹1,20,000

WDV of the machine at the end of third year = ₹12,00,000 - ₹1,20,000 × 3 = ₹8,40,000.

Depreciable amount after revaluation = ₹8,40,000 + ₹60,000 = ₹9,00,000

Remaining useful life as per previous estimate = 7 years Remaining useful life as per revised estimate = 9 years

Depreciation for the fourth year onwards = ₹9,00,000 / 9 = ₹1,00,000.

14. M/s Akash & Co. purchased a machine for ₹10,00,000. Estimated useful life and scrap value were 10 years and ₹1,20,000 respectively. The machine was put to use on 1.1.2017.

Required:

Show Machinery A/c and Depreciation A/c in their books for 2022 by using sum of years digits method. (ICAI Study Material)

Sol.

In the books of M/s Raj & Co.

Machinery A/c

Date	Particulars	Amount ₹	Date	Particulars	Amount ₹
2022			2022		
Jan. 1	To Balance b/d (w.n.2)	3,60,000	Dec. 31	By Depn. A/c (w.n.3)	80,000
			Dec. 31	By Balance c/d	2,80,000
		3,60,000			3,60,000
2023					
Jan. 1	To Balance b/d	2,80,000			

Depreciation A/c

Date	Particular	₹	Date	Particular	₹
2022			2022		
Dec. 31	To Machinery A/c	80,000	Dec. 31	By Profit and Loss A/c	80,000
		80,000			80,000

15. A Machine costing ₹6,00,000 is depreciated on straight line basis, assuming 10 years working life and Nil residual value, for three years. The estimate of remaining useful life after third year was reassessed at 5 years.

Required:

Calculate depreciation for the fourth year.

Sol. Depreciation per year = ₹6,00,000 / 10 = ₹60,000

Depreciation on SLM charged for three years = ₹60,000 x 3 years = ₹1,80,000

Book value of the computer at the end of third year = ₹6,00,000 - ₹1,80,000 = ₹4,20,000.

Remaining useful life as per previous estimate = 7 years

Remaining useful life as per revised estimate = 5 years

Depreciation from the fourth year onwards = ₹4,20,000 / 5 = ₹84,000 per annum

16. A Machinery costing ₹10,00,000 is depreciated on straight line assuming 10 year working life and zero residual value, for four years. At the end of the fourth year, the machinery was revalued upwards by ₹40,000. The remaining useful life was reassessed at 8 years. Calculate Depreciation for the fifth year. [Nov. 2018, 4 Marks]

Sol.

$$\text{Depreciation per year} = \frac{10,00,000}{10} = ₹1,00,000$$

$$\text{Value of plant \& Machinery} = 10,00,000$$

$$\text{Less: Depreciation for 4 years } (1,00,000 \times 4) = 4,00,000$$

$$\text{WDV of the machine at the end of 4 th year} = 6,00,000$$

$$\text{Add: Upward Revaluation} = 40,000$$

$$\text{Depreciable amount after revaluation} = \underline{6,40,000}$$

Remaining useful life as per revised estimate = 8 years

$$\text{Depreciation for the fifth year onwards} = \frac{6,40,000}{8} = ₹80,000$$

17. Jain Bros. acquired a machine on 1st July, 2021 at a cost of ₹14,00,000 and spent ₹1,00,000 on its installation. The firm writes off depreciation at 10% p.a. of the original cost every year. The books are closed on 31st December every year.

Required:

Show the Machinery A/c and Depreciation A/c for the year 2021 and 2022.

(ICAI Study Material)

Machinery A/c

Date	Particulars	₹	Date	Particulars	₹
2021			2021		
July 1	To Bank A/c	14,00,000	Dec. 31	By Depn. A/c	75,000
July 1	To Bank A/c - Installation	1,00,000		10% for 6 months SLM	
			Dec. 31	By Balance c/d	14,25,000
		15,00,000			15,00,000
2022			2022		
Jan. 1	To Balance b/d	14,25,000	Dec. 31	By Depn. A/c	1,50,000
			Dec. 31	10% for 12 months SLM	12,75,000
		14,25,000		By Balance c/d	14,25,000

Depreciation A/c

Date	Particulars	₹	Date	Particulars	₹
2021			2021		
Dec. 31	To Machinery A/c	75,000	Dec. 31	By Profit & Loss A/c	75,000
2022			2022		
Dec. 31	To Machinery A/c	1,50,000	Dec. 31	By Profit & Loss A/c	1,50,000

18. A machine is purchased for ₹20,00,000. Its estimated useful life is 10 years with a residual value of ₹2,00,000. The machine is expected to produce 1.5 lakh units during its life time. Expected distribution pattern of production is as follows:

Year	Production
1-3	20,000 units per year
4-7	15,000 units per year
8-10	10,000 units per year

Required:

Determine the value of depreciation for each year using production units method.

(ICAI Study Material)

Sol. Statement showing Depreciation under Production Units Method

Year	Annual Depreciation
1-3	$\frac{20,000}{1,50,000} \times (\text{₹}20,00,000 - \text{₹}2,00,000) = \text{₹}2,40,000$
4-7	$\frac{15,000}{1,50,000} \times (\text{₹}20,00,000 - \text{₹}2,00,000) = \text{₹}1,80,000$
8-10	$\frac{10,000}{1,50,000} \times (\text{₹}20,00,000 - \text{₹}2,00,000) = \text{₹}1,20,000$

19. A Machinery costing ₹20,00,000 is depreciated on straight line assuming 10 years working life and nil salvage value for four years. At the end of the fourth year, the machinery was revalued upwards by ₹80,000. The remaining useful life of the machinery was also reassessed as 8 years at the end of the fourth year. Calculate the depreciation for 5th Year.

(ICAI Study Material)

Sol. Depreciation every year for first 4 years = ₹20,00,000 / 10 = ₹2,00,000

Thus, Written Down Value of the Machinery at end of the 4th year = ₹20,00,000 - (₹2,00,000 × 4) = ₹12,00,000

Revalued Amount i.e. New Depreciable Amount shall be = ₹12,00,000 + ₹80,000 = ₹12,80,000

Original remaining useful life is (10-4) = 6 Years whereas it is reassessed as 8 Years. Hence, depreciation for 5th Year = ₹12,80,000 / 8 = ₹1,60,000

20. M/s Surya & Co. took lease of a quarry on 1-1-2019 for ₹1,00,00,000. As per technical estimate the total quantity of mineral deposit is 2,00,000 tonnes. Depreciation was charged on the basis of depletion method. Extraction pattern is given in the following table:

Year Quantity of Mineral extracted

2019 2,000 tonnes

2020 10,000 tonnes

2021 15,000 tonnes

Required:

Show the Quarry Lease A/c and Depreciation A/c for each year from 2019 to 2021.

(ICAI Study Material)

Sol.

Quarry Lease A/c

Date		₹			₹
2019			2019		
Jan.	To Bank A/c	1,00,00,000	Dec. 31	By Depn. A/c [(2,000/2,00,000) × ₹1,00,00,000]	1,00,000
			Dec. 31	By Balance c/d	99,00,000
		1,00,00,000			1,00,00,000
2020			2020		
Jan. 1	To Balance b/d	99,00,000	Dec. 31	By Depn. A/c	5,00,000
			Dec. 31	By Balance c/d	94,00,000
		99,00,000			99,00,000
2021			2021		
Jan. 1	To Balance b/d	94,00,000	Dec. 31	By Depn. A/c	7,50,000
			Dec. 31	By Balance c/d	86,50,000
		94,00,000			94,00,000

Depreciation A/c

Date		₹			₹
2019			2019		
Dec. 31	To Quarry lease A/c	1,00,000	Dec. 31	By Profit & Loss A/c	1,00,000
		1,00,000			1,00,000
2020			2020		
Dec. 31	To Quarry lease A/c	5,00,000	Dec. 31	By Profit & Loss A/c	5,00,000
		5,00,000			5,00,000
2021			2021		
Dec. 31	To Quarry lease A/c	7,50,000	Dec. 31	By Profit & Loss A/c	7,50,000
		7,50,000			7,50,000

21. M/s Anshul & Co. commenced business on 1st January 2017, when they purchased plant and equipment for ₹7,00,000. They adopted a policy of charging depreciation at 15% per annum on diminishing balance basis and over the years, their purchases of plant have been:

On 1-1-2021 it was decided to change the method and rate of depreciation to straight line basis. On this date remaining useful life was assessed as 6 years for all the assets purchased before 1.1.2021 with no scrap value and 10 years for the asset purchased on 1.1.2021.

Required:

Calculate the difference in depreciation to be adjusted in the Plant and Equipment A/c for the year ending 31st December, 2021. (ICAI Study Material)

Sol.

Depreciation on WDV method

		Purchased on Jan. 1, 2017 ₹	Purchased on Jan. 1, 2018 ₹	Total Depreciation ₹
2017	Cost	7,00,000		
	Depn.	(1,05,000)		1,05,000
	Written Down Value (WDV)	5,95,000		
2018	Cost	-	1,50,000	
	Depn.	(89,250)	(22,500)	1,11,750
	W.D.V.	5,05,750	1,27,500	
2019	Depn.	(75,863)	(19,125)	94,988
	W.D.V.	4,29,887	1,08,375	
2020	Depn.	(64,483)	(16,256)	80,739
	W.D.V.	3,65,404	92,119	
2021	Depn.	(60,900)	(15,353)	76,253
		3,04,504	76,766	

Plant and Equipment A/c

Date		₹		₹
2021			2021	
Jan. 1	To Balance b/d	4,57,523	Dec. 31	By Depn.
				96,253

	To Bank	2,00,000	(60,900 + 15,353 + 20,000)	
			By Balance c/d	5,61,270
		6,57,523		6,57,523
2022				
Jan. 1	To Balance b/d	5,61,270		

22. On 1.1.2020 Plant was purchased for ₹40,000. On 1.7.2021 addition were made to the amount of ₹20,000. On 31.3.2022 Plant purchased on 1.7.2021 costing ₹6,000 was sold for ₹5,500 & on 30.6.2022 Plant purchased on 1.1.2020 costing ₹16,000 was sold for ₹13,350. On 1.10.2022 addition were made to the amount of ₹10,000.

Show Plant A/c & Depreciation A/c for 3 years 2020, 2021, 2022. Depreciate Plant at 10 % p.a. by W.D.V. method

Sol.

Plant A/c (W.D.V. 10%)

Date	Particular	₹	Date	Particular	₹
1.1.2020	To Bank A/c	40,000	31.12.2020	By Depn. A/c	4000
				By Balance c/d	36000
		40,000			40,000
1.1.2021	To Balance b/d	36000	31.12.2021	By Depn. A/c	4600
1.7.2021	To Bank A/c	20000		By Balance c/d	51,400
		56,000			56,000
1.1.2022	To Balance b/d	51,400	31.3.2022	By Bank A/c	5,500
				By Depn. A/c	142
				By Loss on sale of Machinery	58
30.6.2022	To Profit on sale of machinery	1038	30.6.2022	By Bank A/c	13,350
1.10.2022	To Bank A/c	10,000		By Depn. A/c	648
				By Depn./c (3274 + 250)	3524
				By Balance c/d	39,216
		62,438			62,438

Depreciation A/c

Date	Particular	₹	Date	Particular	₹
31.12.2020	To Plant A/c	4,000	31.12.2020	By P & L A/c	4,000
		4,000			4,000

Date	Particular	₹	Date	Particular	₹
31.12.2021	To Plant A/c	4,600	31.12.2021	By P & L A/c	4,600
		4,600			4,600
31.3.2022	To Plant A/c	142	31.12.2022	By P & L A/c	4314
30.6.2022	To Plant A/c	648			
31.12 .2022	To Plant A/c	3524			
		4314			4314

Working notes

(1) Sold on 31.3.2022			(2) Sold on 30.6.2022			(3) Depreciation on 31.12.2022	
1.7.2021	Cost	6000	1.1.2020	Cost	16000	Balance of old machine on 1.1.2022	51400
31.12.2021	Depreciation	300	31.12.2020	Depreciation	1600	(-) sold	5700
1.1.2022	Balance	5700	1.1.2021	Balance	14400	(-) sold	12960
31.3.2022	Depreciation	142	31.12.2021	Depreciation	1440	Balance	32740
31.3.2022	Balance	5,558	1.1.2022	Balance	12960	Depreciation @10%	3274
	Sold' for	5,500	30.6.2022	Depreciation	648	On new machine	
	Loss	58		Balance	12312	$10,000 \times 10 \div 100 \times 3 \div 12$	250
				Sold for	13350		
				Profit	1038		3524

23. A purchased on 1st January, 2020 certain machinery for ₹97,000 and spent ₹3,000 on its erection. On 1st July, 2020 additional machinery costing ₹50,000 was purchased. On 1st July, 2022 the machinery purchased on 1st January, 2020 having become obsolete was auctioned for ₹50,000 and on the same date new machinery was purchased at a cost of ₹75,000. Depreciation was provided for annually on 31st December at the rate of 10% per annum on the original cost of the machinery. No depreciation need be provided when a machinery is sold or auctioned, for that part of the year in which sale or auction took place. But for the above, depreciation shall be provided on time basis. In 2023, however, A changed this method of providing depreciation and adopted the method of writing off 15% p.a. on the written down value on the balance as appeared in machinery A/c on 1-1-2023.

Show the machinery A/c for the calendar years 2020 to 2023.

Sol.

Date	Particulars	₹	Date	Particulars	₹
2020			2020		
Jan 1	To Bank A/c	97,000	Dec 31	By Depn. A/c	12,500
	To Bank A/c - erection	3,000		(10000 + 2500)	
July 1	To Bank A/c	50,000		By Balance c/d	1,37,500
		1,50,000			1,50,000
2021			2021		
Jan 1	To Balance b/d	1,37,500	Dec 31	By Depn. A/c	15,000
				(10000 + 5000)	
		1,37,500		By Balance c/d	1,22,500
					1,37,500
2022			2022		
Jan 1	To Balance b/d	1,22,500	July 1	By Bank A/c	50,000
July 1	To Bank A/c	75,000		By P & L A/c	25,000
				(loss on sale machine)	
				By Depn. A/c	5,000
				(on asset sold)	
			Dec 31	By Depn. A/c	8,750
				(5000 + 3750)	
				By Balance c/d	1,08,750
		1,97,500			1,97,500
2023			2023		
Jan 1	To Balance b/d	1,08,750	Dec 31	By Depn. A/c	16,312
				(15% of 108750)	
				By Balance c/d	92,438
		1,08,750			1,08,750

New method to be applied on the balance appearing as on 1.1.2023, as prospective change.

24. On April 1, 2019 Shubra Ltd. purchased a machinery for ₹12,00,000. On Oct 1, 2021, a part of the machinery purchased on April 1, 2019 for ₹80,000 was sold for ₹45,000 and a new machinery at a cost of ₹1,58,000 was purchased and installed on the same date. The company has adopted the method of providing 10% p.a. depreciation on the written down value of the machinery.

Required: Show the necessary ledger A/cs for the years ended 31st March, 2020 to 2022 assuming that (a) 'Provision for Depreciation A/c' is not maintained (b) Provision for Depreciation A/c is maintained. (ICAI Study Material)

Sol. (a) If 'Provision for Depreciation A/c' is not maintained.

Dr.			Machinery A/c			Cr.		
Date	Particulars	Amount ₹	Date	Particulars	Amount ₹			
01.04.2019	To Bank A/c	12,00,000	31.03.2020	By Depn. A/c	1,20,000			
				By Balance c/d	10,80,000			
		12,00,000			12,00,000			
01.04.2020	To Balance b/d	10,80,000	31.03.2021	By Depn. A/c	1,08,000			
				By Balance c/d	9,72,000			
		10,80,000			10,80,000			
01.04.2021	To Balance b/d	9,72,000	01.10.2021	By bank A/c	45,000			
01.10.2021	To Bank A/c	1,58,000		By Profit & Loss A/c	16,560			
				By Depn. A/c	3,240			
			31.3.2021	By Depn. A/c (7,900 + 90,720)	98,620			
				By Balance c/d (8,16,480 + 1,50,100)	9,66,580			
		11,30,000			11,30,000			

(b) If 'Provision for Depreciation A/c' is maintained

Dr.			Machinery A/c (at original cost)			Cr.		
Date	Particulars	₹	Date	Particulars	₹			
01.04.2019	To Bank A/c	12,00,000	31.03.2020	By Balance c/d	12,00,000			
01.04.2020	To Balance b/d	12,00,000	31.03.2021	By Balance c/d	12,00,000			
01.04.2021	To Balance b/d	12,00,000	01.10.2021	By Machinery Disposal A/c	80,000			
01.10.2021	To Bank A/c	1,58,000	31.03.2022	By Balance c/d	12,78,000			
		13,58,000			13,58,000			

Dr.			Provision for Depreciation A/c			Cr.		
Date	Particulars	₹	Date	Particulars	₹			
31.03.2020	To Balance c/d	1,20,000	31.03.2020	By Depn. A/c	1,20,000			
31.03.2021	To Balance c/d	2,28,000	1.04.2020	By Balance b/d	1,20,000			
			31.03.2021	By Depn. A/c	1,08,000			
		2,28,000			2,28,000			

01.10.2021	To Machinery Disposal A/c	18,440	01.04.2021	By Balance b/d	2,28,000
31.03.2022	To Balance c/d	3,11,420	01.10.2021	By Depn. A/c	3,240
			31.03.2022	By Depn. A/c	98,620
		3,29,860			3,29,860

Dr.			Machinery Disposal A/c			Cr.		
Date	Particulars	₹	Date	Particulars	₹			
01.10.2021	To Machinery Disposal A/c	80,000	01.10.2021	By Provision for Depn. A/c	18,440			
				By Bank A/c	45,000			
				By Profit and Loss A/c	16,560			
		80,000			80,000			

Working Notes:

(1) Calculation of Profit/Loss on Sale of Machinery

Particulars	₹
A. Original Cost	80,000
B. Less: Depreciation @ 10% WDV p.a. for 2 ½ years	18,440
C. Book Value as on date of Sale (A - B)	61,560
D. Less: Sale proceeds	45,000
E. Loss: on Sale (C - D)	16,560

(2) Calculation of Depreciation for Current Year on Machines (other than sold)

Particulars	₹
A. On Old Machines of ₹9,07,200 for 1 year (10% WDV)	90,720
B. On New Machine of ₹1,58,000 for ½ year	7,900
	98,620

25. Kumar R&D Co. registered a patent (the patent meets the criteria of an intangible asset) on 1st July, 2021 developed at a cost of ₹28,00,000 and spent ₹2,00,000 towards legal fees and registration. The patent is granted for a period of 10 years. The books are closed on 31st December every year.

Required:

Show the Patent A/c and Amortisation A/c for the year 2021 and 2022.

(ICAI Study Material)

Sol. Useful Life: 10 years from 1 July, 2021 Residual Value: NIL

Value of patent will be = ₹30,00,000 (₹28,00,000 + ₹2,00,000)

Therefore, annual depreciation: ₹30,00,000 ÷ 10 years = ₹3,00,000

Patent A/c

Date	Particular	₹	Date	Particular	₹
2021			2021		
July 1	To Bank A/c	28,00,000	Dec. 31	By Amortisation A/c:	1,50,000
July 1	To Bank A/c - Legal & Reg. Exp.	2,00,000		₹3,00,000 x 6/12	
			Dec. 31	By Balance c/d	28,50,000
		30,00,000			30,00,000
2022			2022		
Jan. 1	To Balance b/d	28,50,000	Dec. 31	By Amortisation A/c	3,00,000
			Dec. 31	By Balance c/d	25,50,000
		28,50,000			28,50,000

Amortisation A/c

Date	Particular	Amount ₹	Date	Particular	Amount ₹
2021			2021		
Dec. 31	To Patent A/c	1,50,000	Dec. 31	By Profit & Loss A/c	1,50,000
2022			2022		
Dec. 31	To Patent A/c	3,00,000	Dec. 31	By Profit & Loss A/c	3,00,000

26. Amazing group had Property, Plant & Equipment (PP&E) with a book value of ₹35,00,000 on 31st December, 2022. The balance in Revaluation Surplus on that date was ₹3,00,000. As part of their practice of revaluing the assets on yearly basis, another revaluation was carried out on 31st December, 2022. Evaluate the impact of Revaluation if the Fair Value as a result of Revaluation done on 31st December, 2022 was (a) ₹37,00,000 (b) ₹33,00,000 and (c) ₹31,00,000. Also, give the journal entries. (ICAI Study Material)

Sol. (a) Fair Value: ₹37,00,000

Given that this represents an upward revaluation and the group previously experienced an increase in revaluation surplus (indicating a prior upward adjustment), it will lead to an additional credit of 2,00,000 to the Revaluation Surplus A/c. Consequently, the cumulative balance of Revaluation Surplus (an element of other comprehensive income within Equity) will rise to 5,00,000. Here's the corresponding Accounting journal entry:

Property, Plant & Equipment A/c	Dr	2,00,000
To Revaluation Surplus A/c		2,00,000

(b) Fair Value: ₹33,00,000

As this involves a downward revaluation, and the group previously had a balance in the revaluation surplus (indicating a prior upward adjustment), this will result in a reduction or a debit to the Revaluation Surplus A/c equal to the existing balance. Any remaining excess will be debited to the Profit & Loss A/c. In this particular instance, there is a decrease in fair value amounting to ₹2,00,000 (35,00,000 - 33,00,000), and this entire sum will be debited to the Revaluation Surplus A/c. Consequently, the total balance of Revaluation Surplus (a component of other comprehensive income within Equity) will decrease to ₹1,00,000. Here's the corresponding Accounting journal entry:

Revaluation Surplus A/c	Dr.	2,00,000
To Property, Plant & Equipment A/c		2,00,000

(c) Fair Value: ₹31,00,000

Given that this also involves a downward revaluation, and the group previously held a balance in the revaluation surplus (indicating a prior upward adjustment), this will lead to a reduction or a debit to the Revaluation Surplus A/c up to the amount of the existing balance. Any excess will be debited to the Profit & Loss A/c. In this scenario, there is a decrease in fair value of ₹4,00,000 (35,00,000 - 31,00,000), resulting in a debit of ₹3,00,000 to the Revaluation Surplus A/c, and the remaining ₹1,00,000 will be debited to the Profit & Loss A/c. Consequently, the total balance of the Revaluation Surplus (a component of other comprehensive income in Equity) will be reduced to zero. Here's the corresponding Accounting journal entry:

Revaluation Surplus A/c	Dr.	3,00,000
Profit & Loss A/c	Dr.	1,00,000
To Property, Plant & Equipment A/c		4,00,000

27. The balance of Machinery A/c of a company on 1st April, 2020 was ₹28,54,000. Out of this, a plant having book value of ₹2,16,000 as on 1st April, 2020 was sold on 1st July, 2020 for ₹82,000. On the same date a new plant was purchased for ₹4,58,000 and ₹22,000 was spent on its erection. On 1st November, 2020 a new machine was purchased for ₹5,60,000. Depreciation is Written off @ 15% per annum under the diminishing balance method. Calculate the total amount debited to depreciation for the year ended 31st March, 2021. [July 2021, 4 Marks]

Sol.

Calculation of Depreciation for the year ended 31st March, 2021:

Particulars	Amount ₹
Depreciation on:	
1. Opening Balance (1.4.2020)	
(a) Machine Sold 1.7.2020 $\left(2,16,000 \times \frac{15}{100} \times \frac{3}{12} \right)$	8,100
(b) Other Machine $(28,54,000 - 2,16,000) \times \frac{15}{100}$	3,95,700

2. Machine Purchased on 1.7.2020 $(4,58,000 + 22,000) \times \frac{15}{100} \times \frac{9}{12}$	54,000
3. Machine Purchased on 1.11.2020 $5,60,000 \times \frac{15}{100} \times \frac{5}{12}$	35,000
Total Depreciation for the year	4,92,800

28. A machine was purchased for ₹30,00,000 having an estimated total working of 24,000 hours. The scrap value is expected to be ₹2,00,000 and anticipated pattern of distribution of effective hours is as follows :

Year

1 - 3 3,000 hours per year

4 - 6 2,600 hours per year

7 - 10 1,800 hours per year

Required:

Determine Annual Depreciation under Machine Hour Rate Method.

(ICAI Study Material)

Sol. Statement of Annual Depreciation under Machine Hours Rate Method

Year	Annual Depreciation
1 - 3	$\frac{3,000}{24,000} \times (\text{₹}30,00,000 - \text{₹}2,00,000) = \text{₹}3,50,000$
4 - 6	$\frac{2,600}{24,000} \times (\text{₹}30,00,000 - \text{₹}2,00,000) = \text{₹}3,03,333$
7 - 10	$\frac{1,800}{24,000} \times (\text{₹}30,00,000 - \text{₹}2,00,000) = \text{₹}2,10,000$

29. Cost of Machine = ₹40,000

Scrap Value = ₹4,000

Estimated life = 5 years

Calculate depreciation of all the years on the basis of Sum of Years of Digits Method.

Sol.

$$\text{Depreciation of the Year} = \text{Depreciable value} \times \frac{\text{Number of years (including the present year) of remaining life of the asset}}{\text{Number of years (including the present year) of remaining life of the asset}}$$

1st Year depreciation = $(40,000 - 4,000) \times \frac{5}{1 + 2 + 3 + 4 + 5} = 36,000 \times \frac{5}{15} = ₹12,000$
2nd Year depreciation = $36,000 \times \frac{4}{15} = ₹9,600$
3rd Year depreciation = $36,000 \times \frac{3}{15} = ₹7,200$
4th Year depreciation = $36,000 \times \frac{2}{15} = ₹4,800$
5th Year depreciation = $36,000 \times \frac{1}{15} = ₹2,400$

30. On April 1, 2019 a firm purchased a machinery for ₹2,00,000. On 1st October in the same Accounting year, additional machinery costing ₹1,00,000 was purchased. On 1st October, 2020, the machinery purchased on 1st April 2019, having become obsolete was sold off for ₹90,000. On October 1, 2021, new machinery was purchased for ₹2,50,000 while the machinery purchased on 1st October 2019 was sold for ₹85,000 on the same day. The firm provides depreciation on its machinery @ 10% per annum on original cost on 31st March every year. Show Machinery A/c, Provision for Depreciation A/c and Depreciation A/c for the period of three Accounting years ending March 31, 2022. (ICAI Study Material)

Sol.

Dr.		Machinery A/c		Cr.	
Date	Particulars	₹	Date	Particulars	₹
01.04.2019	To Bank A/c	2,00,000	31.03.2020	By Balance c/d	3,00,000
01.10.2019	To Bank A/c	1,00,000			
		3,00,000			3,00,000
01.04.2020	To Balance b/d	3,00,000	01.10.2020	By Bank A/c	90,000
				By Provision for Depn. A/c	30,000
				By Profit and Loss A/c	80,000
			31.3.2021	By Balance c/d	1,00,000
		3,00,000			3,00,000
01.04.2021	To Balance b/d	1,00,000	01.10.2021	By Bank A/c	85,000
01.10.2021	To Bank A/c	2,50,000		By Provision for Depn. A/c	20,000
	To Profit and Loss A/c	5,000	31.3.2022	By Balance c/d	2,50,000
		3,55,000			3,55,000

Depreciation A/c

Date	Particulars	₹	Date	Particulars	₹
31.03.2020	To provision for Depn. A/c	25,000	31.03.2020	By Profit and Loss A/c	25,000
		25,000			25,000
01.10.2020	To Provision for Depn. A/c	10,000	31.03.2021	By Profit and Loss A/c	20,000
31.03.2021	To Provision for Depn. A/c	10,000			20,000
		20,000			20,000
01.10.2021	To Provision for Depn. A/c	5,000	31.03.2022	By Profit and Loss A/c	17,500
31.03.2022	To Provision for Depn. A/c	12,500			17,500
		17,500			17,500

Dr.

Provision for Depreciation A/c

Cr.

Date	Particulars	₹	Date	Particulars	₹
31.03.2020	To Balance c/d	25,000	31.03.2020	By Depn. A/c (₹20,000 + ₹5,000)	25,000
		25,000			25,000
01.12.2020	To Machinery A/c (₹20,000 + ₹10,000)	30,000	01.04.2020	By Balance b/d	25,000
31.03.2021	To Balance c/d	15,000	01.10.2020	By Depn. A/c	10,000
		45,000	31.03.2021	By Depn. A/c	10,000
01.10.2021	To Machinery A/c (₹5,000 + ₹10,000 + ₹5,000)	20,000			45,000
		20,000	01.04.2021	By Balance b/d	15,000
31.03.2022	To Balance c/d	12,500	01.10.2021	By Depn. A/c	5,000
		32,500	31.03.2022	By Depn. A/c	12,500
		32,500			32,500

31. The Machinery A/c of a firm showed a balance of ₹95 Lakhs on 1st April, 2020. The Books of A/c of the firm are closed on 31st March every year and Depreciation is written off @ 10% per annum under the Diminishing Balance Method. On 1st September, 2020 a new machine was acquired at a cost of ₹14 Lakhs and ₹44,600 was incurred on the same day as installation charges for erecting the machine. On 1st September, 2020 a machine which had cost ₹21,87,000 on 1st April, 2018 was sold for ₹3,75,000. Another machine which had cost ₹21,85,000 on 1st April, 2019 was scrapped on 1st September, 2020 and it realized nothing.

Prepare the Plant and Machinery A/c for the year ended 31st March, 2021. Allow the same rate of depreciation as in the past and calculate depreciation to the nearest multiple of a rupee. Also show all the necessary working notes. [June 2022, 10 Marks]

Sol.

Plant and Machinery A/c (1st April 2020 to 31st March 2021)

Date	Particulars	Amount	Date	Particulars	Amount
2020			2020		
1 April	To Balance b/d :-		1 Sept.	By Depn. on:	
	M1 - WDV 1771470			Machinery 1 - 73811	
	M2 - WDV 1966500			Machinery 2 - <u>81938</u>	1,55,749
	Bal. - WDV <u>5762030</u>	95,00,000		By Bank A/c (Sale M1)	3,75,000
				By P&L A/c (Loss M1)	13,22,659
1 Sept.	To Bank A/c (New Machine)			By P&L A/c (Loss M2)	18,84,562
	Cost - 14,00,000		2021		
	Installation - <u>44,600</u>	14,44,600	31 Mar.	By Depn. On :	
				Op. Unsold - 576203	
				New Machine - <u>84268</u>	6,60,471
				By Balance c/d	
				Op. Unsold - 5185827	
				New Machine - <u>1360332</u>	65,46,159
	Total	1,09,44,600		Total	1,09,44,600

Working Note:-

Machinery 1	₹
Cost as on 1.4.2018	21,87,000
- Depreciation @ 10%	(2,18,700)
W.D.V. as on 31.3.2019	19,68,300
- Depreciation @ 10%	<u>(1,96,830)</u>
W.D.V. as on 31.3.2020	<u>17,71,470</u>
Cost as on 1.4.2019	21,85,000
Depreciation @ 10%	<u>(2,18,500)</u>
W.D.V. as on 31.3.2020	<u>19,66,500</u>

32. Mr. Bhuvan purchased a Plant costing ₹30,000 on 1st January, 2020. He purchased another Plant for ₹25,000 on 1st July in the same year. On 1st October 2021, he sold 1/3rd part of 1st Plant for ₹5,500 and purchased another Plant for ₹15,000 on the same date. Prepare Plant A/c for three years in the following cases:

Case I - If rate of depreciation is 10% p.a. on SLM

Case II - If rate of depreciation is 10% p.a. on WDV

Sol. Case I:-

Working Note:

Plant-I		Plant-II		Plant-III	
On Jan .1, 2020	30,000	On July 1, 2020	25,000	On Oct 1, 2021	15,000
Part I		Less: Dep.	1,250	Less: Dep. for 3M	375
COA $30,000 \times 1/3 =$	10,000	Balance as on 31/12/20	23,750	Balance as on 31/12/21	14,625
Less: Dep.	1,000	Less: Dep.	2,500	Less: Dep.	1,500
Balance as on 31/12/20	9,000	Balance as on 31/12/21	21,250	Balance as on 31/12/22	13,125
Less: Dep. for 9M	750	Less: Dep.	2,500		
Balance on date of sale	8,250	Balance as on 31/12/22	18,750		
Sale Value	5,500				
Loss:	2,750				
Part II					
COA $30,000 \times 2/3 =$	20,000				
Less: Dep.	2,000				
Balance as on 31/12/20	18,000				
Less: Dep.	2,000				
Balance as on 31/12/21	16,000				
Less: Dep.	2,000				
Balance as on 31/12/22	14,000				

Plant A/c

Date	Particulars	L.F.	Amount	Date	Particulars	L.F.	Amount
2020				2020			
Jan. 1	To Bank: Plant I		30,000	Dec. 31	By Depn. on		
July 1	To Bank: Plant II		25,000		Plant I	3000	
					Plant II	1,250	4,250
					By Balnance c/d		
					Plant I	27,000	
					Plant II	23,750	50,750
	Total		55,000		Total		55,000
2021				2021			
Jan. 1	To Bal b/d			Oct. 1	By Depreciation on		
	Plant I 27,000				Plant I 1/3		750
	Plant II 23,750		50,750		By Bank		5,500
					By P& L A/c (Loss)		2,750
Oct. 1	To Bank -Plant III		15,000	Dec. 31	By Depn. on		
					Plant I (2/3)	2,000	
					Plant II	2,500	

				Plant III	<u>375</u>		4,875
				By Balance c/d			
				Plant I (2/3)	16,000		
				Plant II	21,250		
				Plant III	<u>14,625</u>		51,875
	Total		65,750	Total			65,750
2022				2022			
Jan. 1	To Balance b/d			Dec. 31	By Depn. on		
	Plant I 16,000				Plant(2/3) 2,000		
	(2/3)				Plant II 2,500		
	Plant II 21,250				Plant III <u>1,500</u>		6,000
	Plant III <u>14,625</u>		51,875		By Balance c/d		
					Plant I(2/3) 14,000		
					Plant II 18,750		
					Plant III <u>13,125</u>		45,875
	Total		51,875	Total			51,875

33. M/s. Tyagi & Sons purchased 10 trucks @ ₹50,00,000 each on 1st July 2017. On 1st October, 2019, one of the trucks is involved in an accident and is completely destroyed and ₹35,00,000 is received from the insurance in full settlement. On the same date, another truck is purchased by the company for the sum of ₹60,00,000. The company writes off 20% of the original cost per annum. The company observes the calendar year as its financial year.

Give the motor truck A/c for two years ending 31st December, 2020.

[Jan. 2021, 10 Marks]

Sol.

In the Books of M/s. Tyagi & Sons
Trucks A/c

Date	Particulars	Amount	Date	Particulars	Amount
2019			2019		
1 Jan.	To Balance b/d (WN-1)	3,50,00,000	1 Oct.	By Depn. A/c	7,50,000
1 Oct.	To Profit on destroyed Truck (WN-2)	7,50,000		[50,00,000 × 20% × (9/12)]	
	To Bank A/c	60,00,000	31 Dec.	By Bank A/c	35,00,000
				By Depn. A/c	
				(a) On 9 old trucks 90,00,000	
				(b) On 1 new truck <u>3,00,000</u>	93,00,000
				By Balance c/d	
				(a) 9 old trucks 2,25,00,000	
				(b) 1 new truck <u>57,00,000</u>	2,82,00,000
	Total	4,17,50,000	Total		4,17,50,000

2020			2020		
1 Jan.	By Balance c/d		31 Dec.	By Depn. A/c	
	(a) 9 old trucks 2,25,00,000			(a) On 9 old trucks 90,00,000	
	(b) 1 new truck <u>57,00,000</u>	2,82,00,000		(b) On 1 new truck <u>12,00,000</u>	1,02,00,000
				By Balance c/d	
				(a) 9 old trucks 1,35,00,000	
				(b) 1 new truck <u>45,00,000</u>	1,80,00,000
	Total	2,82,00,000		Total	2,82,00,000

Working Notes:

(1) Calculation of Balance as on 1st Jan., 2019:-

	₹
Cost of 10 trucks	5,00,00,000
Less: Dep. for 6 months of Year 2017	(50,00,000)
Less: Dep. of Year 2018	<u>(1,00,00,000)</u>
	<u>3,50,00,000</u>

(2) Calculation of Profit or Loss on destroyed truck:-

Balance of 10 trucks as on 1st Jan., 2019	= $\frac{3,50,00,000}{10}$
Balance of destroyed truck	= 35,00,000
Less: Depreciation of Year 2019	(7,50,000)
	27,50,000
Less: Insurance Claim	35,00,000
Profit	7,50,000

Case II:

Working Note:

Plant-I	Plant-II	Plant-III
On Jan 1, 2020 30,000	On July 1, 2020 25,000	On Oct 1, 2021 15,000
Part I-	Less: Dep. 1,250	Less: Dep. for 3M 375
COA $30,000 \times \frac{1}{3} = 10,000$	Balance as on 31/12/20 23,750	Balance as on 31/12/21 14,625
Less: Dep. 1,000	Less: Dep. 2,375	Less: Dep. 1463
Balance as on 31/12/20 9,000	Balance as on 31/12/21 21,375	Balance as on 31/12/22 13,162
Less: Dep for 9M 675	Less: Dep. 2,137	
Balance on date of sale 8,325	Balance as on 31/12/22 19,238	
Less: Dep. 5,500		
Loss 2,825		

Part II-	
COA 30,000 × 2/3=	20,000
Less: Dep.	2,000
Balance as on 31/12/20	18,000
Less: Dep.	1,800
Balance as on 31/12/21	16,200
Less: Dep.	1,620
Balance as on 31/12/22	14,580

Plant A/c

Date	Particulars	L.F.	Amount	Date	Particulars	L.F.	Amount
2020				2020			
Jan. 1	To Bank: Plant I		30,000	Dec. 31	By Depn. on		
July 1	To Bank: Plant II		25,000		Plant I	3000	
					Plant II	<u>1,250</u>	4,250
					By Balance c/d		
					Plant I	27,000	
					Plant II	23,750	50,750
	Total		55,000		Total		55,000
2021				2021			
Jan. 1	To Balance b/d			Oct. 1	By Depn. on		
	Plant I 27,000				Plant I (1/3)		675
	Plant II <u>23,750</u>		50,750		By Bank		5,500
Oct. 1	To Bank - Plant III		15,000		By P& L A/c (Loss)		2,825
				Dec. 31	By Depn. on		
					Plant I (2/3)	2,000	
					Plant II	2,500	
					Plant III	<u>375</u>	4,550
					By Balance c/d		
					Plant I (2/3)	16,200	
					Plant II	21,375	
					Plant III	<u>14,625</u>	52,200
	Total		65,750		Total		65,750
2022				2022			
Jan. 1	To Balance b/d			Dec. 31	By Depn. on		
	Plant I 16,200				Plant (2/3)	1,620	
	(2/3)				Plant II	2,137	
	Plant II 21,375				Plant III	<u>1,463</u>	5,220
	Plant III <u>14,625</u>		52,200		By Balance c/d		

				Plant(2/3)	14,580		
				Plant II	19,238		
				Plant III	<u>13,162</u>		46,980
	Total		52,200	Total			52,200

34. On 1.1.20 machinery was purchased for ₹40,000. On 1.7.21 addition were made to the amount of ₹20,000. On 31.3.22 machine purchased on 1.7.21 costing ₹6,000 was sold for ₹5,500 & on 30.6.22 machinery purchased on 1.1.20 costing ₹16,000 was sold for ₹13,350. On 1.10.22 addition were made to the amount of ₹10,000.

Show Machinery A/c & Depreciation provision A/c for 3 years 2020, 2021, 2022. Depreciate Machinery at 10% p.a. by S.L.M.

Sol.

Dr.		Machinery A/c		Cr.	
Date	Particulars	₹	Date	Particulars	₹
1.1.20	To Bank A/c	40,000	31.12.20	By Balance c/d	40,000
		40,000			40,000
1.1.21	To Balance b/d	40,000	31.13.21	By Balance c/d	60,000
1.1.21	To Bank A/c	20,000			
		60,000			60,000
1.1.22	To Balance b/f	60,000	31.3.22	By Bank A/c	5500
30.6.22	To P&L A/c (profit)	1,350		By Depn. provision A/c	450
1.10.22	To Bank A/c	10,000		By P&L (loss) A/c	50
			30.6.22	By Bank A/c	13,350
				By Depn. provision A/c	4,000
			31.12.22	By Balance c/d	48,000
		71,350			71,350

Alternatively sale of asset can be routed through asset disposal A/c as done in earlier question.

Dr.		Provision for Depreciation A/c (SLM 10%)		Cr.	
Date	Particulars	₹	Date	Particulars	₹
31.12.20	To Balance c/d	4,000	31.12.20	By Depn. A/c	4,000
		4,000			4,000
31.12.21	To Balance c/d	9,000	1.1.21	By Balance b/d	4,000
			31.12.21	By Depn. A/c	5,000
		9,000			9,000
31.3.22	To Machinery A/c	450	1.1.22	By balance b/d	9,000
30.6.22	To Machinery A/c	4,000	31.3.22	By Depn. A/c	150

31.12.22	To Balance c/d	9,550	30.6.22	By Depn. A/c	800
			31.12.22	By Depn. A/c	4050
		14,000			14,000

Depreciation A/c

Date	Particulars	₹	Date	Particulars	₹
31.12.20	To Depn. provision A/c	4,000	31.12.20	By P&L A/c	4,000
		4,000			4,000
31.12.21	To Depn. provision A/c	5,000	31.12.21	By P&L A/c	5,000
		5,000			5,000
31.3.22	To Depn. provision A/c	150	31.12.22	By P&L A/c	5,000
30.6.22	To Depn. provision A/c	800			
31.12.22	To Depn. provision A/c	4050			
		5,000			5,000

Working notes

(1) Sold on 31.3.2022			(2) Sold on 30.6.2022		
1.7.2021	Cost	6,000	1.1.2020	Cost	16000
31.12.2021	Depreciation	300	31.12.2020	Depreciation	1600
1.1.2022	Balance	5,700	1.1.2021	Balance	14400
31.3.2022	Depreciation	150	31.12.2021	Depreciation	1600
31.3.2022	Balance	5,550	1.1.2022	Balance	12800
	Sold' for	5,500	30.6.2022	Depreciation	800
	Loss	50		Balance	12000
				Sold for	13350
				Profit	1350

(3) Depreciation on 31.12.2022	
Original cost of remaining old machine	
40,000 - 16,000 =	24,000
20,000 - 6,000 =	14,000
	38,000
Depreciation @10%	3,800
One new machine	
10,000 × 10 ÷ 100 × 3 ÷ 12	250
	4050

35. A Trader purchased an old Machinery for ₹37,000 on 1st January, 2015 and spent ₹3,000 on its overhauling. On 1st July 2016, another machine was purchased for ₹10,000. On 1st July 2017, the machinery which was purchased on 1st January 2015, was sold for ₹28,000 and the same day a new machinery costing ₹25,000 was purchased. On 1st July, 2018, the machine which was purchased on 1st July, 2016 was sold for ₹2,000.

Depreciation is charged @ 10% per annum on straight line method. He changed the method and adopted diminishing balance method with effect from 1st January, 2016 and the rate was increased to 15% per annum. The books are closed on 31st December every year.

Prepare Machinery A/c for four years from 1st January, 2015.

[May 2019, 10 Marks]

Sol.

Machinery A/c

Date	Particulars	Amount	Date	Particulars	Amount
2015			2015		
Jan. 1	To Bank A/c (M1)	37,000	Dec. 31	By Depn. A/c	4,000
	To Bank A/c (M1) - overhauling	3,000		By Balance c/d	36,000
	Total	40,000		Total	40,000
2016			2016		
Jan. 1	To Balance b/d (M1)	36,000	Dec. 31	By Depn. A/c	
July 1	To Bank A/c (M2)	10,000		M1	5400
				M2	<u>750</u>
				By Balance c/d	
				M1	30600
				M2	<u>9250</u>
	Total	46,000		Total	46,000
2017			2017		
Jan. 1	By Balance c/d		July 1	By Depn. A/c	2,295
	M1	30600		By Bank A/c	28,000
	M2	<u>9250</u>		By Profit & Loss A/c (1)	305
		39,850			
July 1	To Bank A/c (M3)	25,000	Dec. 31	By Depn. A/c	
				M2	1388
				M3	<u>1875</u>
				By Balance c/d	
				M1	7862
				M3	<u>23125</u>
	Total	64,850		Total	64,850

2018 Jan. 1	By Balance c/d		2018 July 1	By Depn. A/c	590	
	M2	7862		By Bank A/c	2,000	
	M3	<u>23125</u>	30,987	Dec. 31	By Profit & Loss A/c (2)	5,272
					By Depn. A/c	3,469
					By Bank c/d	19,656
	Total		30,987	Total	30,987	

Working Note:-

(1)	Calculation of Loss on 1st Machinery:	₹
	Balance of Machinery as on 1 Jan, 2017	36,600
	Less: Depreciation upto 1 July, 2017 $\left(30,600 \times \frac{15}{100} \times \frac{6}{12}\right)$	2,295
	Balance of Machine on date of Sale	28,305
	Less: Sale value of Machinery	28,000
	Loss on sale of asset	305
(2)	Calculation of Loss on 11nd Machinery:	
	Balance of Machinery as on 1 Jan, 2018	7,860
	Less: Depreciation upto 1 July, 2018 $\left(7,862 \times \frac{15}{100} \times \frac{6}{12}\right)$	590
	Balance of Machine on date of Sale	7,272
	Less: Sale value of Machinery	2,000
	Loss on sale of asset	5,272

36. Prime Streaming Co. acquired the streaming rights of a movie for ₹18,00,000 with the contracted duration of the streaming period being 10 years. At the beginning of the fourth year, based on the decline in viewership, Prime Streaming Co. decided to stream the movie only for the next 5 years.

Required:

Calculate amortisation for the fourth year.

(ICAI Study Material)

Sol. Amortisation every year will be = ₹18,00,000 / 10 = ₹1,80,000

Amortisation on SLM charged for 3 years = ₹1,80,000 × 3 = ₹5,40,000

Balance Amount of the Streaming Rights at the end of third year

= ₹18,00,000 - ₹5,40,000 = ₹12,60,000.

Balance useful life as per previous estimate = 7 years

Balance useful life as per revised estimate = 5 years

Amortisation from the 4th year onwards = ₹12,60,000 / 5 = ₹2,52,000 per annum

