Chapter – 3

Conceptual framework of depreciation accounting

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CHAPTER - 3

Conceptual Framework of Depreciation Accounting

In view of the fact that depreciation accounting has assumed greater significance in modern time because of rapid industrial growth and increasing cost of replacement, knowledge of meaning, definition concept aspect, postulates and method of writing of fixed assets before making a critical analysis of its application in the cement Industry in "Madhya Pradesh."

Meaning and Definitions:

Here an attempt is being made to present definition of important terms used in depreciation accounting. Definitions given by standard authorities, professional bodies and professors have been given with suggested modification.

Assets:

Any owned physical object (tangible) or right (intangible) having a money values an item or sources of wealth, expressed in terms of its cast, depreciated cost or less frequently some other value; hence any cost benefiting a future period.

Asset differs from “Property” in that the former means any item appearing on asset side of a balance sheet whereas the latter means item transferable between persons, and right to its uses and benefit safe guarded and governed by body of law. The amounts at which assets are recorded do
not necessarily indicate their current value but rather cost of that portion of cost fairly allocable to succeeding periods. The above definition given by Dr. N.K. Sharma\(^1\) does not cover fictitious assets like debit balance of profit & loss account and differed revenue expenditure to be allocated to future operations. The committee on terminology of the American Institute of Certified Public Accountants has given a better definition.

Something represented by a debit balance is or would be properly carried forward upon closing of books of account according to the books of accounting (Provided such debit balance is not in effect a negative balance applicable to liability) on the basis that it represents either a property right or value acquired, or an expenditure made which has created applicable to the future.\(^2\)

**Accounting:**

Accounting is the language of commerce, the language is which the history of a business to be recorded its operation are summarized, the financial condition is stated and its budget forecast are expressed.

**Fixed Assets:**

Fixed assets imply properties of permanent nature by mean of which the concern is carried on and which are held for the purpose of earning income and not for the purpose of resale in other words fixed means those properties tangible or intangible (i,e,fixed assets mean these properties perceptible to the senses as having physical substance like-land, building, plant & machinery, equipments, furniture, fixtures, patterns,

drawing etc. and an asset is intangible if its value resides not in physical properties of the asset itself, but in the right which its possession confer upon its owner like goodwill, patents) which business has acquired for use in producing goods or services and which are not for resales so long as they are serviceable.

According to the Johnson and William, "Fixed assets may be defined as assets which will provide service for a period longer than one year. They are required for use in the business and are not mean for resale. The majority of fixed assets are subject to depreciation and limited productive life. Land is a passable exception but even land in some forms of use will reduce in value (e.g. as a mine or quarry). Thus fixed assets are those acquired for the purpose of use in the business with the object of earning revenue which is not intended for resale at a profit and conversion into cash in the ordinary course of business."^{1}

**Block Account:**

In fixed assets accounting the most common term used "Block Account" it is nothing but the collective name for the fixed assets of an industry/organization. The various fixed assets stated at their original cost are referred to as gross blocks or gross block expenditure or total block account. This term implies the total fixed investment made in fixed assets. The term net block or depreciated block thus means the original cost or total investment in fixed assets minus the total amount of depreciation provided since their acquisition.

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^{1}Johnson and will aim: "Depreciation" Ed. 1994, Englewood cliffs, new jersey : practice Hall, Page 271.
Fixed Assets Accounting: -

Fixed Assets accounting is a system of accounting which aims at distributing cost or other best value of tangible capital assets\(^1\). This observation points the fact that the purpose of fixed assets accounting is to allocate in systematic manner. The cost of productive facilities over their useful life so as to measure periodic income as precisely as possible.

Replacement or Renewal: -

The replacement of one fixed assets for another particularly of a new asset for an old or at a new part for an old part on the book of account the recognition at the cost of the new assets requires the elimination of the cost of the assets it replaces.

Betterment: -

An expenditure having the effect of extending the useful life of an existing fixed assets increasing its normal rate at output, lowering its unit cost of operation, or otherwise, adding to the worth at benefit it can yield.

Service Life: -

The age on an asset at retirements means retirement at fixed assets from producing or service.

Obsolesce:-

Obsolesce is loss of usefulness occasioned of progress of the technology or by such other external causes as changes in consumer demand and legislation or regulation leading to the reduction of future production.

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\(^1\) Accounting Reserves Bulletin No. 22 of the American institute of accounts, Page 121.
Wear and Tear: -

A factor of depreciation caused by ordinary use, disuse or lapse of time and action of elements.

Fluctuation: -

It is nothing but a variation either upward or downward of the market value of an asset brought through economic factors.

Amortization: -

It means the gradual extinction of an assets or cost over the period of its benefit.

Inadequacy: -

Inadequacy is loss of usefulness brought about by business change due to an alternation in the character, rate of quantum of production.

Depreciation: -

This is an allocation of the depreciable amount of an asset over its estimated useful life. This amount is charged to income either directly or indirectly. Depreciable amount of a depreciable asset is its historical cost or other amount substituted for historical cost in the financial statement less the estimated salvage value.

Repair and maintenance: -

This cost of restoration of a capital asset to its full productive capital. After damage, accident or prolonged use, without increase in the previous estimated service life or capacity.
Accounting concept and other concept: -

In this observation it seems to be implied that despite the growing significance of depreciation. Accounting in modern time the term depreciation assets accounting appears to be over worked and its concept much confused. The concept of depreciation accounting as used in Economics, Engineering and Law is quite different from its popular concept i.e. accounting concept, if this basic fact is over looked. One is sure to be involved in confusion regarding the concept of depreciation accounting. In view of this fact, therefore different concept of depreciation accounting have been examined in following paragraphs:

Accounting concept

The popular concept or accounting concept emphasizes the importance of cost value as well as book value because the basis of scrap value or salvage value of fixed assets is technically determined and it is a basis of the letter, the realizable value of the fixed Asset. In this context the cost value means the value represented by the price, which was paid for a fixed asset. Thus the cost value is quite different from the book value or balance sheet value of a fixed asset. The book value or balance sheet value represents the amount of cost of an asset, which remains to be written off against revenue over the remainder of its expected life.

The scrap value is the value of fixed asset realized at the end of life of fixed asset in the best possible way after it has been worn out. In other words, the scrap value is equal to estimate & resale value of a fixed asset at the time of retirement of fixed assets.
Economic Concept: -

According to the economists a fixed asset of a business is a bundle of future services and its value is the present value of these services at the end of the particular financial year in comparison to the present value at the commencement of the particular financial year is a measure of depreciation. As fixed assets contribute to the working capital, their depreciation is a contribution towards working capital.

Legal Concept: -

It signifies the value, which is the department of Income tax, Government value and their legal authorities place upon or recognize for taxation, registration, compensation and other legal purposes. It is the value, which is legally of greater significance because on the basis of this value fixed assets are valued to pay tax, registration fees, payment of compensation etc.

Engineering Concept: -

A comparison between the service ability of the particular fixed asset at the end of the period and at the commencement of that period is measured. In this concept, replacement value is taken not of, which means the value of fixed asset in terms of the cost of another fixed asset of the same or similar type, which is to be substituted for the existing fixed asset.

Appraisal Concept: -

According to this concept, an existing old fixed asset is compared with the hypothetical new fixed asset used as a basis of valuation. Thus two different fixed assets are compared on a single date in order to determine appraisal value.
It is better to analyze different concept of depreciation accounting to understand the subject matter. Although it is true that accounting concept is the only popular concept and recognized concept, economic concept, engineering concept and appraisal concept are not less important in modern time, where at every State Government interference and inflation, the price of fixed assets are increasing continuously.

**Aspect of Depreciation Accounting: -**

Accounting aspect of depreciation accounting recognizes only the historical cost of fixed Asset. Thus according to this aspect historical cost is considered for calculating depreciation on fixed Assets, but now majority of accountant are thinking replacement value of fixed assets for price fixation purpose. This practice is at variance from recognized principle of financial and cast accountancy.

**Principle and Postulates:**

The term postulates refers to assumptions, which are made for the development of concepts or definition and principles of a profession. Postulates are accepted without any proof of their existence or accuracy. Like any other branch of knowledge, depreciation accounting is also based on certain postulates these are given below:

*(i) Limit Service life: -*

Fixed assets have a limited service life due to physical and financial factors.
(ii) Continuity of operations: -

The business unit will continue its operation. It is not be wound up during service life of an asset and thereafter.

(iii) Divisibility of Enterprise Life: -

The life of business enterprise can be divided in terms of certain accounting periods.

(iv) Measurability or Serviceability: -

Usefulness or serviceability of a depreciable asset can be measured either in terms of year’s or some other service unit e.g. hour’s, physical unit and output etc.

(v) Stable Value of Money: -

The Law of land assumes that value of money is stable for the purpose of financial transaction.

Under the forgoing assumption the initial cost or bargained price furnishes the basis for the valuation of fixed assets. Accounting to this postulate all fixed asset must be taken at their exchange value at the time of acquisition, further more, the sensible conservation in all matters involving valuation allow for making provision for all expenses or losses effecting a period by excluding revenue or gain until it has been realized for this purpose. It is emphasized that transaction must be analyzed and recorded in the same way from one period to another and be presented and classified in the same way from one period to another and classified in the same way in the statement of successive periods. It is also required that full disclosure of accounting policies and procedures effecting valuation of fixed assets or
assignment of costs should be made in financial reports by means of footnotes, Parenthetical explanation or separate schedule. When major change are made these changes and their effect upon the statement should be brought to the attention of the reader by means of footnotes, Parenthetical statements or attached schedules. This procedure will undoubtedly help in maintaining consistency of treatment for comparison of successive statements. Any procedure once adopted should not be changed or sifted indiscriminately by the management especially for ulterior purpose. In setting property valuation and computing net income due attention must be paid at the statutory and common like applicable thereto.

Depreciation: -

Depreciation is nothing but difference between the original cost and the probable break-up value would represent the loss to be suffered by the business organization on account of use of such assets. Depreciation is on accruing loss of value, which begins with cost now and ends with scrape value at the end of the fixed assets useful life. The use of the term like “Provision for Depreciation” or “Depreciation reserve” in accounting statement has made the reader to believe that fixed assets accounting provides fund, but however, depreciation charges in accounting simply recognizes the fact that existing fixed asset has lost a portion of its serviceability, through use, disuse, obsolescence’s, Inadequacy. The provision for depreciation means only that a book entry has been made resulting, in an expense deduction in the profit and loss account and a reduction in the asset casting value from cost to lower amount. Some people think that depreciation charges automatically provide funds and all that is necessary to obtain more money to acquire more depreciation is a completely mistaken view funds for replacement may be provided only
when cash equivalent to the replacement cost is invested outside the business in ready marketable securities or kept in some other liquid form.

**Approaches to depreciation:** -

The following approaches to charging depreciation are worth mentioning in connection because the problem involved in depreciation account will remain unsolved, until the accountant keeps these considerations in view.

(i) *Valuation Approach:* -

According to this approach, depreciation is considered as the balancing difference between cost of fixed asset and current value of fixed asset. In this approach both positive and negative depreciation must be realized.

(ii) *Appraisal Approach:* -

According to this approach to different fixed asset are compared on a signal date in order to determine depreciation. Thus, difference in the value of existing old assets and hypothetical new assets is treated as depreciation of that fixed assets, thus, it is clear that in this approach an attempt is made to determine what one could offered to pay for the old asset in comparison with the hypothetical new one.

(iii) *Accrued Renewals Approach:* -

According to this approach there must be periodical setting aside of funds in such a way that when the asset has no further use. Funds will be available to meet the expenditure on fixed assets. Depreciation
accounting to this approach is the accrued liability for the differed or periodic renewals of fixed assets.

(iv) **Manufacturing Cost Approach:** -

According to this approach, depreciation it only in relation to manufacturing cost of goods sold. It is concerned with naught but the problem of adding the cost of asset to the total cost of the goods processed through the use of the fixed asset. This approach is not concerned with whether prices of the product go up or down.

(v) **Replacement Cost Approach:** -

According to this approach depreciation is calculated on the replacement value of fixed asset instead of historical cost of fixed assets. Due to price inflation, this approach is considered better because it reflects real cost of the product and it helps in price fixation also.

(vi) **Service Expected And Expired Approach:** -

According to this approach depreciation should bear relationship to service expected and services expire of day to day, The difference between service expected and service expired day to day is treated as depreciation of that fixed asset.

**Methods of depreciation charges:** -

There may be various methods available for calculating the amount of depreciation to be charged to profit and loss account. Amount of depreciation is functions at various factors are time, usage, time & usage
and time & cost of maintaining the fixed assets, As such the various methods available for charging the depreciation can be describe as below:

1. **Straight Line Method.**

2. **Decreasing Change Method:**
   (i) Fixed rate diminishing base method.
   (ii) Double balance method.
   (iii) Arbitrary decreasing charges method.
   (iv) Diminishing rates on cost method.
   (v) Straight line method with rate changes.
   (vi) Sum of the year digit method.

3. **Increasing Charge Method.**

4. **Interest Method**
   (i) Annuity Method
   (ii) Depreciation fund method.

5. **Production method.**

6. **Revaluation method.**

7. **Other methods.**

Above methods details and explanations are given below:

1. **Straight Line Method:**

   This is also called; fixed percentage method; original cost method or fixed installment method. Under it a fixed percentage at the original cost of the assets is written all each year till the assets is ultimately reduced to nil or its break up value thus the entire cost less the scrap value is written all during the estimated working life after which the assets becomes value less.
This method is simple in calculation however, as the charge at repaired increase with the passage at time, the effects on net profit are heat steady every year, a lot of calculation are involved in case at additions made to the assets. According to this method the amount of yearly depreciation is calculated as below:

\[
\text{Depreciation} = \frac{\text{Cost of Assets: - Estimated Scrap Value}}{\text{Estimated life in Years}}
\]

**Example:**

Cost of Asset \( \text{Rs.} - 2,20,000 \)
Estimated Scrap Value \( \text{Rs.}- 20,000 \)
(At the end of life of the asset)
Estimated life \( - 10 \text{ Years} \)
Yearly depreciation \( = \frac{2,20,000 - 20000}{10} \)
\( = \text{Rs.} \ 20,000 \)

The benefit of this method is the equal amount of depreciation is charged every year throughout the life of the assets, making the calculation of depreciation and cost comparison easy. The main draw back of this method is that the amount of depreciation in later years is high when the utility at the assets is reduced.

The formula of calculating depreciation is as follow:

\[
D = \frac{C - S}{N}
\]

Where

\( D = \) Stands for depreciation for the Particular Year
C = Stands for cost
S = Stand for scrap value
N = Stands for number of year of estimated life at assets.

2. Decreasing Charged Method: -

It is also known as diminishing value method 'or' decline balance method or diminishing balance method. Under this method it a fixed percentage is written every year on the reduced balance of the assets. The percentage of depreciation is not applied to the original cost but only to the balance, which remains after charging depreciation in the banging at a year it remains fixed for all the years of the working life of an assets. However the actual amount of depreciation written off every year goes on decreasing with the reduction in the value of the assets till after the expiry of the working life, the value of the assets is brought down to its scrap value.

In the case of assets, which have fairly long life and which require plenty of repairs e.g. plant and machinery. However it is not at much use for assets having short life for which depreciation has to be charged at a uniform rate.

Decreasing charge method is developed from one at the shortcomings of the straight-line method. It is suggested that repaired tend to increase as the machine approaches at the end end of its useful life. Accordingly depreciation charges should be smaller as the repair charges increase so that the sum of the two charges may be equalized over the life of assets. Some decreasing charge methods, which are generally hatted discussed in textbooks are discussed in this leading.
(i) Fixed Rate Diminishing Base Method:

The most common decreasing charge method is the reducing balance method, its another name is ‘diminishing’ balance method, written down value method reducing balance method, reducing installment method and accelerated depreciation method. This method requires a given Percentage of the written down value of the asset to be user as the figure for depreciation expenses. This method will never depreciate the entire cost of an asset but required an explicit implicit salvage value of a significant size. In this method, depreciation rate is constant but it is applied each year to the different between the asset account and depreciation reserve account (book value).

The assumption is that a constant percentage of the value of asset at the beginning of each particular depreciation period is last during the period. This method enables more or less an even charge during to reserve each year. Heavy depreciation charges during the first year are balanced by small depreciation charges in our Income Tax Act; this method is followed in each case except in the cost of ocean going ships.

There are two approaches in this method. In the first approach, we estimate the salvage value and then complete the fixed percentage rate. This method cannot be used unless a salvage value is assumed. This approach is rarely used because rate varies with the salvage value and bears no relationship to the way the asset is actually depreciating. In this second approach we decide a constant percentage rate with which result is the salvage value of the unresolved cost of the end of the assets life.

As soon as an asset is put to use, its value, for sale purposes falls heavily. Under this method, the depreciation is the heaviest in the first
year, that it reduces the book figure to its appropriate value, the rate applied would require to be high so that at about the time. The asset has ceased to be useful it will be written down to a negligible amount, the formula, which enables the ascertained, is given as under.

\[ V = 1 - n \sqrt{\frac{S}{C}} \]

Stands for

\begin{align*}
V &= \text{Percentage to be applied} \\
N &= \text{Number of years of assets life} \\
S &= \text{Scrap value} \\
C &= \text{Cost of assets}
\end{align*}

There arises a problem when assets are acquired during the year and less than full year’s depreciation is to be taken during the first and last year of the service life. The logical solution to this problem is to compute the depreciation for each year for a whole number of years of service life and then allocate each annual depreciation charges between partial years.

Instead of charging depreciation at a flat rate on the net value of asset as standing at the end of the accounting period, this matter can also be dealt with in two other way, first depreciation is charged on the value of the asset as appearing at the beginning of the period, additions and sales during the year are ignored. Secondly depreciation is charged on the computed number of month an asset has been in the factory. Alternatively, table are available showing the balance remaining at the end of successive years when depreciation is calculated at a given percentage rate by examining several tables at different rates of depreciation. A rate may be
found which will reduce the cost of residual value at the end of the expected life of the assets.

This method is suitable for plant and machinery, furniture and fixture and particularly those types of assets, which are subject to serious wear and tear, such as road vehicles, it is not suitable for such assets as leased, which must be reduced to zero value in definite time.

(ii) **Double Declining Balance Method:**

Many concerns usually apply in this method using twice the straight-line depreciation rate without regard to the residual value and declining block value of asset. For the first year, the rate is applied to the cost of depreciable assets and since the second year the rate is applied to the declining balance. In practice, service life of depreciation asset generally terminates before the full allocation of cost. Hence, a switch over to straight-line method is made near the midpoint of the life.

(iii) **Arbitrary Decreasing Charges Method:**

In this method we divide the depreciation base into two or more segments and allocate each segment over different portions of service life. For example depreciable assets cost Rs. 5,10,000/- and salvage value 10,000 and estimated life 12 years, the decision might to be allocate Rs. 250,000/- over the first for four years of service life, 1, 50,000/- over the next four year of service life, and remaining Rs. 100,000/- over the last four years. This method of depreciation is both arbitrary and highly subjective. The major objection to a subjective, an assignment of service cost is that if may be employed to deliberately show reported. Income as a mere estimated and since the groups, primarily by various business have
conflicting interests there is some advantage in being arbitrary in a systematic manner.

*(iv) Diminishing Rates on Cost Method: -*

This method is arbitrary in the selection of the rate therefore; no formula can be given for determining the rates. The rates are chosen arbitrarily when the depreciation programme is set up. The base and the cost, remain fixed while the rates choose arbitrarily and applied to cost each year. This being so the method has no logic or reason behind it, it is suitable for those assets, where belief is held that depreciation should be small in the early years and larger in the later years the changed this method is substitute for the fixed percentage on diminishing value method.

*(v.) Straight-line Method with Rate Change: -*

Another method of obtaining a higher or a lower rate of depreciation in the early years as compared with the later once is to use two different straight-line rates of depreciation during the life of the asset. For example- Two thirds of the deprecating value of machine may be depreciated in one half of its life the life of machine may be assumed at 10 year’s and cost of machine may also be assumed of Rs. 150,000/-

First five-year annual charge: -

\[
\frac{150,000 \times \frac{2}{3}}{10/2} = 20,000/-
\]

Second five year annual charge:-

\[
\frac{150,000 \times \frac{1}{3}}{10/2} = 10,000
\]

Total depreciation for first five year \[5 \times 20,000 = 100,000\]
Total depreciation for second five years  \( 5 \times 10,000 = 50,000 \)

Total depreciation  \( = 150,000 \)

*(vi) Sum of The Year's Digits Method of Depreciation:* -

A similar method of computing depreciation which result in declining amount of depreciation charges each year of on depreciable asset useful life is the sum of the years digits method. This method does not require a salvage value like the declining balance method, this method assigns depreciation to each accounting period in proportion to the number of years of an asset's useful life, which remains at the beginning of the current year the number of each year are added together e.g. years 1,2,3,4, = 10. The sum of digit is always equal to \( n(n+1)/2 \) in the above depreciation is charged at 4/10, in the First year, 3/10 In the Second year, 2/10 In the Third year & 1/10 In the Final year.

This method's formula is:

\[
\text{Year's Depreciation} = \frac{\text{Number of Year remaining}}{\text{Total digital salvage Years of life}} \times (\text{Cost- salvage})
\]

This method is called “the sum of the year digit method” because the annual rate is calculated through the use of number of years in the estimated life of the asset, the number of all the years are added to from the denominator of a fraction and the digit of each year is used as the number of the fraction applied for that year to the cost less scrap value of the asset the fraction are applied in the reserve.

The result obtained by the use of the sum of the year digits method account particularly the same as those obtained by the use of reducing balance method, but the sum of the year's digits method is less
difficult to apply. Under this method the annual depreciation is that proportion of the total depreciation, which the year that the asset has yet to live plus one, bear to the sum of years digits. It may be applied to all type of depreciable assets and yields periodic charge similar to those provided by the declining balance method. This method is likely to be particularly useful where style or fashion has much to do with the value of the assets.

3. Increasing Charge Method: -

In practice, depreciation is seldom assigned to the successive period of service life by an increasing charge formula, such a procedure it’s regarded as non conservative, specially for higher risk investment in specialized plant assets. There is added objection that where maintenance costs tend to increase an installation ages the combination of increasing depreciation and increasing maintenance, unduly burdens the latter years of service life. In its most familiar form the method assumes, in fact that the contribution of the assets to revenue remains constant period-by-period thou out service life and that the expenses other than depreciation are also relatively stable. This condition is seldom fulfilling except in special case of leasehold property. The tax considerations have tended to suppress interest in these methods although in the past tax increases have sometimes more the all offset the effect of interest taken into account.

4. Interest Method: -

Depreciation and interest are physically in separate. Both of them are relate with time. However, one can not be replaced by the other the best example to take in clearly one in which the depreciation is wholly and solely due to passage of time so that there is no qualities deterioration
to fag the relation between depreciation and interest which also depends entirely on the passage of time.

(i) **Annuity method:**

In the annuity method, the cost of asset, as also equal installment unit and the book value of asset thereon writes down the interests annually is reduced either to zero or its residual value at the end of its usefulness to business. Annuity method is based on the present value approach to income determination, i.e., it allows for the time value of money and its advocates often argue for its adoption. Moreover, it tends to produce a reported income, which reflects a constant rate of return on the capital invested.

In this method it is supposed that money invested in the purchase of asset earns interest at fixed rate. The idea, under this method is that the expenditure on the asset is regarded as an investment earning a certain rate of interest, interest at a fixed rate is calculated on the capital outlay involved in the acquisitions of the assets on assumption that if the same amount of capital were employed in other investment it would have earned a certain rate of interest. The owner of the business utilizing any assets not only loses the original cost of the assets in the shape of depreciation, but also interest thereon. The cost together with interest on diminishing balance is written of the asset. this method can be used. Advantageously chiefly in respect of a long lease, which generally involves a considerable capital out-lay, because in these cases the interest earn in earlier years is not important. This method is equitable to subsequent years when repair charges are equal. In this method revenue account is debited for less and less amount year after year, because the rate of depreciation remains the same while the interest charges go on decreasing. It is not
otherwise popular because when the asset account is debited with interest, its value in the early years of its appear at high figure than its actual value. It will not be suitable for adoption in case of plant and machinery. As fresh calculations will have to be made each time when additions or deductions take place. This method is seldom if ever used in practice.

Under this method the assets is treated like an interest bearing investment. The money invested in the asset is retained in the business and is expected to earn interest at a fixed rate. Thus an amount equivalent to the estimated loss of interest is written off in the profit and loss account throughout the useful life of the asset. A certain fixed amount of depreciation is provided for every year as shown by the annuity table. The asset account is debited with interest at a fixed rate. A fixed sum is written off the asset account so that the values of the asset plus intrest come to nil at the end of its working life

This applied in case of assets, which have a definite span of life like lease, for assets to which additions are made every user it is not to much value hence this method is not much popular.

This method assumed that the amount of capital invested in the fixed assets would have earned interest had it been invested otherwise. This method is a constant proportion of the aggregate of the interest at the specific rate on written down value of the asset at the beginning of each period.

**Example -**

<table>
<thead>
<tr>
<th></th>
<th>Cost of the asset (c)</th>
<th>Rs. 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life of the asset (n)</td>
<td>5 years</td>
<td></td>
</tr>
<tr>
<td>Rate of interest (r)</td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>
Depreciation to be charged is calculated as below

\[ D = \frac{c \times r}{1 - \frac{1}{(1+r)^n}} = \frac{100,000 \times 0.10}{1 - \frac{1}{(1 + 10)^5}} = 26380 \]

Table No.3.1
Depreciation Charge by Annuity Method

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost/WDV Rs.</th>
<th>Interest Rs.</th>
<th>Total Rs.</th>
<th>Depreciation</th>
<th>WDV. c/fd</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,00,000</td>
<td>10,000</td>
<td>1,10,000</td>
<td>26,380</td>
<td>83,620</td>
</tr>
<tr>
<td>2</td>
<td>83,620</td>
<td>8,362</td>
<td>91,982</td>
<td>26,380</td>
<td>65,602</td>
</tr>
<tr>
<td>3</td>
<td>65,602</td>
<td>6,560</td>
<td>72,162</td>
<td>26,380</td>
<td>45,782</td>
</tr>
<tr>
<td>4</td>
<td>45,782</td>
<td>4,578</td>
<td>50,360</td>
<td>26,380</td>
<td>23,980</td>
</tr>
<tr>
<td>5</td>
<td>23,980</td>
<td>2,400</td>
<td>26,380</td>
<td>26,380</td>
<td>NIL</td>
</tr>
</tbody>
</table>

The amount of depreciation is very high under this method and covers the opportunity cost of non-investment of the capital anywhere else.

(ii) **Depreciation fund method:**

This method is also called the, ‘Redemption fund method’ ‘Amortization fund method’ or sinking fund to replace a depreciable asset. When one time writes off depreciation, one make sure that sufficient assets are retained in the business to replace the asset unless the proprietor draws out more than warranted amount by the figure of his net profit. Under the above method, however readily cash may not be available, when the time
for replacement comes the amount for depreciation may be dispersed. In all sorts of assets making it difficult to be buy a new assets in place of old one. It is good to provide funds for replacement of assets at the end of its life in such a way that the entire burden of the replacement does not fall on one year, it is necessary to set a part of a fixed amount every year out of the cash for investment in securities

Under this method such a sum as debited to depreciation account and credited to depreciation fund account, which if invested in gilt-edged securities from year to year, during the life of the existing asset, will accumulate at compound interest to a sum required to replace the original asset, at the time when it become useless the amount of annual depreciation can be obtained from the depreciation fund table or with help of logarithm table.

This method is also known as depreciation fund method or ‘Reduction fund method’ or Amortization fund method: According it a depreciation fund is in other words under this method created every your and credited with the amount charged to the profit and loss account simultaneously, an equivalent sum is invested outside the business to asset remains at its original cost in the books of account. The installments are fixed in a way so that the whole investment accumulates at the compound interest and provides a sum equivalent to the replacement cost the asset at the end of working life.

Thus the asset is written off after a fixed interval of time and the money is available to replace it at the end of its useful life the cash is usually invested in gilt-edged securities. Thus under this method no
inconvenience is caused to the business. Money becomes available from outside to replace the asset after the expiry of its working life.

**Example** - Cost of the asset (c) 100000
Life of the asset (n) 5 years
Rate at interest 10%
Dep. to be charged is calculated as below:

\[
D = \frac{c \times r}{(1 + r)^n - 1} = \frac{100000}{(1.10)^5 - 1} = 16380
\]

<table>
<thead>
<tr>
<th>Table No.3.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation Charge by Fund Method</td>
</tr>
<tr>
<td>Year</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

**Production Method:** -

Several depreciation methods have been designed to attempt to charge accounting period with expired cost in production to the use of fixed assets. These methods are referred to as production or out-put method. when the life of the asset is more a function of activity or use than the time, the appropriate measure of depreciation of the asset value may be the
number of items produced by the asset or the this method the asset is assumed to produce so may units of the product and each product is charged with the proportion of the total estimate depreciation which the units produced during the period bear to the total estimated out-put.

The service benefits may also be thought of as contributions to revenue or cost reduction resulting from the asset, although such benefits are usually difficult or impossible to trade. The production method is peculiarly suitable to the depreciation of the asset for which the total service unit can be rather definitely estimated and when the service is not uniform by period to period. Methods of this type are feasible when the life of an asset depends almost entirely upon use and when both the total useful life and the part of the life expiring each year can be measured in terms of a standard unit of activity. Other forms of the production method state useful life in terms of units of product made by the asset, or in revenue rupees resulting from the product.

In budget the depreciation charges for year, the number of unit to be produced during that period will have to be estimated the formula for calculation the depreciation per unit can be expressed in the following manner:

\[
\text{Depreciation charges per unit} = \frac{\text{Cost of Asset} - \text{Salvage value of asset}}{\text{Unit of productive activity}}
\]

**Example.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of the machine</td>
<td>2,00,000</td>
</tr>
<tr>
<td>Estimated scrap value</td>
<td>20,000</td>
</tr>
<tr>
<td>Estimated number of unit to be Produced</td>
<td>1,00,000</td>
</tr>
</tbody>
</table>
Rate of depreciation per unit  = \frac{2,20,000 - 20,000}{1,00,000} = \text{Rs. 2}

It in a particular year 7000 unites are produced the depreciation to be charge will be: -

7000 units x Rs 2 per unit = Rs 14,000

This method gives more stress on usage factor rather than time factor. Higher the number of unit-produced higher is the amount of depreciation and vice versa.

This method is based upon the assumption of the depreciation is strictly a function of use and that the passage of in itself is not relevant to the depreciation process the yearly provision for depreciation. It is directly related to the number of units produced during the period and the accumulated depreciation increase in direct proportion to unit s produced during the period. The carrying value decreases in direct proportion to the unite produced during the period. The production method must be confined to those assets whose useful life is determined by the factors of wear and tear. Where the extent of use the rate of a production measures the rate of exhaustion of property. For most of the property, it is not possible to obtain this information with any degree of accuracy and therefore, the method is not considered in acceptable one for general application to the machinery account of industrial concerns or the property of those companies exploiting natural recourse with reserve sufficient to expend operations beyond the physical life of the original plant if we accept the argument that the periodic depreciation charges should reflect the availability of productive capacity and the periodic earnings are in part a function of the degree of succession is achieving full utilization over total economic case of asset for it is best
regarded as bundle of prepared services to be utilized as required as variable use charges appear entirely rational.

If a fixed assets is subject to obsolescence the production method appear to be illogical procedure for establishing a reserve intended to provide for path physical deterioration, obsolescence, because obsolescence presumably develops on a time rather than on the bases of units of out-put. During a period of small production, the depreciation charges might be less than the amount which should be provide for obsolescence on the basis of the lapse of time and this inadequacy might not be compensated for the period of large production. Further more, all productive factors of a business, not just fixed assets. Contribute to the earning of revenue and the individual contribution of each factor cannot be identified, there are some methods for providing depreciation, which are based on unit of production.

1. *Straight-line Method By Using Factors:* -

Under straight line method, service life of a depreciable asset, may be measured in either units of time or units of physical service or ou-
put in practice. The term straight line is commonly used with reference to the period of time, when service life of a depreciation asset is measured in units a physical out-put, the procedure is called the production or out-put method of depreciation, If under this method depreciation is computed on an out-put basis, the depreciation charges per year will vary in production to the number of hours run is each year similarly. If depreciation is computed using a straight-line yearly rate, the depreciation charges per machine hour will vary if the machine is run for different number of hours each year.
(ii) **Declined Unit Use Charge Method**:-

When a machine is older its production may be less valuable because of poorer quality of reduced demand for the product. A use charge on declined unit bases may then be appropriate the earlier units of production being charges at a higher rate, then later units produced when the machine is older.

(iii) **Working hour Method**:-

Under this method the assets is assumed to have a life of so many working or producing hour’s and each of the period is charged with total proportion of the total estimated depreciation, which the hours that the assets is used during the period, bear to the total estimated working hour’s. In budgeting the depreciation charge for a year, the number for productive hours, which each asset will be used during the period, will have to be estimated.

(iv) **Machine-Hour Method**:-

The total operating hours estimated for the duration of the effective working life of the machine or divided into cost of machine less its estimated scrap value. The results is an hourly rate for machine depreciation, However, its use is restricted is case of man made fixed tangible assets, because the service units to be obtained from a fixed assets or a group of fixed assets, during its service life can rarely be measured in actual practice. No depreciation is charged on idle assets despite of the fact that depreciation occurs even when an asset remains idle .It is also known as machine Hour method or efficiency Hour method or Unit at Production Method or Hour’s Service Method. It is like the kilometer method with the only difference that the working life of the assets is calculating in terms of hours instead of calculating it in terms of kilometers. It is applied in case of
machine, the working life of machine, which can be measured in terms of hours.

This Method is similar to the Production Unit Method except that instead at number of units to be produced during the life of assets number of hours for, which the assets accepted to work is taken into consideration.

Example

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Machine</td>
<td>Rs. 1,10,000</td>
</tr>
<tr>
<td>Estimated Scrap Value</td>
<td>Rs. 10,000</td>
</tr>
<tr>
<td>Estimated Number of hours</td>
<td>25000</td>
</tr>
</tbody>
</table>

Rate of depreciation per hour = \[
\frac{1100,00 - 10,000}{25000} = \frac{1090,000}{25000} = Rs. \ 4
\]

If in a particular year, the machine works for 25000 hour’s, the depreciation will be charged -

2500 Hours X Rs. 4 per hour

= Rs. 10,000

(v) Efficiency Hour Method: -

It is counted in terms of working hours; this method is used for costly machines, where a fair estimate of the life of the machine in terms of working hours can be formed.

(vi) Production Unit Method: -

According this method the depreciation is calculated per ton according to the out-put of the year. Under this method a minimum annual
charges is sometimes adopted, irrespective of the fact, the production has not reached the minimum.

**Revaluation method:**

Under this method the asset is valued at the end of each year when the balance sheet has to be prepared and the fall its value is charged as depreciation occasion are rare on, which their are profit on revaluation assets are usually revalued by technical experts. Their value is determined as the value to the business as a going concern. This method is useful in case of assets such as horse patterns. Models desing patterns, trademarks etc. it is the most scientific method of the calculating depreciation.

According to this method the asset is revalued periodically, the amount of depreciation for the period is the difference between the cost of the period and the amount of revaluation to the end of the period. Many persons call it appraisal, inventory or annual valuation method, where any mathematical basis of depreciation is not possible. The assets are revalued at the end of financial year because it is not possible to estimate the life of such assets with any precision. This method equates depreciation with the loss of asset value and in effect involves a determination of the value that remains in the asset at the end of each period expired. The difference between the book value of such assets and the value after revaluation is the measure of depreciation, if the valuation exceeds the book value, the difference is not taken into account the method must be according to “going concern”. This method equates depreciation with the loss of the asset value and in effect involves a determination of the value that remains in the asset to the end of each period rather than the service value that has expired. Valuation is done by some one having knowledge of the asset.
It is useful however in valuing fixed assets like small tools, live stock patents, copyrights and another assets of this nature, which are constantly changing and those period of life is most uncertain. This method is used only in case of hotel lines, ready movable from place to place. Where it may be to much to maintain accounts of each single items in which breakage, and theft rather than usage of time are the effective factors of depreciation. This method is suitable for depreciable assets, jars, bottle, Packages, Horses, Castles, patterns, models, trademark and Investment. It is also useful where a percentage rate of depreciation would be difficult to apply accurately and where no other method can be employed to secure satisfactory result at the end of each financial period this method is useful for deprecating loose tools of Jute Industry.

Other methods: -

Following are some other methods of calculating the amount of depreciation, these are following: -

(i)Endowment Policy Method: -

This method is know Insurance policy method under this method, the fund instead of being Invested in gilt-cadge securities, is applied in taking out an insurance policy so that after the aping of working life of the asset of the insurance company pay the sum assured to replace the asset. This method is superior to the depreciation fund method, there are little chances of loss on realization. However, it is more expensive and it is not applicable to asset, whose life cannot be calculated and determined precisely.

This method similar to sinking fund method under this method an insurance policy is taken out for the amount required to replace the
assets at the end of life of the asset, the amount of depreciation to be charged is equal to the annual premium payable on the insurance policy, which is decided by the insurance company.

(ii) *Job Method: -*

Wherever special equipment is purchased for a particular Job or contract the difference the cost and salvage value of such equipment is charged as depreciation against the Job or contract for which it is purchased such a method of calculating depreciation is often referred to as the Job method.

(iii) *Combination of Time And Depreciation: -*

It is possible to estimate the percentage of depreciation of assets, which is a function of time and the percentage. Which is a function of usage and then a combination of some of the method is used for example, if the depreciation of a machine is judged to have caused 40% by usage and 60% by the passage of time.

(iv) *Equation of Cost And Repair Method: -*

Under this method, the estimated total cost of repairs is added to the value of the asset and a fixed amount is debited to profit and loss account each year throughout the life of the asset to cover both depreciation of the asset and repairs as the actual repairs are effected the cost of these will be charged against the provision. It is cause, extremely difficult to estimate future repairs and for this reasons this method is of little use.

(v) *Depreciation Based On Average: -*

When depreciation is computed on the basis of a composite group for assets of different life spends, it is necessary to develop a rate based on
average. Computing the annual depreciation for each item in the group and dividing the total cost of assets may do this.

When composite rates are used they may be applied against total asset cost on a monthly basis or some reasonable assumption may be made regarding the timing of increases and decreases in the group. A common practice is to assume that all additions and retirements during the second half occurred on the first day of the following year.

(vi) **Depletion method:**

In the case of wasting assets such as mines and quarries depreciation is usually provided by “depletion method” which means that such a sum is provided each year for depreciation as represent the expired capital outlay on the basis of output compared with the total estimated contents as the mines. This method provides that amount should be written at in the production account each year according to the number of unit actually obtained.

(vii) **Retirement or Replacement Method:**

Under this method the cost of plant units less salvage is charged to expenses in the year in which the assets is retired from service. Under the replacement method, the Original cost of fixed assets is retained in the assets account and the cost of all replacement is charged to expenses when new fixed an asset is acquired. The replacement is somewhat analogous to the use of life in costing inventories in that assets account will always reflect the cost of the first unit of each type of property acquired by the company. Under the retirement method, the properly account will show the cost of facilities actually in use.
The method is strongly advocated by some public utility companies in an economy where there is good deal of inflation as asset may be purchased today at a certain price, its estimated life being say ten years. At the end at 10th year the cost of replacing the assets may increase by say 75%. Now if depreciation is charged on the basis of original cost, there might be difficulty at the time of replacement of assets, because the depreciation charged on the basis of historical cost is not sufficient to cover the full replacement cost. Under these circumstances this method followed by some accountants.

This Method does not confirm to good accounting practices and is criticized on the grounds that no depreciation will be charged against revenues, until the first retirement occurs. Not only is the income misrepresented in the early years of service life, but at all time the full investment in the productive facilities will appear on the balance sheet despite of the fact that portion of service life has expired.

(Viii) Global Method: -

Under this method all the assets are grouped together and a flat rate of depreciation is charged. This method is very unscientific and should and should not be adopted. It is not permissible under the Company Act of India.

(ix) Examination Method: -

In this method the total depreciation accrued as of a particular date can be determined by physical examination of the assets. This method has serious objections especially as a means of determining successive periodic charges. The physical condition of an asset often gives no clue of the extent of elapsed service life. This method throws light on the question
of remaining life on a physical basis but it is inadequate as a means of recognizing the impact of obsolesces and other non-physical factors. For many kinds of depreciation assets, no method of examination is available which will furnish reliable evidence of either expired or remaining life.

(x) Statistical Method: -

Some persons recommended from time to time for the adoption of depreciable rate represented by various well-known curves including the vertical parable the logarithmic curve, the ellipse, the horizontal parabola, the cubic parabola and on this assumption it is argued that as possibly no single curve represents the manner in which depreciation occurs, the problem should be solved by the adoption at several cures it is obvious that such methods would give no useful results.

(xi) Renewal Method: -

According to this method the full cost of the assets is charged as depreciation during the period in which assets are renewed. No depreciation charged between the periods. This method at changing can be used if the asset is of small value and is renewal frequently: -

1. In spite of the fact that their are various method available for calculating the depreciation, the final choice of the method depends upon the individual organization. It should be noted that Income Tax Act, 1961. Which is a very important piece of legislation applicable to all types of business organization recognizes only one method for calculating the depreciation i.e. written down value method. The rate at which the depreciation is to be calculated is also specified in the Income Tax Act 1961. If the organization wants to calculate the depreciation on some different basis or at some different rates, it can do so for financial
accounting purpose. However, for calculating the tax liabilities the depreciation has to be calculated on written down value basis and that to at the specified rates.

2. The company form of organization to home the provision of Companies Act 1956 applies are reused to calculate, the deprecations per the provision at schedule (xiv) at the companies Act 1956 the salient features at schedule (xiv) at the companies Act 1956 can be stated as below:

a. Schedule (xiv) the Companies Act, 1956 provides that the company can calculate the depreciation by using other written down value method or straight line method. The companies are given the choice to select between these two methods. The actual choice of the method may depend upon the effect on the profitability of the company. If the company wants to change the method of calculating the depreciation, it amount to the Change in accounting policy. Any change in the method of calculating the depreciation has to be effected with retrospective effect from the date of incorporation of the company. The company is required to disclose the fact of change in the method of calculating depreciation, while preparing its financial statement along with the effect of change in the method of calculating depreciation.

b. The Rates at which the companies are required to calculate the depreciation are also spaced in Schedule xiv. For this purpose, the fixed assets are classified in various categories the broad categorization of the fixed assets as below:

**Building:** - Factory building as well of Administration building.

**Plant and Machinery:** - Computer Installations, Furniture, Vehicles,
The Rates for Calculation at depreciation are as below:

**Table No-3.3**

<table>
<thead>
<tr>
<th>Nature of the fixed assets</th>
<th>WDV</th>
<th>SLM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Factory</td>
<td>10</td>
<td>3.63</td>
</tr>
<tr>
<td>Building Administrative</td>
<td>5</td>
<td>1.63</td>
</tr>
<tr>
<td>Plant and Machinery</td>
<td>15</td>
<td>4.75</td>
</tr>
<tr>
<td>Furniture</td>
<td>10</td>
<td>6.33</td>
</tr>
<tr>
<td>Vehicles</td>
<td>20</td>
<td>9.5</td>
</tr>
<tr>
<td>Computer Installation</td>
<td>40</td>
<td>16.21</td>
</tr>
</tbody>
</table>

c. If during the financial year any addition has been made to any asset or any asset has been sold, the depreciation on such assets will be calculated on a prorate basis from the date of such addition or unto the date on which such assets has been sold. Their is some of the questions, which are normally, rise in respect of the nature of depreciation.

**(xii) Compound Interest Method:**

This method is usually adopted for charging depreciation on fixed assets of the electric supply undertakings. It is like the depreciation fund method with the difference only that investment are not made out side the business and the interest is also calculated on the increasing balance of depreciation each year. The depreciation provided for each year is also adjusted that it becomes equivalent to 90% of the value of the assets accumulated at the rate of 4% per annum compound interest. These methods enable to retain enough of the working capital in the business. It involves no risk of loss on realization as in the case of the depreciation fund method.
(xiii) Use of Kilometer (Mileage) Method: -

This Method is simple in nature but difficult for adoption in practice. It is adopted in case of assets whose use may be measured in the term of kilometer, e.g. cars, Trucks, Buses, Motorcycles, etc. For example, if a Car costing Rs. 40,000 is estimated to run for about 16,00,000 kilometer on average, it rules for about 160,000 kilometer each year. It will be value less after the expiry of 10 years, but if it runs 320000 km. in the first year 240,000 km. in second year. 28,0000 km. in the third year and so on... Charged calculated at the rate at 25 Paise per Km the depreciation will be Rs. 80000, 60000, and 70000 respectively.

(xiv)- Single Charge Method: -

In it a fixed sum of money equivalent to the amount of depreciation and repair over the working life of the asset is charged to the debited of the profit and loss account and credited to depreciation and repairs reserves account. Repair affected in the following years, are charged to this account.

Criteria for Judging Depreciation Method

The criteria for judging depreciation method are as follows. : -

(A) An objective evaluation of the following factors should be carried out: -

(a) Relationship between decline in market value and use at the assets.
(b) The effects of obsolescence’s
(c) Expected pattern of repair and maintenance.
(d) Anticipated of decline in operating efficiency.
(e) Expected change in revenues.
(f) Time factor, short life or long life of asset, need for considering interest factor in the case of long life of high value asset’s life.

(g) Degree of uncertainly regarding the later periods of the asset’s life.

(B) Determine the most dominant factors out of the above checklist.

(C) Select a method of depreciation, which answer to most dominant factor most closely. This exercise will require joint efforts on the part of engineers, economists and accountants. The government at national level to carry out this excersise industry wise, major asset-wise and particular may constitute independent expert groups

Method of depreciation by prescribed for specific industry or for major assets groups or specific asset. An individual firm/company must be compelled by law to adopt methods any one of the following alternatives

(i) Use of revolution method.

(ii) Equal allocation (use of straight-line method).

(iii) Neutral or sterilized allocation based on revenue/net contribution.

(iv) Presentation of fund flow and cash flow statements instead of profit and loss/revenue statement.

Comparison of Methods: -

Various method of charging depreciation followed by a company will have quite different effect upon the finance of the company. No one method of depreciation will ever satisfy all persons and no one method exists or will be designed which will apply equitably. To all the diverse kinds or fixed assets an appraisal of methods frequently develops into an arguments in which personal preferences are emphasized. Practical operating conditions in any one plant should be the primary force in
arriving at a decision concerning the correct method to adopt under those given circumstances.

The materiality of deference in the effect of various methods of computing depreciation upon the measurement of income and financial states depends upon (i) the amount of depreciation relative to other expenses and to revenue, and (ii) the amount of depreciable asset in relation to total assets. The difference resulting from alternative depreciation method and be great because of the long life of many depreciable assets. Cumulative differences between methods can become significant over long period.

The Principle difference among depreciation methods are (1) the units in which they express the estimated useful life of the asset, and (ii) the manner in which they determine what fraction of the useful life expires during each accounting period. The units in which the length of an assets life is expressed may be calendar years. Units of service or output or a combination of the asset to be allocated to any accounting period is proportionate to the fraction of the assets useful life, which expires during that accounting period.

Some types of assets are subjected too little technological change wear and tears are the most important determinants of their useful life. For others wear and tear has little effect on the economic life of the asset. The particular conditions affecting each asset should be considered in estimating its total useful life and the fraction of its life, which expires in each accounting period. These characteristics are very important in selecting the appropriate depreciation method. The different in the results of the above method will vary when applied in particular situations depending upon the length of life and the scrape value of the depreciable assets. The
arriving at a decision concerning the correct method to adopt under those
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estimating its total useful life and the fraction of its life, which expires in
each accounting period. These characteristics are very important in
selecting the appropriate depreciation method. The different in the results of
the above method will vary when applied in particular situations depending
upon the length of life and the scrape value of the depreciable assets. The
results and effect of above depreciation methods have been summarized as follows:

(a) The fundamental assumption in the time method is that the decrease in the method is that the decrease in the value as well as the ability of the company to bear the burden is fixed and determinable in relation to the passage of time. The straight-line method based upon the expiration is its basis; fluctuations in operating conditions do not receive any consideration. This method gives a constant amount of yearly depreciation expenses, which is a constant percentage of the unexpired cost of the depreciable asset. The percent of annual depreciation on the un-expired cost of the depreciable assets at the beginning of each year, which increases sharply until the balance, are reduced to scrape value of assets. This method give satisfactory results, where depreciation is controlled primarily by inadequacy and obsolesces or any other time factor and where severity of usage is that fact that this method should be used for land, building and for leasehold property of cement industry because these assets are depreciated due to passage of time and rate of depreciation is also constant for year to year.

(b) Decreasing charge method and the sum of the year's digits methods are objective and are fairly simple to apply. These method are more appropriate for assets whose service benefits decline with age whether the rate of decline is most similar to that produced by the uniform rate method or the sum of year's digits method or whether it neither resembles nor depends upon the characteristics of the particular asset in question. It has been suggested that these methods can be used for depreciating furniture and fixtures of cement industry these methods can also be used for depreciating those plant and machinery that cannot be linked with
production say machinery used in office of depreciation recommended by independent expert groups. No change of method of depreciation should be allowed unless it recommended by such independent expert groups constituted by the government.

(c) Whenever the independent expert group allows change at method, it should be introduced with prospective effect only. In no circumstances, post year, excess depreciation charge should be allowed, to be credited to profit and loss account of the current year.

(d) In extreme cases where the independent experts group feel that objective selection of an appropriate method of depreciation is not possible or practicable it may recommended.

The working hours method is used for distributing depreciation on the basis of the hours of operation prorates the cost of an asset to production in much more equitable fashion than does the straight-line method. If with the passage of time obsolesces and inadequacy are not vital factors of depreciation and method can be used. This method is regarded as the most suitable for depreciating plant and machinery of cement industry. This method can also be used for writing of motor vehicles of cement industry.

The composite life method is not recommended for purposes other that a check upon the general adequacy of the depreciation provided under the straight line or any other method in use. The sinking fund and annuity method is good for the cement industry; because both these method are based upon right assumption that is to say that it taken interest into accounts. One method may be considered more useful for one enterprise, which another may be more satisfactory for a concern operating under
different circumstances. The nature of the assets involves consideration in deciding on the method of depreciation appropriate in each use. The committee of the American Institute on terminology for 1945 on depreciation states that any method to be acceptable, must provide for the distribution of the estimated total depreciation cost during useful life of the asset to which the amount relates in a systematic and equitable manner, recognizing the validity of different method used under varying circumstances of business operations. It is therefore, necessary to unsecure a high degree of comparability of accounting data from period to period for each industry concern.

Where services like can be measured in physical units of output or working hours, the method based on out-put should be used if obsolescence’s is not an important factor and repair & maintenance cost and revenues are proportional use. Where serviceability is a fluctuation of time rather than use, repairs and maintenance cost operating efficiency and revenues are relatively constant over the estimated service life. The choice should undoubtedly fall on straight-line method. Declining charged method may be used only when operating efficiency or revenues are expected to increase at the same time. The fundamentally argument in favor of any reducing charge method is the equalization of depreciation and maintenance over the life of the fixed asset. If obsolescence factor is important, decaling charge method is good and prevents heavy losses due to premature disposition of the depreciable asset. Reducing charge method enjoys wide adoption because of above advantages. Imputed interest charges and notional interest income are not good for manufacturing concerns but these methods are favored for government undertaking, municipalities, etc. Compound interest method has not been found acceptable.
The above depreciation methods are proper, if they are properly use and no method appear to be more accurate then the other when adjustment are made in depreciation charges from period to period.

A Regarding Decision for the Choice of the Depreciation Method

For tax purpose the best method is that which minimizes the effect of taxes. The Depreciation methods are not only method for allocating the cost of depreciable asset to period. There may be other method by which a business organization may choose a suitable method. According to its need and purpose, but the management must take into account the factor like constituenty suitability, purpose orientation, cost variability etc. in selecting a suitable method.

Depreciation essentially is a process at allocation of the historical cost over the service potential of the assets. The income tax law actually prescribes the depreciation percentage, however, under the Companies Act, 1956(Sec. 205) says that freedom is given to the companies to follow in income tax percentage or such a percentage. Which would results in equitable distribution of the cost of the assets over its effective life. Some companies resort to change method of depreciation from the diminishing balance method to the straight line method with effect from back date, which results in generation of book profit which may be used as the device for issue of bonus share or payment of divided in lease yearly. This opportunities device is not a sound policy.