Chapter 7 DEPRECIATION

GLPBA8

Learning Objectives

- To understand the meaning and definition of depreciation.
- To know the causes for depreciation.
- To understand the objectives and factors for providing depreciation.
- To understand different methods of calculating depreciation and auditor duties with regard to it.

POINTS TO RECALL

RECAP

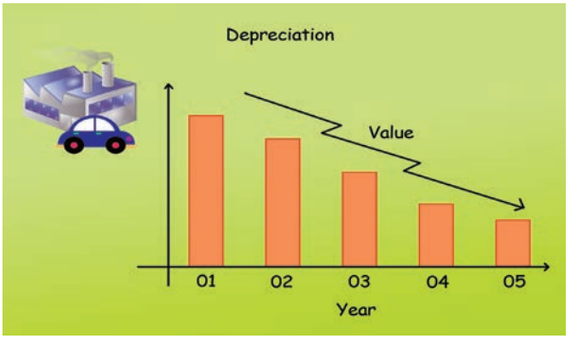
In the previous lesson we have studied verification of various liabilities such as share capital, reserve and surplus, long term loan and current liabilities like trade creditors, outstanding expenses and contingent liabilities.

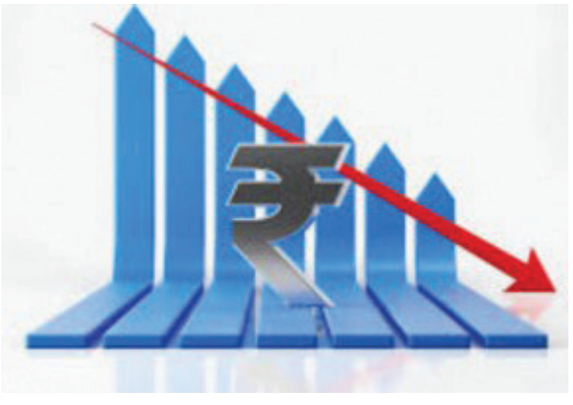
7.1 Depreciation – Meaning

The word depreciation has been derived from a Latin word 'Depretium'. The words 'De' means decline and 'pretium' means 'price'. Thus, the word 'Depretium' stands for decline in the value or price of an asset. The gradual diminution, loss or shrinkage in the utility value of an asset due to wear and tear in use, effluxion of time or obsolescence is called as depreciation.

Depreciation accounting is a system which aims at distributing the cost or basic value of tangible capital assets less salvage value over the estimated useful life of the asset in a systematic and rational manner.

Only assets like building, plant, machinery, furniture etc. are subject to depreciation. It refers to the gradual diminution or loss in the utility value of an asset on account of wear and tear in use, efflux of time or obsolescence.





7.2 Definition

- **R.G.Williams**, "Depreciation may be defined as a gradual deterioration in value due to use".
- **Spicer and Pegle**r, "Depreciation may be defined as the measure of exhaustion of the effective life of an asset from any cause during a given period".
- **The Institute of Chartered Accountants of India** defines it as, "depreciation is a measure of wearing out, consumption or other loss of value of a depreciable asset arising from use, effluxion of time or obsolescence through technology and market changes".

7.3 Causes For Depreciation

The causes of depreciation can be classified as – (1) Internal causes, and (2) External causes.

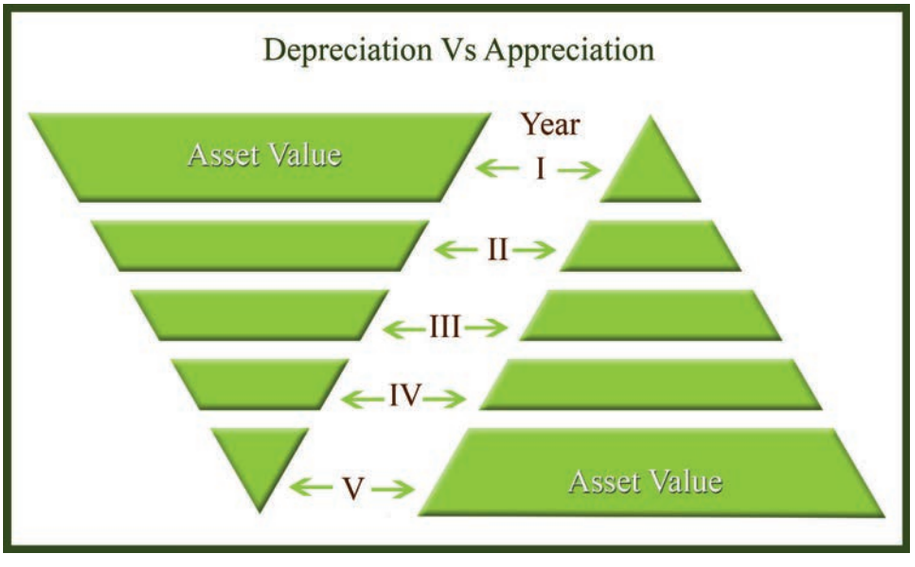
CAUSES FOR DEPRECIATION

INTERNAL CAUSES

1. Wear and Tear
2. Exhaustion
3. Depletion
4. Deterioration

EXTERNAL CAUSES

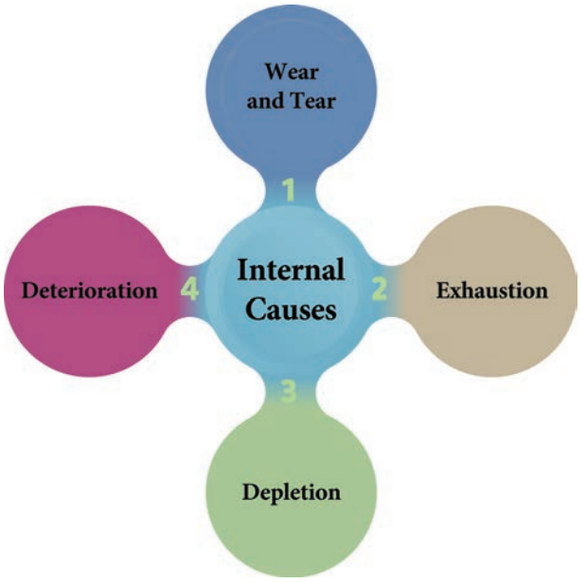
1. Effluxion of Time
2. Obsolescence
3. Weather and Natural Calamities
4. Permanent fall in market value of asset



	
How I was?	***How I am?***

INTERNAL CAUSES

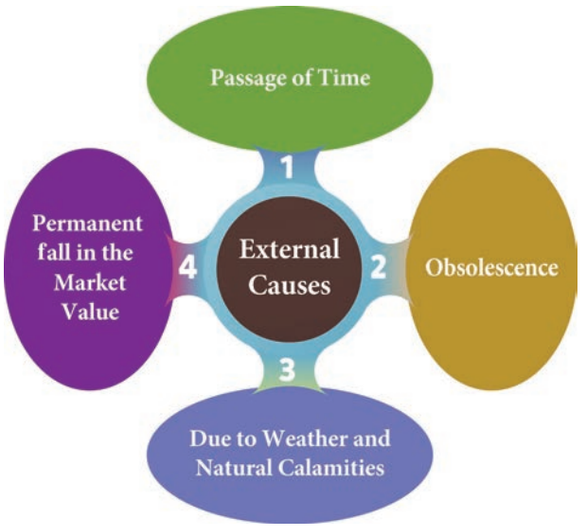
Wear and tear, exhaustion, depletion, deterioration etc., causes depreciation on assets which are internal in nature.



1. **Wear and Tear:** The value of capital assets like plant, machinery, building etc. decrease in value due to constant use. The wear and tear of an asset depends on the usage of asset. For example, when machinery is used for three shifts the wear and tear will be greater than the machinery which is used on a single shift. The difference between the value of an asset when it was purchased and its value after being used for some time period represents wear and tear of the asset.
2. **Exhaustion:** Certain assets like plantations and livestock loose their value with lapse of time as they are being used or consumed. These assets have a definite period of life after which they exhaust in value and become useless.
3. **Depletion:** Natural resources such as mines, quarries and oil wells are of a wasting character and are called as wasting asset. These assets loose their value due to extraction of oil, depletion of minerals and metals. Thus, the value of wasting assets declines due to gradual exhaustion.
4. **Deterioration:** Deterioration means erosion in value of those assets which have a very short period of life. The fall in value of those assets refers to depreciation.

EXTERNAL CAUSES

External factors which cause depreciation include passage of time, obsolescence, permanent fall in market value and weather and accidental calamities. These factors are not connected to the inherent nature of the asset.



1. **Effluxion or Passage of Time:** The utility of some fixed assets like patents, copyrights, trademarks, leasehold property etc., is confined to a time frame. The value of the asset decreases after a particular period of time. For example, assets like lease hold property becomes valueless after the expiry of the period of lease.
2. **Obsolescence:** The value of an asset decreases due to (a) invention of new and improved techniques or production methods, for example, old machines become outdated with the introduction of new machines, (b) decline in market due to change in taste and fashions, or (c) change in market conditions, for example, the demand for a product or service falls to such a level that it is no longer viable to continue with that product or service, (d) legal restraints, etc. These factors make it economical to replace the assets though they are still usable.
3. **Due to Weather and Natural Calamities:** Some assets lose in value when they are constantly exposed to rain, sun, wind etc. and certain assets decline in value when they are affected by certain natural calamities like flood, earth quake, fire etc.
4. **Permanent fall in the Market Value:** Assets like investments lose value due to permanent fall in market value of the asset. Such a fall in the price of an asset should be treated as depreciation. Temporary fall in the value of investments should be ignored for calculating depreciation.

7.4 Objectives of Providing Depreciation

The need for charging depreciation arises due to the following objectives:

1. **To Ascertain the True Cost of Production:** Depreciation or decrease in the value of fixed asset arises when the asset is used in production of goods or services.

Hence the cost of utilizing the asset is an indirect cost and it is necessary to charge depreciation as an item of cost of production. If depreciation on fixed assets is not charged, the cost records will not present a true and fair view of the cost of production.

2. **To Ascertain Correct Income:** Depreciation is a charge against the income or revenue in an accounting period and should be deducted from the income earned to ascertain correct income of the business. It is an invisible cost and is not paid to external persons. True and correct profit can be ascertained only when depreciation is charged against income. Otherwise, the Profit and Loss Account or Income Statement will not present a true and fair view of the business.
3. **To Show a True and Fair View of Financial Position:** Balance Sheet reveals the financial position of the business. The value of fixed assets should be shown in Balance Sheet after deduction of depreciation. Otherwise, the value of fixed assets will be overstated and the Balance Sheet will not show a true and fair view of the financial position of the business.
4. **To Comply with Legal Requirements:** Companies are formed and registered under the Companies Act. According to this, the Companies should compulsorily provide for depreciation before payment of dividend to shareholders.
5. **To Accumulate Funds for Replacement of Asset:** A portion of profit is set aside every year in the form of depreciation for replacement of an asset. Depreciation which is accumulated over a period of time is used for a specific purpose of replacement of the asset at the end of its useful life.

6. **To Keep Capital Intact:** Keeping the capital intact has always been the focal point in business. The amount of depreciation charged against every year's profit should be appropriated. Omission or understatement of depreciation will inflate profit. If any dividend is distributed out of inflated profit, it would be an incorrect return on capital and will decrease the value of the business.
7. **To Plan Tax Liability:**

Tax planning is the legitimate right of every assesse. Depreciation can be used as tax saving device. It is an admissible expense while computing income from business. Income tax liability is reduced by claiming depreciation. A suitable depreciation policy is always essential to minimize tax liability.

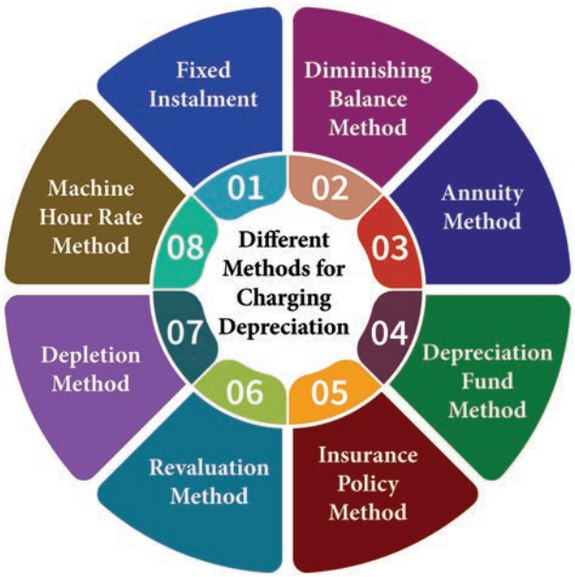
7.5 Factors (or) Basis of Providing Depreciation

1. **Original Cost of the Asset:** Depreciation has to be provided on the original cost of the asset. Cost includes all expenses incurred like freight and installation charges up to the point at which the asset is ready for use.
2. **Residual or Scrap Value:** The value which an asset brings when it is sold as scrap should be considered before making provision for depreciation. Residual value is the estimated sale value of an asset at the end of its economic life to the business concern.
3. **Estimated Working Life:** The working life of an asset differs, based on its nature, usage, conditions under which it is maintained and preserved in business. Hence the working life of an asset should be carefully determined to calculate the accurate amount of depreciation.
4. **Additions and Extensions:** Additions and extensions are made whenever necessary throughout the life of an asset. Such expenditure is capital in nature. When additions are made on the asset, the working life is extended and depreciation is provided accordingly.
5. **Repairs and Renewals:** In order to maintain an asset in good working condition, proper provision for repairs should be provided. By proper maintenance and repairs, the asset works well for the stipulated period otherwise it becomes useless after a few years. This should be considered before providing for depreciation.
6. **Obsolescence:** Obsolescence is another factor to be considered for depreciation. The innovation and improvement in new technology make the existing asset valueless. Hence, it should be borne in mind before providing depreciation.
7. **Interest on Capital Investment:** Interest could be earned if the capital involved in purchasing an asset would have been invested elsewhere. The loss of interest on that account should be

taken into account before providing for depreciation.

8. **Legal Provisions:** The provisions of Companies Act and Income Tax Act should be kept in mind before charging depreciation on an asset.

7.6 Different Methods of Charging Depreciation



1. **Straight Line (Or) Fixed Instalment Method**

   This is the oldest and simplest method of charging depreciation. The life of the asset is estimated and depreciation is written off equally over the life of an asset. The amount of depreciation is such that the book value of the asset is reduced to zero at the end of life of the asset. The amount of depreciation is calculated as follows:

$$\text{Amount of Depreciation (Rs.)} = \frac{\text{Original cost} - \text{Residual or Scrap value}}{\text{Estimated Useful life of the Asset}}$$

$$\text{Rate of Depreciation (\%)} = \frac{\text{Amount of Depreciation}}{\text{Original Cost}} \times 100$$

ADAVANTAGES

1. **Simple to Understand:** This method of calculating depreciation is very simple to understand.
2. **Easy to Calculate:** It is easy to calculate the amount and rate of depreciation.
3. **Accuracy:** In this method, the book value of the asset, i.e., cost price of the asset less depreciation, becomes zero or equal to its scrap value of the expiry of its useful life.

SUITABILITY

- Straight line method of charging depreciation is suitable for assets when – (1) the possibility of obsolescence is less, and (2) when repair charges are less.
- This method is recommended in case of fixed assets such as buildings, plant and machinery and other assets which are subject to depreciation by reason of their employment in the business.
- It is also recommended in case of assets which become exhausted by the effluxion of time such as leasehold properties, patents etc.

DISADVANTAGES

1. **Difficulty in Calculating Depreciation:** Calculation of depreciation is easy only when life of the original asset and its additions are similar. When both have varied life calculation becomes difficult and complicated.
2. **No Provision for Replacement of Asset:** This method does not provide any provision for replacement of asset on the expiry of its useful life.
3. This method increases the charge to the Profit and Loss Account over the years because the repairs to an old asset increases.
4. This method increases the cost of the asset over the years as the amount of depreciation is fixed over the years.

2. Diminishing Balance or Written Down Value Method

In this method depreciation is charged at a fixed percentage on the reducing balance of the asset every year over the useful life of the asset. The amount of depreciation goes on decreasing every year. This method is very useful for plant and machinery where additions and extensions take place very often.

ADVANTAGES

1. It is a simple method of providing depreciation as fixed rate is applied on book value or written down value of assets.
2. This method is quite popular.
3. It provides uniform charge for services of the assets throughout the life.

DISADVANTAGES

1. The method is slightly complicated.
2. If the asset has no residual value it is very difficult to calculate the rate.

SUITABILITY

This method of charging depreciation is suitable when – (a) the possibility of obsolescence are more, and (b) the amount of repairs and renewals increases as the asset grows older.

3. ANNUITY METHOD

Annuity method considers both the value of asset and the amount of interest on the investment made in the fixed asset. Besides, interest, a fixed amount of depreciation is calculated on the basis of depreciation from Annuity Table and is charged to Profit and Loss Account every year. The method is precise and exact from the point of view of calculations, so it is called a scientific method.

ADVANTAGES

1. This method takes interest on capital invested in the asset into account.
2. It is regarded as most exact and precise from the point of view of calculations and is therefore most scientific.

DISADVANTAGES

1. The system is complicated and difficult to understand.
2. The ultimate consequences being that the net burden on profit and loss account grows heavier each year.

SUITABILITY

This method of calculating depreciation is suitable for those assets which require huge amount of capital, like, leasehold property.

4. DEPRECIATION FUND METHOD

This method provides funds for the replacement of the asset at the end of

its life. The amount of depreciation is credited to an account called Sinking Fund or Depreciation Fund account which is shown on the liabilities side of the balance sheet. This amount is invested in securities.

Every year the amount set aside for depreciation along with the interest is again invested. The amount so invested is debited to an account known as Sinking Fund Investment Account and these investments are shown as an asset in the Balance Sheet. The amount of depreciation remains the same for the year.

The rate of interest available from investments and the time required for replacement of the asset enables to determine the amount of depreciation. A reference to Sinking Fund Table gives the extra amount of depreciation to be charged every year. The investments are sold when the asset is due for replacement and the amount so received is used for purchasing the new asset.

The value of asset is shown at its original cost in all years. In the last year, the asset is written off by transferring it to Depreciation Fund Account.

This method is suitable where intention is not only to provide depreciation but also to provide for its replacement as happens in case of Plant and Machinery and many wasting assets.

ADVANTAGES

1. This method sets aside certain amount for replacement of asset by maintaining separate provision.
2. The sale proceeds of the investments are useful for replacement of the asset.
3. This method helps to strengthen financial position of a concern.

DISADVANTAGES

1. This method creates complication and burden on funds each year as they are invested outside.
2. Prices of securities may fall at the time when they are to be realized as a result of which loss may have to be suffered.

5. INSURANCE POLICY METHOD

In this method an insurance policy is purchased for the value of the asset. This policy is taken up for the life of the asset and it matures at a time when the asset is to be replaced. The amount provided for depreciation is paid towards insurance premium. The amount of premium remains the same in all the years. On maturity of the policy, insurance company will pay the amount and the amount will be used for replacing the asset.

ADVANTAGES

1. Funds are readily available for replacement of the asset.
2. Funds are not used for other purposes as they are invested outside.
3. There is no risk in getting back the money as the policy is taken with the insurance company.

DISADVANTAGES

The drawback of this method is that it creates an increasing burden on the funds of each year as they are invested outside.

6. REVALUATION METHOD

In this method the amount of depreciation is calculated by revaluing the asset at the end of each year. The difference between the value of the asset at the beginning and at the end of the period is taken as depreciation. There can be an appreciation in value too. The amount of appreciation is

debited to the asset and credited to profit and loss account.

ADVANTAGES

1. It is easy to understand and simple to implement.
2. Depreciation is calculated every year in the opening balance of asset.
3. This method equalizes the yearly burden on profit and loss account in respect of depreciation.

DISADVANTAGES

1. This method charges heavy amount of depreciation in earlier years.
2. It is difficult to assess the life of these assets, calculation of depreciation becomes complicated.
3. The formula to obtain rate of depreciation can be applied only when there is residual value of the asset.
4. This method has limited applicability.

SUITABILITY

This method can be used for specific assets like loose tools, copyrights, trademarks, etc.,

7. DEPLETION METHOD

This method is specially used for those assets which deplete with use. The cost of the assets is divided by total workable deposits. The depreciation rate is calculated by dividing the cost of the asset by the estimated quantity of product likely to be available. Annual depreciation will be the quantity extracted multiplied by the rate per unit.

For example, If a mine has 2 lakh tons of coal and the value of mine is ₹ 5 lakhs, each ton of coal will cost ₹ 2.50. The quantity of coal taken out of the mine in a period will be multiplied by the rate per ton, i.e., ₹ 2.50 and the resultant figure will be the amount of depreciation.

ADVANTAGES

1. It provides a method to charge amortization or depreciation for the companies dealing in resources, as these assets are different in nature and consumption, from other fixed assets like car, building etc.
2. The method is easy to understand.

DISADVANTAGES

1. The method is simply used for a periodic reduction in the cost of the asset.
2. The method is highly subjective especially the number of units to be extracted is difficult to estimate.

SUITABILITY

This method is suitable for mines, quarries, sandpits, etc.

8. MACHINE HOUR RATE METHOD

Under this method, the life of a machine is estimated in terms of its working hours instead of years. The total number of hours in which a particular machine will work efficiently is estimated. The estimated number of hours is then divided by the cost of the machinery less residual value to ascertain the hourly rate of depreciation.

This method is considered more scientific and precise than either the fixed instalment method or the diminishing balance method.

ADVANTAGES

1. It helps to compare the relative efficiencies and cost of operating different machines.
2. It is most scientific, practical and accurate method of recovery of manufacturing overheads.
3. It provides ready method for measuring the cost of idle machines.

DISADVANTAGES

1. It involves additional work in assessing the working hours of machines and thus it is a costly method.
2. It gives inaccurate results if manual labour is also used.

Rates of Depreciation (for Income-Tax)
Specified in Finance Act, 2018

Block of Asset	Depreciation Allowances as % on WDV
PART-A (Tangible Assets)	
1. Building (Residential, Hotel, Boarding Houses)	5%
2. Building (Commercial – Other than residential)	10%
3. Furniture & Fittings	10%
4. Plant & Machinery	
➢ Machinery & Plant (General)	15%
➢ Vehicles (Non-commercial)	15%
➢ Vehicles (Commercial) - Motor car, Lorry, Trucks	30%
5. Ships	20%
PART-B (Intangible Assets)	
I. Know - how patents, copy rights, trade marks, licences, franchises or any other business or commercial rights of similar nature.	25%
Plant & Machinery	
1. Motor Car	15%
2. Aeroplane	40%
3. Motor Bus, Lorry	30%
4. Life Saving – Medical Equipment	30%
5. Surgical / Medical Equipment	40%
6. Computer / Computer Software	40%
7. Books – Annual publication, library	40%

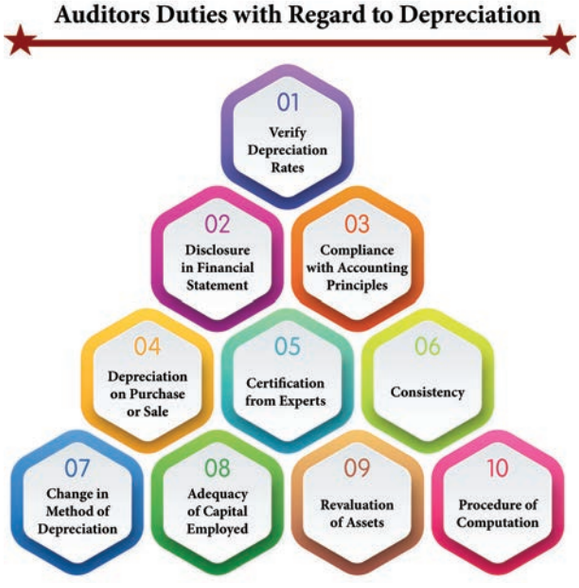
To Think:

- Depreciation is not provided on Land why? But appreciated…..
- Depreciation is not provided on Gold, Silver and Diamond why? But appreciated

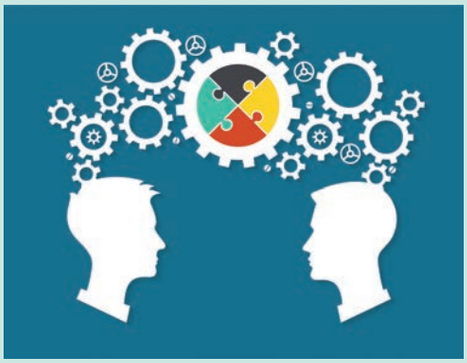
7.7 Auditor's Duties with Regard to Depreciation

An auditor is not a valuer to determine the value of assets held by the company. He has to depend on the suggestions and advice given by professionals or experts in determining the value and estimated life of the asset. However, the following are the duties of an auditor in this regard.

1. **Verify Depreciation Rates:** The auditor should ensure that depreciation has been provided as per the rates prescribed by the Companies Act.
2. **Disclosure in Financial Statement:** He should ensure that adequate depreciation is charged and properly disclosed in the Profit and Loss Account and Balance Sheet.
3. **Compliance with Accounting Principles:** He should ensure that relevant accounting principles have been followed while providing for depreciation.
4. **Depreciation on Purchase or Sale:** When assets are purchased or sold during the year, auditor should ensure that depreciation is charged on pro-rata basis taking into account the date of purchase or sale and the accounting period.
5. **Certification from Experts:** In case the depreciation charged is more than the rates prescribed, he should examine whether same are based on professional and technical advice.
6. **Consistency:** Where difference rates are used for different assets, the same should be consistently applied over the years.
7. **Change in Method of Depreciation:** In case of a change in the method of accounting for depreciation it is recalculated from the date on which asset came into use and deficiency, if any, should be charged to Profit and Loss Account.
8. **Adequacy of Capital Employed:** Auditor should check whether the capital employed in the assets is being kept intact.
9. **Revaluation of Assets:** In case of revaluation of asset during the year he should ensure that depreciation is charged on revalued amounts.



STUDENTS ACTIVITY



1. Discuss the process for depreciation for the assets in your institution and calculate the book value as on date.
2. Discuss the suitable method of depreciation for your computer and its accessories.
3. Refer the depreciation rates prescribed by the finance act for income tax purpose.

SUMMARY

10. **Procedure of Computation:** He should ensure that the procedure for calculating depreciation complies with the provisions of Companies Act and Income tax Act.

Depreciation is the gradual diminution, loss or shrinkage in the utility value of an asset due to wear and tear in use, effluxion of time or obsolescence. It is caused due to wear and tear, exhaustion, depletion, deterioration, effluxion of time, obsolescence, permanent fall in market value of an asset etc. The main objectives of providing depreciation is to ascertain correct profit or loss and to show true and fair view of the financial position and to ensure the compliance of legal provisions of the Companies and Income Tax Act. The method of providing depreciation varies according to the nature of the asset and business. Some of the principal methods of providing depreciation are: Fixed Instalment method, Written down value method, Depreciation or Sinking Fund method, Insurance policy method, Depletion method, Machine hour rate method. In depreciation audit, it is the duty of an auditor to verify the cost of the asset, scrap or residual value, useful life of the asset, depreciation amount, rate of providing depreciation, additions or deletions to the asset, provision for depreciation and proper disclosure in the financial statements.

KEY TERMS

- **Depreciation** is the decrease or reduction in the value of fixed assets.
- **Obsolescence** is the loss arising on account of new invention, technological changes and legal restraints.
- **Effluxion:** Fall in the value of asset over passage of time, like leasehold property, patents, trademarks, copyrights etc.

- **Amortization:** It is an accounting term that refers to the process of allocating the cost of an intangible asset over a period of time. It also refers to the repayment of loan principal over time.
- **Exhaustion:** Assets like plantation, livestock loose their value with lapse of time as they are being used or consumed. These assets have a definite period of life after which they exhaust in value and become useless.
- **Depletion:** Assets like oil wells, mines, quarries etc. loose their value on extraction of oil, mineral and metals.
- **Deterioration:** Depreciation by deterioration is found in case of those assets which have a temporary or short period of life like food articles.
- **Assets Replacement** is the replacement of existing assets at a future date.
- **Residual or Scrap Value:** Residual or scrap value is an estimated sale value of the asset at the end of its economic life.

EVALUATION

HVZZCJ

Multiple Choice Questions:

1. Depreciation is charged on _____
   a. Fixed Asset
   b. Current Asset
   c. Contingent Asset
   d. All of the above
2. Which one of the following is not external cause of depreciation?
   a. Effluxion of time
   b. Obsolescence
   c. Permanent fall in market value
   d. Wear and tear
3. Which one of the following is not an internal cause of depreciation?
   a. Exhaustion
   b. Depletion
   c. Deterioration
   d. Passage of time
4. In case any addition is made to any asset during the financial year, depreciation should be calculated _____
   a. On a pro-rata basis
   b. For full year
   c. At a higher rate
   d. At a lower rate
5. Depletion method is used in respect of _____.
   a. Wasting assets
   b. Fixed assets
   c. Premises
   d. Patents

6. This method is suitable for assets such as bottles, loose tools, livestock etc.
   a. Depletion method
   b. Production unit method
   c. Revaluation method
   d. Sum of the year's digits method
7. This method is suitable for fixed assets like tunnels, bridges, railway lines etc.
   a. Production unit method
   b. Annuity method
   c. Depreciation fund method
   d. Renewals method
8. Obsolescence means decline in value of asset due to _____.
   a. Wear and tear
   b. Fall in market value
   c. Innovation and inventions
   d. All of the above
9. The term used to depreciate intangible asset is _____.
   a. Obsolescence
   b. Replacement
   c. Amortisation
   d. Depletion
10. Rate of depreciation is same but the amount of depreciation is diminishing under _____.
   a. Fixed Installment Method
   b. Diminishing Balance Method
   c. Both
   d. None of the above

Answers: 1.(a), 2.(d), 3.(d), 4.(a), 5.(a), 6.(c), 7.(a), 8.(c), 9.(c), 10.(b)

II Very Short Questions

1. Define depreciation?
2. What is Depletion?
3. What is obsolescence?
4. Write short notes on Revaluation method?
5. What is meant by Amortization?
6. Explain the term "Wear and Tear"

III Short Questions

1. Describe the causes of depreciation?
2. What are the different methods of providing depreciation?
3. Write a short note on – (a) Fixed Instalment Method (b) Written Down Value Method.
4. Explain the method of charging depreciation for Wasting Assets.

Essay Ty pe Questions

1. Explain the causes of depreciation.
2. State the objectives of providing depreciation.
3. What are the factors for providing depreciation?
4. Explain the different methods of charging depreciation.
5. Discuss the duties of an auditor in verifying depreciation

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