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ACCOUNTING PRINCIPLES, CONCEPTS AND CONVENTIONS

THIS CHAPTER INCLUDES

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| <ul style="list-style-type: none">• Definition of Accounting• Objectives of Accounting• Function of Accounting• Book-Keeping• Accounting Cycle• Accounting - Classification | <ul style="list-style-type: none">• Basis of Accounting• Basic Accounting Terms• Accounting Principles• Accounting Concepts and Conventions |
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CHAPTER AT A GLANCE

S. No.	Topic	Important Highlights
1.	Definition	As per the definition of American Institute of Certified Public Accountants- Accounting is “the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are in part at least, of a financial character and interpreting the results thereof”.
2.	Characteristics (attributes) of Accounting	(i) Accounting records transactions and events which are of financial nature. (ii) Accounting is an art. (iii) It involves the following activities: recording, classifying and summarizing (iv) Accounting helps in determining the



		financial position of an enterprise by analysing and interpreting the summarized records and communicating them to users. (v) Accounting information can be manipulated and thus cannot be considered as the true test of performance. (vi) It records transactions in terms of money.
3.	Objectives of Accounting	(i) Maintaining accounting records (ii) Ascertaining profit/loss of the enterprise (iii) Ascertaining the financial position of the enterprise (iv) Providing accounting information to the users.
4.	Functions of Accounting	(i) Maintaining systematic records (ii) Protecting and controlling business properties (iii) Ascertaining the operational profit/loss (iv) Ascertaining financial position (v) Facilitating rational decision making.
5.	Advantages of Accounting	(i) Provides financial information about the business to interested parties (ii) Helps in comparison of financial results — Comparison of its own results of different years — Comparison of financial results with other firms in the industry (iii) Helps in decision making (iv) Accounting information can be used as an evidence in legal & Taxation matter

		(v) Helps in valuation of the business (vi) Provide information to interested parties
6.	Disadvantages (Limitations of Accounting)	(i) Accounting ignores non monetary transactions (ii) Accounting information is sometimes based on estimates which may be unrealistic (iii) Window Dressing may lead to faulty results. (iv) Accounting ignores the effect of price level changes as the recordings are done at historical costs. Fixed assets recorded at historical cost. (v) Accounting information can be manipulated and thus can not be considered as the true test of performance. i.e. it may be biased. Money as measurement unit changes in value. (vi) Accounting Information may be biased. Accounting Information is not without personal influence or bias of accountant.
7.	Book-Keeping	• Book keeping is a branch of knowledge that educates us how the financial records are maintained. Due to clerical in nature it is done by junior employees. • It is concerned with recording financial data of the business in a significant and orderly manner. • It is meant to show the effect of all the transactions made during the accounting



		period on the financial position of the business. • Book keeping is a clerical work which covers procedural aspects of accounting work and includes record keeping function. It is science and art both. • Book keeping is mechanical and repetitive.
8.	Accounting Cycle	Steps/Phases of Accounting Cycle: (i) Recording of Transaction: As soon as a transaction happens it is at first recorded in subsidiary book. (ii) Journal: The transactions are recorded in Journal chronologically. (iii) Ledger: All journals are posted into ledger chronologically and in a classified manner. (iv) Trial Balance: After taking all the ledger account closing balances, a Trial Balance is prepared at the end of the period for the preparations of financial statements. (v) Adjustment Entries: All the adjustments entries are to be recorded properly and adjusted accordingly before preparing financial statements. (vi) Adjusted Trial Balance: An adjusted Trial Balance may also be prepared. (vii) Closing Entries: All the nominal accounts are to be closed by the transferring to Trading Account and Profit and Loss Account. (viii) Financial Statements: Financial statement can now be easily prepared

		which will exhibit the true financial position and operating results.
9.	Basis of Accounting	(i) Accrual Basis of Accounting Accrual Basis of Accounting is a method of recording transactions by which revenue, costs, assets and liabilities are reflected in the accounts for the period in which they accrue. This basis includes consideration relating to deferrals, allocations, depreciation and amortization. This basis is also referred to as mercantile basis of accounting. (ii) Cash Basis of Accounting Cash Basis of Accounting is a method of recording transactions by which revenues, costs, assets and liabilities are reflected in the accounts for the period in which actual receipts or actual payments are made.
10.	Accounting Principles	Generally Accepted Accounting Principles A widely accepted set of rules, conventions, standards, and procedures for reporting financial information, as established by the Financial Accounting Standards Board are called Generally Accepted Accounting Principles (GAAP). These are the common set of accounting principles, standards and procedures that companies use to compile their financial statements.

11.	Accounting Concepts	1. Going Concern Concept • It is on this concept that a clear distinction made between assets and expenditure. • This concept assumes that business shall continue for an indefinite period. • The proprietor has no intention to close it in the near future and would be able to meet its obligations according to plan. • Due to this concept : (i) Assets are valued at cost and then depreciated every year. (ii) Expenses and incomes are classified into capital and revenue. 2. Business Entity Concept • According to this concept, business and its owners are separate entities. • The owner is treated as the creditor of the company to the extent of capital contributed by him. • All transactions of the business are recorded in the books of business from the point of view of business. • This concept keeps the personal affairs of the owner away from the business affairs. • Income or profit is the property of the business unless distributed among the owners. 3. Money Measurement Concept • As per this concept, only those transactions which can be expressed in terms of money can be recorded.
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		• Transactions and events which cannot be expressed in terms of money, even if they affect the business, are not recorded in the books. • Income or profit is the property of the business unless distributed among the owners. Example: Death of the director, disputes within the organisation, strikes, etc. may affect the working and profits of the business, but are not recorded in books of accounts. • Measuring unit for money is the currency of the ruling country. Note: Entity and money measurement are considered as the basic concepts on which other procedural concepts depend. 4. Cost concept • According to this concept, the value at which the various assets shall be recorded in the books shall be the historical cost or acquisition cost. • This concept says that the assets shall be recorded at cost at the time of its purchase and its value shall be reduced systematically by charging depreciation. • This concept helps to keep the statements free from personal bias or judgements. • This concept is not beneficial for new investors as they are more interested in knowing the present worth of the business rather than its historical cost.
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		5. Dual Aspect Concept - According to this concept, every transaction has two aspects a debit aspect and a credit aspect. - Due to these two aspects, the total amount debited is always equal to the total amount credited (i.e. total assets are equal to total liabilities) Note: Concept of Accounting Equation : Accounting equation is based on the dual aspect concept. Assets: These are the resources owned by the business. Liabilities: These are the claims against the assets. Liability to owners — capital Liability to outsiders — liabilities. 6. Realisation concept - According to this concept, revenue is recognized only when sale is made. - This concepts says that any change in the value of an asset is to be recorded only when business realises it. - This concept prevents business firms from inflating their profits by showing expected incomes. (which have not yet materialised) - E.g. An increase in the value of asset cannot be considered as a profit until and unless the asset is sold and profit is realised. Note : Going concern + Cost Concept + Realization Concept = Valuation criteria
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		7. Accrual concept • It is fundamental to the usefulness of financial accounting information. • According to this concept, a transaction should be recorded at the time when it takes place and not when the cash is realised. • Every transaction and event effects, one or more or all the three aspects, assets, liabilities and capital. • They have their impact on both the profit & loss A/c and Balance Sheet. • This concept implies that income should be measured as a difference between revenue and expenditure. 8. Accounting Period Concept • This is also known as the concept of periodicity. • According to this principle, the life of an enterprise is broken into smaller periods (generally one year) known as accounting period. • The main objective of this concept is to know the performance of the enterprise at regular intervals. • Accounting period is an interval of time at the end of which the income or revenue statement and balance sheet are prepared in order to show the results of the operations. 9. Matching concept/ Revenue match concept • Based on accounting period concept • As per this concept, expenses of a period should be matched with the revenues of that period. • It says, the cost incurred to earn the
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		revenue should be recognized as expenses in the period when revenue is recognized. • Matching principle requires that all revenues earned during an accounting year, whether received or not and all cost incurred, whether paid or not, have to be taken into account while preparing Profit/Loss Account. In the same manner all amounts received or paid during the current year but pertaining to the previous year or the next year should be excluded from current year's revenue and cost. • The term matching means appropriate association of related revenues and expenses.
12.	Accounting Conventions	1. Consistency • According to this convention, accounting practices once selected and adopted should be applied consistently year after year. • This convention helps in comparison of financial statements. • Consistency does not mean that accounting principles once adopted can never be changed. They can be changed, if the change is desirable. Example: If a company follows written down value method of depreciation, it shall continue to follow year after year. 2. Disclosure

- This is also known as the “Full disclosure” principle.
- According to this convention, all significant information should be fully and fairly disclosed in the financial statements.
- Ensuring this convention increases the relevance and reliability of financial statements. The companies act make ample provision for disclosure of essential information.

3. Conservatism

- The concept of conservatism states that we should not anticipate a profit but should provide for all possible losses while preparing financial statements.
- It enables the financial statements to show a realistic picture of the state of affairs of the enterprise.
- This convention understates the assets and overestimates the liabilities.
- Financial statement are usually drawn up on a conservative basis.
- Choice between two method of valuing an asset the accountant should choose a method which leads to lesser value.

Example: Valuing stock at lower of cost or market value, making provision for doubtful debts in anticipation of debts becoming bad, are done to comply with the convention of conservatism.

4. Materiality

BASIS OF DIFFERENCE	JOINT VENTURE	CONSIGNMENT
NATURE	Joint venture is the temporary business between the two firms for a particular purpose or up to limited time period.	Consignment is the dispatch of the goods by the consignor to the consignee to be sold by the consignee.
PARTIES INVOLVED	The parties involved are known as Co-venturers.	The parties involved are known as Consignor and the Consignee.
RELATIONSHIP BETWEEN THE PARTIES	The relationship between the co-venturers is of associates and partners.	The relationship between the consignor and consignee is of principal and agent.
LEGISLATION	Joint venture is not governed by any special act, but being a particular partnership, some rules of partnership law are applicable.	Consignment is governed by the law of agency as given under the Indian Contract Act, 1872.
DURATION	Joint venture is for a specific purpose. That is why is generally for short time period.	The consignment agreement is for a long period and does not come to an end on the completion of a particular transaction.
SHARING OF PROFITS	Co-venturers share the profits or losses in the agreed ratio or equally in the absence of the agreement.	In consignment, all the profit is of consignor.
CONSIDERATION	The profits earned on the venture is the consideration for the risk undertaken by the co-venturer.	The consignee gets the commission as consideration for the goods sold by him on the behalf of the consignor.
OWNERSHIP OF GOODS	The co-venturers are the joint owners of the goods and property of the business.	The consignor is the owner of the goods, only the possession is transferred to the consignee.
POWERS/	All the co-venturers have equal rights or powers.	The consignee has not right

AUTHORITY		in regard to the goods.
SCOPE	The scope of joint venture is wider. It consists of buying and selling of goods, underwriting of shares and debentures.	The scope of consignment is narrow. It is concerned with the sale of goods only.
CONTRIBUTION OF FINANCE	The finances are provided by all the co-venturers in case of a joint venture.	In case of consignment business, consignor is the main provider of finance.
MANAGEMENT	In joint venture, each co-venturer takes part in the management of the business.	In consignment, only consignor is responsible of managing the whole things.
LOSS OF GOODS	Co-venturers are equally responsible for loss of goods.	The consignor is responsible for the normal and abnormal loss of the goods.
METHODS OF ACCOUNTING	There are four methods of keeping accounts i.e. separate set of books are maintained, joint venture records maintained by all co-venturers or records maintained by one of the co-venturer or memorandum method.	The methods of accounts followed are: Cost price method Invoice Price method Memorandum Method.
ACCOUNT SALES	No 'Account sales' is sent by the one co-venturer to another co-venturer.	An 'Account Sales' is prepared and submitted by the consignee to his consignor.
SUBJECT MATTER OF DEALING	Co-venturers can deal in both movable and immovable property.	Only movable property is the subject matter of the consignment.
TREATMENT OF CLOSING STOCK	The unsold stock belongs to all the co-venturers.	The unsold stock belongs to consignor only.
ACCOUNTS MAINTAINED	The accounts maintained are: Joint Venture A/c Co-Venturer Personal A/c	The accounts maintained are: Consignor's A/c Consignee's A/c Consignment A/c Stock Reserve A/c Commission A/c Stock sent on Consignment A/c

STRAIGHT LINE METHOD

Under this method, an equal amount is provided each year for depreciation of each asset until the asset has been written down to nil or its scrap value at the end of the estimated life of the asset¹⁷. The name of this method is derived from the fact if the successive annual depreciation over the life of the asset are plotted on a graph, the result will be a straight line with a slope equal to the annual depreciation. This method is also called 'Fixed Installment Method' because a uniform amount of depreciation is charge each year¹⁸. The formula of the annual depreciation under the method is :

$$D = \frac{C - S}{n}$$

Where,

D = Annual depreciation.

C = Cost of the asset

S = Salvage or scrap value

n = Estimated life of years.

This method can be recommended only when the following conditions are satisfied.

- a) The asset is expected to render an uniform service through out its estimated useful hfe¹⁹.
- b) Annual repairs and maintenance costs are assumed to remain constant over its life²⁰.
- c) The asset is expected to earn an equal amount of revenue each year throughout its life.
- d) The amount of depreciation is a function of time only.

Repair Cost²¹

To mulify, the higher shut down and repair costs in the later part of the asset's life, a partial rectification of this method is possible by estimating the total amount of repair cost over the life of the asset. The depreciation and repairs are accounted for as a unit. The annual cost would then be :

$$\frac{\text{Cost} - \text{Estimated salvage value} + \text{Repair cost}}{\text{Estimated Life in Years.}}$$

Merits

There are several merits of the method

- a) This method is not only simple to understand but also easy to calculate.
- b) The book value of an asset can be fully written off.
- c) The life of the certain assets sometimes depend on contracts like leasehold property, patents, trade marks etc. In such case this method is very much appropriate.
- d) Effective life of an assets, scrap value, repairs and maintenance cost, rate of interest etc. cannot be measured with certainty. So, no single method can weight all the factors at a time with equal importance for fixing the amount of depreciation. From this view point, this method appears most reasonable as some favourable impact of some factors are offset by unfavourable effects of others.

Demerits

As against the advantages enumerated above, the straight-line method has some disadvantages also. Some of the disadvantages are :

- a) This method does not take into account the interest on capital invested on the assets²².
- b) Under this method the amount of depreciation can never be equal to the value of services rendered from the asset. An asset is expected to render

more effective services during earlier period than later period of its useful life as it's efficiency decreases over times.

- c) The charge for depreciation remains constant year to year but the repair and maintenance expenses may go up with the asset growing older and older.
- d) The recovery of 'Real Capital' is not possible under this method as the amount of depreciation remains the same year after year. Only the historical cost is recovered.
- e) This methods ignores the time value of money²³ and inflation factor.

DIMINISHING BALANCE METHOD

In this method, depreciation is charged at a fixed percentage each year to the net asset balance (i.e. cost less accumulated depreciation). The depreciation charges is higher at the early stages than the later stages i.e. the amount of depreciation decreases gradually although the depreciation rate is fixed. This method is also known as 'Declining Balance Method', 'Written Down Value Method'²⁴ etc.

Formula

Let,

C = Original cost of the asset.

D = Depreciable value i.e. total depreciation during the service life of asset.

S = Scrap value or residual value ($S = C - D$).

n = Estimated life of the asset.

r = Rate of depreciation in decimal term

V = Book value (i.e. cost less depreciation) (i.e. $V_1, V_2, V_3 \dots V_n$ be respectively, the book value at the end of the period 1, 2, 3.....n)

$d_1, d_2, d_3 \dots d_n$ be respectively the amount of depreciation at the end of period 1, 2, 3,n

Thus in the first year

$$d_1 = C \cdot r \quad \dots\dots\dots(1)$$

$$V_1 = C - d_1 \quad \dots\dots\dots(2)$$

From (1) & (2) we get,

$$V_1 = C - C \cdot r$$

$$\text{or, } V_1 = C (1 - r) \quad \dots\dots\dots(3)$$

In the second year,

$$d_2 = V_1 \cdot r \quad \dots\dots\dots(4)$$

From (3) & (4) we get,

$$d_2 = C (1 - r) \cdot r$$

$$\text{or, } d_2 = C \cdot r (1 - r) \quad \dots\dots\dots(5)$$

$$\text{And, } V_2 = V_1 - d_2 \quad \dots\dots\dots(6)$$

From (3), (5) and (6) we get,

$$V_2 = C (1 - r) - C r (1 - r)$$

$$\text{or, } V_2 = C (1 - r) (1 - r)$$

$$\text{or, } V_2 = C (1 - r)^2 \quad \dots\dots\dots(7)$$

In the third year,

$$d_3 = V_2 \cdot r \quad \dots\dots\dots(8)$$

From (7) and (8) we get,

$$d_3 = C (1 - r)^2 \cdot r$$

$$\text{or, } d_3 = C r ((1 - r)^2) \quad \dots\dots\dots(9)$$

$$\text{And, } V_3 = V_2 - d_3 \quad \dots\dots\dots(10)$$

From (7), (9) and (10) we get,

$$V_3 = C(1 - r)^2 - dr(1 - r)^2$$

$$\text{Or, } V_3 = C(1 - r)^2(1 - r)$$

$$\text{Or, } V_3 = C(1 - r)^3 \quad \dots\dots\dots(11)$$

If we follow the equation no. (1), (5) and (9) we can easily determine d_4 , d_5 and so on i.e.

$$d_1 = C.r.$$

$$d_2 = Cr(1 - r)$$

$$d_3 = Cr(1 - r)^2$$

$$d_4 = Cr(1 - r)^3$$

.....

$$d_n = Cr(1 - r)^{n-1}$$

Similarly, if we follow the equation no.(3) (7) and (11) we can easily determine the value of V_4 , V_5 and soon i.e.

$$V_1 = C(1 - r)$$

$$V_2 = C(1 - r)^2$$

$$V_3 = C(1 - r)^3$$

$$V_4 = C(1 - r)^4$$

.....

$$V_n = C(1 - r)^n$$

It appears from the above, both depreciation and the book value of the asset are reducing at a constant rate.

$$d_n = Cr(1 - r)^{n-1}$$

$$\text{and } V_n = C(1 - r)^n$$

In general terms,

$$\text{and } d_t = Cr (1 - r)^{t-1}$$

$$\text{and } V_t = C (1 - r)^t$$

Where t ranging from 0 to n

Adding periodic depreciation we get

$$D = d_1 + d_2 + d_3 + \dots + d_n \quad \dots\dots\dots(12)$$

By substituting the value d_1, d_2, d_3 etc.

$$D = Cr + Cr (1-r) + Cr (1-r)^2 + \dots + Cr (1-r)^{n-1} \quad \dots\dots\dots(13)$$

Multiplying both side of the equation by $(1 - r)$, we get

$$D (1 - r) = Cr (1 - r) + Cr (1 - r)^3 + \dots + Cr (1 - r)^n \quad \dots\dots\dots(14)$$

Subtracting (13) from (14), we get

$$-Dr = -Cr + Cr(1-r)^n$$

Dividing both side by '-r'

$$D = C - C (1 - r)^n$$

$$\text{or, } D = C [1 - (1 - r)^n]$$

$$\text{or, } \frac{D}{C} = 1 - (1 - r)^n$$

$$\text{or, } (1 - r)^n = 1 - \frac{D}{C}$$

$$\text{or, } 1 - r = \sqrt[n]{1 - \frac{D}{C}}$$

$$\text{or, } 1 - r = \sqrt[n]{\frac{(C - D)}{C}}$$

$$\text{or, } 1 - r = \sqrt[n]{\frac{S}{C}} \quad (\text{As, } S = C - D)$$

$$\text{or, } r = 1 - \sqrt[n]{\frac{S}{C}} \quad \dots\dots\dots(15)$$

To find out the value of d_1, d_2, d_3 etc. directly, we have already shown in terms of general equation i.e.

$$d_t = Cr (1 - r)^{t-1}$$

Where t = Estimated life of the asset which is ranging from 0 to n

It may be written either as $d_t = [r (1 - r)^{t-1}] \cdot C$

Thus instead of applying a fixed rate on the diminishing balances of the asset, it is also possible to compute depreciation by applying fluctuating rates on the original cost of the asset.²⁵

Diminishing balance method is characterised generally by predetermined fixed rate say 20%, 15% or 10% on the diminishing balance to charged depreciation in each year. But the same result may be obtained under this method by charging depreciation on variable rate on the initial cost of asset. What is needed for the purpose is some mathematical adjustment.

It is observed from the above that a negative acceleration²⁶ is achieved under diminishing balance method.

Merits :

The diminishing balance method of depreciation has some advantages. These are mentioned below :

- a) Under this method, depreciation is calculated according to the service yielding capacity of the asset. As amount of depreciation decreases gradually with the decrease in service potential of asset.
- b) This method can be proved very helpful in adopting the better matching of revenue and expenses as in the first few years depreciation being heavy and repairs light and in the last few years repairs being heavy and depreciation light. The combination of depreciation with the cost of

repairs and maintenance is resulted more or less even charge against revenue over the whole life time of the asset.

- c) There is no danger that asset will be over-depreciated since no matter how high the rate of depreciation is taken (less than 100%) there is always something left in the relative ledger account to which the rate would be applied in the next year.²⁷
- d) This method is consistent with the principle that book value of an asset should be considered equal to the present value of its remaining service potentials because asset value decrease at higher rate in the earlier parts than in the later parts of the life.

Demerits :

There are certain objections to the use of this method. The main objections are as follows :

- a) There is no certainty that the service yielding ability of depreciable assets will always reduce by a constant rate.
- b) This method puts too much emphasis on the historical cost. Proper emphasis is not given on the recovery of capital invested on the asset. Similarly interest on capital invested is also ignored here.
- c) The use of this method mitigates against accurate costing. It has been observed in practice that sometimes the assets can earn more or less the same amount of revenue for a long period of time. In that case, different amount are charged for the use of same assets in different periods cannot be justified.
- d) This method does not give acceptable depreciation charges in either practice or theory where disposal costs of an asset are taken into account for purposes of determining the periodic rate.²⁸

- e) If the salvage value is relatively small the methods demands a very high rate of depreciation per annum. Again if the salvage value of the asset becomes zero or negative in that case, the formula has no applicability.
- f) This method requires a good deal of mathematical calculation.

SUM-OF-THE-YEARS'-DIGITS METHOD

This is another accelerated depreciation method which was introduced by the US Internal Revenue Code of 1954²⁹. Under this method the cost less salvage value is charged to different years in the ratio of capital blocked in the asset in the year concerned to the total blockage over its life. This method assumes that depreciation of the first year should be the highest as no portion of the capital has been recovered till then and the depreciation of the last year should be the least of all years because a major portion of the invested capital has been already recovered.

Since depreciation is measured according to the volume of blocked investment, its magnitude is expressed by means of a fraction. The denominator of the fraction, which remains constant is the total of the digits representing the useful life of the asset. The numerator, on the other hand, measuring the blockage of capital in the reverse weighted digits of each year.

Formula³⁰

Let,

D_t = Depreciation in period t

C = Cost of the asset

S = Estimated salvage value of the asset

n = Estimated life of the asset in years

t = The year of life of the asset (i.e. 1 is the first year, 2 is the second year and so on)

$$\sum_{i=1}^n Y_i = \text{The sum of the digits from 1 to } n = \frac{n(1+n)}{2}$$

The formula for measuring depreciation for a particular year is :

$$D_t = (C - S) \times \frac{n+1-t}{\sum_{i=1}^n Y_i}$$

Merits :

The merits of the method are as follows :

- a) In this method, the quantum of depreciation is greater in the earlier years in comparison with the later years because the benefits received from the use of the asset are greater in the early years than in the later years.
- b) In the earlier year repairs are light but depreciation is heavy but in the later year, as the asset gets older the repairs are heavy but depreciation is light. So depreciation plus repairs will more or less constant every year and the charge to Profit and Loss Account should be uniform.
- c) If the asset is retired earlier than anticipated as result of unforeseen obsolescence, the loss upon retirement will be less than if straight line depreciation were used, because, asset are recovered at a higher rate in the earlier years where as only a small fraction remains left for recovering them in the later years.
- d) For tax accounting purposes, these methods have a clear advantage over the straight line method. The larger deductions in the early years mean that at the very least tax payments are postponed for a considerable period. On the other hand, this method gives a tax postponement with the greatest present value.
- e) In this method nearly three-fourth of total depreciation is charged within half of its life. That means three-fourth of blocked investment recovered within short span.
- f) This method is very simple to understand and simple to calculate.

- g) This method is preferable for assets with services lives of eight years or more.

Demerits :

Although this method is considered to be a great innovation in the field of depreciation accounting but it has some disadvantages which are given below :

- a) This method also ignored the cost of capital on invested fund.
- b) In the earlier year greater depreciation is charged at a result less profit is available for declaring dividend in the earlier year. This may created serious problem for organisation to attract new investor. As dividend is one of the motivating factors for investment. Again more depreciation in the earlier year may resultant the high cost of production in the competitive market.

DOUBLE DECLINING BALANCE METHOD

In the USA the Internal Revenue Code of 1954³¹ permitted the tax payers who were using a declining balance method to charge depreciation for tax purpose a maximum of double the rate allowed under straight line method. This method of calculating depreciation was called double declining balance method. This method may be identified as a combination of straight line and diminishing balance method. Like diminishing balance method here the depreciation is charged on the opening written down value of the fixed asset. Like straight line method a fixed rate of depreciation is charged in this method. But the rate used is twice the straight line rate.

It is important to mention here that under this method an over depreciated cost of the asset at the end of the life of asset than its anticipated salvage value. In that case there may be two options to deal with the problem. Depreciation charge for the last year may be adjusted to make salvage value equal to its anticipated salvage value. Alternatively, in the last year the firm may opt out for straight line depreciation for written off the over depreciated salvage value. Again, under most circumstances, the entire depreciation would not be allocated during the life of the asset i.e. the amount

of the asset would exceed the salvage value. So that at a point some where near the mid point of the life of the asset, a change is made to the straight line method. If salvage value is zero and the life is an odd digit, the years of change will be $n/2 + 1\frac{1}{2}$; if the life is a even digit, the year of change will be $n/2 + 2$. If the salvage is greater than zero, the year of change will be later than this.³²

Merits :

The advantages of this method are as follows;

- a) In the earlier year more depreciation is charged than later years, so by adopting this method a firm can save tax by lowering its tax liability.
- b) In the initial year high depreciation accompanied with low repairs and maintenance cost and in the later part of asset's life low depreciation accompanied with high repairs and maintenance cost will be tend to make a uniform equitable year after year during the asset's life.
- c) A firm will generate more interest if it invest the depreciation outside the firm. It helps to create more fund at the time of replacement of asset.
- d) The firm will face minimum loss at the time of disposal of asset due to innovation as a large part has already changed to profit and loss account by way of depreciation.

Demerits

Every methods has its own limitation. The main objections against adopting the method are as follows :

- a) This method shows lower profit in the earlier year as high depreciation is charged. It will depict poor performance in the initial year.
- b) The investors are unhappy as they get low dividend in the earlier year for generating lower profit by the firm.
- c) Though it is popular among tax payer but sometimes they face high cost of production due to higher depreciation.

- d) Under this method the asset value can never be reduced to zero.

SINKING FUND METHOD

Under this method, depreciation is a provision by charging out of revenue for replacement of an asset and a means of maintaining capital. This method is based on the assumption that a fund is to be built up and that the amount of this fund should equal the total amount of the depreciation at the end of the useful life of the depreciable asset. An equal amount by way of depreciation is set aside by charging to the profit and Loss Account at the end of every accounting period, so that, all such equal installments if allowed to accumulate at a compound interest³³ would equal to the depreciable cost of the asset at the expiry of its useful life. Under all other methods of depreciation liquid cash may not be available to the firm at the time of replacement of asset because in those cases the amount of depreciation is retained in the business. In this method annual equal installment set off as depreciation is regularly invested outside the business in interest bearing easily marketable securities. Interest yielded on such securities is compounded or reinvested in each year. When the life of the asset expires, investments are disposed off and the proceeds are utilised for replacing the old asset. This method is also known as 'Depreciation Fund Method' or 'Redemption Fund Method'.³⁴

Formula :

Let,

d = Sinking Fund Depreciation.

C = Cost of the asset.

S = Salvage value

i = Rate of interest in decimal term

n = Years

Let it be assumed that the salvage value equal to zero. The accumulated amounts should then be equal to the cost of the existing asset. The accumulated amount can be obtained from the following :

$$C = d (1+i)^{n-1} + d (1+i)^{n-2} + d (1+i)^{n-3} + \dots + d (1+i)^{n-(n-1)} + d (1+i)^{n-n}$$

$$\text{or, } C = d (1+i)^{n-1} + d (1+i)^{n-2} + d (1+i)^{n-3} + \dots + d (1+i) + d \dots \dots \dots (1)$$

Multiplying both side of the equation by (1+i)

$$C (1+i) = d (1+i)^n + d (1+i)^{n-1} + d (1+i)^{n-2} + \dots + d (1+i)^2 + d (1+i) \dots \dots \dots (2)$$

Subtracting equation (1) from equation (2), we get,

$$C.i = d (1+i)^n - d$$

$$\text{or, } C.i = d [(1+i)^n - 1]$$

$$\text{or, } d = \frac{C.i}{(1+i)^n - 1} \dots \dots \dots (3)$$

Merits :

The main advantages of this method are as follows :

- a) Under this method, at the end of the specified time, a definite sum is available in cash to replace the old asset.
- b) Since the amount is invested outside the business there is no need to drawn money from the business for replacement purpose at the end of the life of the asset. This helps to avoid pressure on working capital.

Demerits

There are some weaknesses of this method and these are as follows :

- a) From the management view point the method is inefficient. Generally the internal rate of return of the firm is higher than the return on investment. As a result this causes substantial loss to the firm.
- b) There is always a risk factor about the loss on realisation of investments. That means if the market price of the investment in which depreciation is

invested fluctuate in that case the amount realised may be less than cost of the asset.

- c) The firm may face the difficulty of finding suitable investments which provide the desired rate of return per annum.
- d) It is difficult to estimate the exact working life of the asset which will be replaced.
- e) The effect of price level change is not considered at all. Since the amount of available fund at the end of the asset does not exceed the historical cost of the asset, the claim that fund invested outside the business will effectively replace the asset, remains doubtful.
- f) Under this method, the amount of depreciation charge does not bear any relation to the intensity of the use of the asset.
- g) This method does not consider the salvage value of an asset, at the end of its working life. It is truly unjustified.

ANNUITY METHOD

The principle underlying this method is that in calculating depreciation regard should be held, not only to the cost of an asset but also to the interest³⁵ which the capital blocked in that asset would have earned had it been invested outside the business. So under this method, a fixed installment of depreciation is charged against revenue for each year of the life of the asset in such a way that at a given rate of interest the present value of the sum of all those installments equals to the cost of the asset. Stated otherwise, depreciation for each year is made to include an interest on unrecovered capital outlay but the interest which is credited annually to Profit and Loss Account, gradually diminishes. On the other hand, depreciation excluding interest i.e. net depreciation goes on increasing. It may also be noted that Annuity Method of depreciation recovers more than the original cost of the asset. The excess being interest on investment.

Formula

Let,

A = Annuity depreciation

C = Cost of the asset

S = Salvage value

i = Rate of interest in decimal term

n = Estimated life of the asset

It also assume that salvage value is equal to zero.

Then, the present value of A due in 1 year = $\frac{A}{(1+i)}$

the present value of A due in 2 years = $\frac{A}{(1+i)^2}$

So, the present value of A in n year = $\frac{A}{(1+i)^n}$

The sum of the present value of future annuity depreciation is to be equal to the cost of the asset.

$$\text{Then, } C = \frac{A}{(1+i)} + \frac{A}{(1+i)^2} + \frac{A}{(1+i)^3} + \dots + \frac{A}{(1+i)^n} \quad \dots\dots\dots(1)$$

Multiplying both side of the equation by (1+i)

$$C(1+i) = A + \frac{A}{(1+i)} + \frac{A}{(1+i)^2} + \frac{A}{(1+i)^3} + \dots + \frac{A}{(1+i)^{n-1}} \quad \dots\dots\dots(2)$$

Subtracting equation (1) from equation (2), we get,

$$C.i = A - \frac{A}{(1+i)^n}$$

$$\text{or, } C.i = A \left[1 - \frac{1}{(1+i)^n} \right]$$

$$\text{or, } C.i = A \left[\frac{(1+i)^n - 1}{(1+i)^n} \right]$$

$$\text{or, } A = \frac{C.i.(1+i)^n}{(1+i)^n - 1} \dots\dots\dots(3)$$

Merits :

A number of merits can be claimed for this method :

- a) In this method depreciation includes not only the recovery of invested capital but also the interest on capital outlay. So this is more logical and realistic than other methods.
- b) At the time of inflation, it is possible for the firm to replace the asset as total depreciation charged is more than cost of the asset.
- c) This method is most appropriate for the intangible such as leasehold rights, patents etc. In this cases depreciation varies with the passing of time rather than with the intensity of use.

Demerits

The method has some demerits and these demerits are as follows :

- a) The use of the asset or its service rendering capacity is not at all considered for measuring depreciation. The cost of waiting time rather than the cost of physical deterioration is given more importance in such a case.
- b) In this method, it is assume that the rate of interest on unrecovered capital outlay is equal to its cost of capital but in real world it is hardly happen.
- c) The scrap value of the asset is not considered which is not justified.
- d) Annual repairs and maintenance cost are assumed to remain constant throughout the life of an asset, but it is not so happen.

- e) This method creates difficulty in measuring depreciation if replacement of old asset with new asset occurs during the life of old asset.

INSURANCE POLICY METHOD

This method is similar to the sinking fund method except that instead of investing the money in securities an insurance policy³⁶ is taken to produce the amount required at the end of asset's life. Here a fixed amount is charged each year to the Profit and Loss Account, but unlike the sinking fund method, the amount is paid to the insurance company as premium at the beginning of each year. As the Insurance Company requires to be paid for the risk it undertakes and it follows that the insurance policy method is a little more expensive than the sinking fund method, but it provides a definite amount at the end of the asset's life.

Merits

The merits of this method are as follows :

- a) In this method, there is a certainty that the guaranteed amount will be received from the insurance company. There is no such risk due to fluctuation in the market price of securities.
- b) There is no need to judge the merit of different securities for investment. Fund is made by paying the premium on insurance policy.

Demerits

Some of the demerits of this method are as follows :

- a) As the insurance company takes the risk and it also makes some profit naturally the interest on insurance policy is less than the rate of interest prevailing in the market. So depreciation charge in this method becomes more expensive.
- b) If new asset is acquired during the life of the old asset this method cannot be used effectively because the contract with the insurance company cannot be changed.

DISCOUNTED CASH FLOW METHOD OF DEPRECIATION³⁷

Under this method the value of an asset is computed by discounting the future cash flows attributable to the asset. Here depreciation is a measure of change in the discounted value of the asset. This means depreciation is measured the difference between the value of the asset based on the discounted future cash flow at the beginning of the period and the discounted future cash flow at the end of the period. This method is widely used in the field of economics.

Formula

Let,

V = Present value of future cash flows

D = Periodic depreciation

R = Periodic Cash Flows (i.e. $R_1, R_2, R_3, \dots, R_n$ be respectively the cash flow at the end of the period 1, 2, 3, ..., n).

i = Rate of interest in decimal term

n = Life of the assets in years

This the value of the asset at the beginning

$$V_0 = \frac{R_1}{(1+i)} + \frac{R_2}{(1+i)^2} + \frac{R_3}{(1+i)^3} + \dots + \frac{R_n}{(1+i)^n}$$

$$\text{or, } V_0 = \sum_{j=1}^n \frac{R_j}{(1+i)^j} \dots \dots \dots (1)$$

Then, the value of the asset at the end of 1st year

$$V_1 = \frac{R_2}{(1+i)} + \frac{R_3}{(1+i)^2} + \frac{R_4}{(1+i)^3} + \dots + \frac{R_n}{(1+i)^{n-1}}$$

$$\text{or, } V_1 = \sum_{j=2}^n \frac{R_j}{(1+i)^{j-1}} \dots \dots \dots (2)$$

∴ Depreciation in year 1

$$D_1 = V_0 - V_1$$

$$\text{or, } D_1 = \sum_{j=1}^n \frac{R_j}{(1+i)^j} - \sum_{j=2}^n \frac{R_j}{(1+i)^{j-1}}$$

Similarly, depreciation in year 2

$$D_2 = V_1 - V_2$$

$$\text{or, } D_2 = \sum_{j=2}^n \frac{R_j}{(1+i)^{j-1}} - \sum_{j=3}^n \frac{R_j}{(1+i)^{j-2}}$$

And, depreciation in year 3

$$D_3 = V_2 - V_3$$

$$\text{or, } D_3 = \sum_{j=3}^n \frac{R_j}{(1+i)^{j-2}} - \sum_{j=4}^n \frac{R_j}{(1+i)^{j-3}}$$

In this way we can calculate the depreciation in respect of any period. In general term the period is denoted as D_t .

$$\therefore D_t = V_{t-1} - V_t$$

$$\text{or } D_t = \sum_{j=1}^n \frac{R_j}{(1+i)^{j-t+1}} - \sum_{j=t+1}^n \frac{R_j}{(1+i)^{j-t}}$$

$$\text{Again, } V_t = \sum_{j=t+1}^n \frac{R_j}{(1+i)^{j-t}}$$

$$\text{or, } V_t = \frac{R_{t+1}}{(1+i)} + \frac{R_{t+2}}{(1+i)^2} + \frac{R_{t+3}}{(1+i)^3} + \dots + \frac{R_n}{(1+i)^{n-t}} \quad \dots\dots\dots(3)$$

$$\text{And, } V_{t-1} = \sum_{j=t}^n \frac{R_j}{(1+i)^{j-t+1}}$$

$$\text{or, } V_{t-1} = \frac{R_t}{(1+i)} + \frac{R_{t+1}}{(1+i)^2} + \frac{R_{t+2}}{(1+i)^3} + \dots + \frac{R_n}{(1+i)^{n-t+1}} \quad \dots\dots\dots(4)$$

Multiplying both side of the equation (4) by $(1+i)$, we get,

$$V_{t-1} (1+i) = R_t + \frac{R_{t+1}}{(1+i)} + \frac{R_{t+2}}{(1+i)^2} + \dots + \frac{R_n}{(1+i)^{n-t}} \quad \dots\dots\dots(5)$$

Subtracting equation no (3) from equation (5), we get

$$V_{t-1} (1+i) - V_t = R_t$$

$$\text{or, } V_{t-1} + i.V_{t-1} - V_t = R_t$$

$$\text{or, } V_{t-1} - V_t = R_t - i.V_{t-1}$$

$$\text{or, } D_t = R_t - i.V_{t-1} \quad [\text{As, } D_t = V_{t-1} - V_t]$$

So, the new formula for getting the depreciation at 't'th period :

$$D_t = R_t - i.V_{t-1} \quad \dots\dots\dots(6)$$

Putting the value t (1, 2, 3.....n) we can easily determine the depreciation for period 1, 2, 3..... and so on.

$$D_1 = R_1 - i.V_0$$

$$D_2 = R_2 - i.V_1$$

$$D_3 = R_3 - i.V_2$$

.....

$$D_n = R_n - i.V_{n-1}$$

Merits :

The merits of this method are as follows :

- a) Under this method depreciation is based on the service potentiality of an asset. So this method is the ideal method for charging depreciation.
- b) This method is widely used in the field of economics.
- c) This method may be used effectively where the firm depends on single asset.

Demerits

Weaknesses of this method are as follows :

- a) Future cash flow may not be correctly known from previous. So this method depends on the expected cash flow.
- b) Forecasted cash flow and actual cash flow may differ, in that case this method gives some unrealistic picture of business.
- c) Cash flow of a business is a joint product of many factors. So, it is difficult to find out the separate cash flow generated by individual asset.
- d) Under this method, it is difficult to forecast the future services of the asset; to value those future services and to determine the appropriate rate (or rates) of discount.³⁸
- e) This method needs a good deal of mathematical calculation.

USE-BASE METHOD

Under this method depreciation charge is made a function of usage rather than a function of time. The basic assumption of this method is that with every unit of product the value of the asset reduces proportionately. So depreciation under this method becomes a true variable cost of the product. This method is suitable where individual output can easily be identified, the rate of usage varies from period to period and total usage of the asset over its life can be established reliably.

There are three methods based on this concept :

(i) Output method (ii) Working hours method, and (iii) Mileage method.

i) OUTPUT METHOD

Under this method depreciation charge for the year is made to vary with the number of units produced during the years. To find out depreciation, the cost less salvage value of the asset is divided by the number of units expected to be produced by the asset during its service life.

$$\text{So, Depreciation cost per unit} = \frac{\text{Cost of asset} - \text{Salvage value}}{\text{Estimated number of units}}$$

Periodic depreciation = Number of units produced during the period X Depreciation cost per unit.

ii) WORKING HOURS METHOD

This method is suitable where the life of asset is measured by its service hours rather than units produced. To find out depreciation, under this method cost of asset less salvage value is divided by the total working hours during its life.

$$\text{So, Depreciation cost per hour} = \frac{\text{Cost of asset} - \text{Salvage value}}{\text{Total working hours of the asset}}$$

Period depreciation = Number of hours worked during the period X Depreciation cost per hour.

iii) MILEAGE METHOD

This method is used in transport industries. The working life of the vehicles like asset is expressed in mileage or kilometers. Depreciation per kilometer is calculated by dividing the cost of the vehicle by the estimated running kilometers it can travel in its life time.

$$\text{So, Depreciation cost per mile / kilometer} =$$

$$\frac{\text{Cost less salvage value}}{\text{Estimated miles / kilometres run during the service life.}}$$

Periodic depreciation = Actual miles or kilometres run by the vehicle during the period X depreciation cost per mile or kilometre.

OTHER METHODS OF DEPRECIATION

DEPLETION METHOD

This method is generally applied in case of wasting assets e.g, mines, quarries and natural resources. Here the rate of production is measured by the rate of

Write the difference between single entry system and double entry system.

The major differences between single entry system and double entry system are as follows –

Single entry system	Double entry system
• Tells about cash, debtors and creditors cash balances only. • Records transactions related to business only. • Incomplete system of recording the transactions. • Can easily record fraud transactions. • Hard to find errors. • Persons accounts and cash accounts are included. • Not accepted by taxation department. • Takes lot of time in calculation profit/loss. • Suitable for small business. • Cost of implementation is not required. • Reconciliation of accounts is not possible. • Special knowledge is not required in maintaining books. • Trail balance can't be prepared. • Not suitable for tax purpose • Difficult to prepare financial statement • Difficult to tell about financial position	• Tells about every business financial entity. • Records all effects of transactions. • Complete system of recording the transactions. • Difficult to record fraud transactions. • Easy to identify errors. • All accounts are considered. • Accepted by taxation department. • Easy to calculate profit/loss. • Suitable to all types of business. • Cost of implementation is required. • Reconciliation of accounts is possible. • Special knowledge is required in maintaining books. • Trail balance can be prepared. • Suitable for tax purpose. • Easy to prepare financial statements. • Can easily tell about financial position.

Illustration 2

Journalise the following transactions of M/s. Radha & Sons.

M/s. Radha & Sons

2000

Jan 1	Business started with Rs. 2,50,000 and cash deposited with Bank	Rs. 1,50,000
3	Purchased machinery on credit from Rangan	50,000
6	Bought furniture from Ramesh for cash	25,000
12	Goods sold to Yesodha	22,500
13	Goods Returned by Yesodha	2,500
15	Goods sold for cash	50,000
17	Bought goods for cash	25,000
20	Cash received from Yesodha	10,000
21	Cash paid to Ramola	20,000
25	Cash withdrawn from bank	50,000
29	Paid advertisement expenses	12,500
30	Bought office stationery for cash	5,000
31	Cash withdrawn from bank for personal use of the proprietor	6,250
31	Paid salaries	15,000
31	paid rent	2,500

Solution :**Books of M/s. Radha & Sons****Journal**

Date	Particulars	L. F	Debit Rs.	Credit Rs.
2000 Jan 1	Cash A/c To Capital A/c [Being cash brought in as capital]	Dr	2,50,000	2,50,000
1	Bank A/c To Cash A/c [Being cash deposited into bank]	Dr	1,50,000	1,50,000
3	Machinery A/c To Rangan's A/c [Being machinery bought on credit from Rangan]	Dr	50,000	50,000

			L.F.	Rs.	
239		Dr		25,000	
6	Furniture A/c To Cash A/c [Being furniture purchased for cash from Ramesh]	Dr		22,500	25,000
12	Yesodha's A/c To Sales A/c [Being goods sold to Yesodha on credit]	Dr		2,500	22,500
13	Sales Returns A/c To Yesodha's A/c [Being goods returned by Yesodha]	Dr		50,000	2,500
15	Cash A/c To Sales A/c [Being goods sold for cash]	Dr		25,000	50,000
17	Purchases A/c To Cash A/c [Being goods purchased for cash]	Dr		10,000	25,000
20	Cash A/c To Yesodha's A/c [Being cash received from Yesodha]	Dr		20,000	10,000
21	Ramola A/c To Cash A/c [Being cash paid to Ramola]	Dr		50,000	20,000
25	Cash A/c To Bank A/c [Being cash withdrawn from bank]	Dr		12,500	50,000
29	Advertisement Expenses A/c To Cash A/c [Being advertisement expenses paid]	Dr		5,000	12,500
30	Office stationery A/c To Cash A/c [Being stationery purchased for cash]	Dr		6,250	5,000
31	Drawings A/c To Bank A/c [Being cash withdrawn from bank for personal use]	Dr		15,000	6,250
31	Salaries A/c Rent A/c To Cash A/c [Being salaries and rent paid]	Dr Dr		2,500	17,500

ILLUSTRATIONS

Illustration 1

The following balances were extracted from the ledger of Ramakrishna Engineering Works on 31st March 1997. You are required to prepare a trial balance as on that date in proper form.

	Rs.		Rs.
Drawings	6,000	Salaries	9,500
Capital	24,000	Sales Returns	1,000
Sundry creditors	43,000	Purchase Returns	1,100
Bills payable	4,000	Travelling expenses	4,600
Sundry debtors	50,000	Commission paid	100
Bills receivable	5,200	Trading expenses	2,500
Loan from Karthik	10,000	Discount earned	4,000
Furniture & fixtures	4,500	Rent	2,000
Opening stock	47,000	Bank overdraft	6,000
Cash in hand	900	Purchases	70,800
Cash at bank	12,500		
Tax	3,500		
Sales	1,28,000		

Solution :

Trial balance of Ramakrishna Engineering Works as on 31-3-1997

S. No.	Name of Account	L.F.	Debit balance Rs.	Credit balance Rs.
			6,000	—
1.	Drawings		—	24,000
2.	Capital		—	43,000
3.	Sundry creditors		—	4,000
4.	Bills payable		50,000	—
5.	Sundry debtors		5,200	—
6.	Bills receivable		—	10,000
7.	Loan from Karthik		4,500	—
8.	Furniture & Fittings		47,000	—
9.	Opening stock		900	—
10.	Cash in hand		12,500	—
11.	Cash at bank		3,500	—
12.	Tax			

13.	Sales	-	-
14.	Salaries	9,500	1,28,000
15.	Sales returns	1,000	-
16.	Purchase returns	-	-
17.	Travelling expenses	4,600	1,100
18.	Commission paid	100	-
19.	Trading expenses	2,500	-
20.	Discount earned	-	-
21.	Rent	2,000	4,000
22.	Bank overdraft	-	-
23.	Purchases	70,800	6,000
		<u>2,20,100</u>	<u>2,20,100</u>

Illustration 2

Messrs. Rajkumar & Bros. started their business on 1st April 1995 with Rs. 50,000 as their capital. Following were the transactions for one month :

1995

April 1	Paid into bank	Rs.
" 2	Purchased furniture from Modern furniture Ltd., on credit	20,000
" 5	Purchased goods from Mohan	3,000
" 6	Sold goods on credit to Sivakumar	8,800
" 8	Paid to Modern furniture Ltd., cash	3,500
" 15	Paid wages in cash	2,000
" 16	Issued cheque to Mohan	200
" 20	Received from Sivakumar	7,000
" 21	Paid into bank	1,500
" 23	Cash sales	1,500
" 25	Cash purchases	3,500
" 27	Goods withdrawn for personal use	1,800
" 28	Cash withdrawn for personal use	500
" 29	Paid for stationery	750
" 30	Paid salaries by cheque	100
		1,000

Give journal entries and prepare ledger accounts and trial balance as on 30-4-1995.

Balance Sheet of Weifa as at 31-12-1995

Liabilities	Rs.	Assets	Rs.
Creditors	26,600	Debtors	36,000
Bank overdraft	8,400	Less: Provision for B.D	1,800
			34,200
Capital	50,000	Stock	40,120
Add: Net Profit	32,300	Prepaid Insurance	1,400
Add: Interest on capital	2,500	Furniture	5,200
	84,800	Less: Depreciation	520
			4,680
		Business Premises	40,000
		Less: Depreciation	600
			39,400
	1,19,800		1,19,800

Illustration 12

Prepare Trading, Profit & Loss A/c and Balance Sheet from the following Trial Balance of Mr. M. Madan.

Debit Balances	Rs.	Credit Balances	Rs.
Sundry Debtors	92,000	Madan's Capital	70,000
Plant & Machinery	20,000	Purchase Returns	2,600
Interest	430	Sales	2,50,000
Rent, Rates, Taxes, & Insurance	5,600	Sundry Creditors	60,000
Conveyance charges	1,320	Bank Overdraft	20,000
Wages	7,000		
Sales Returns	5,400		
Purchases	1,50,000		
Opening Stock	60,000		
Madan's Drawings	22,000		
Trade Expenses	1,350		
Salaries	11,200		
Advertising	840		
Discount	600		
Bad debts	800		
Business premises	12,000		
Furniture & Fixtures	10,000		
Cash in hand	2,060		
	4,02,600		4,02,600

Adjustments:

- Stock on hand on 31-12-96 Rs. 90,000.
- Provide depreciation on premises at 2.5%; Plant & Machinery at 7.5% and furniture & fixtures at 10%.
- Write off Rs. 800 as further bad debts.
- Provide for doubtful debts at 5% on sundry debtors.
- Outstanding rent was Rs. 500 and outstanding wages Rs. 400.
- Prepaid insurance Rs. 300 and prepaid salaries Rs. 700.

[Periyar, B.Com., Nov. 2005]

Solution:**Trading and Profit & Loss Account of M. Madan for the year ending 31-12-90**

Particulars	Rs.	Particulars	Rs.
To Opening Stock	60,000	By Sales	2,50,000
To Purchases	1,50,000	Less: Sales Returns	5,400
Less: Purchase returns	2,600		2,44,600
	1,47,400	By Closing Stock	90,000
To wages	7,000		
Add: Outstanding	400		
To Gross Profit c/d	7,400		
	1,19,800		
	3,34,600		
To Trade Expenses	1,350	By Gross Profit b/d	3,34,600
To Salaries	11,200		1,19,800
Less: Prepaid	700		
	10,500		
To Conveyance Charges	1,320		
To Advertising	840		
To Rent, rates, taxes, and insurance	5,600		
Add: Rent Outstanding	500		
	6,100		
Less: Prepaid Insurance	300		
	5,800		
To Discounts	600		
To Interest	430		
To Bad debts	800		
Add: Additional Bad debts	800		
Add: New provision for bad debts	4,560		
	6,160		
To Depreciation:			
Premises	300		
Plant & Machinery	1,500		
Furniture & fixtures	1,000		
	2,800		
To Net Profit transferred to Capital A/c	90,000		
	1,19,800		
			1,19,800

Final Accounts

Balance Sheet of M. Madan as at 31-12-1996

Liabilities	Rs.	Assets	Rs.
Sundry Creditors	60,000	Sundry Debtors	92,000
Bank overdraft	20,000	Less: Bad debts	800
Outstanding:			91,200
Rent	500	Less: Provision for B.D	4,560
Add: Wages	400		86,640
		Cash in hand	2,060
Capital	70,000	Stock	90,000
Less: Drawings	22,000	Prepaid: Insurance	300
		Salaries	700
			1,000
	48,000	Plant & Machinery	20,000
Add: Net Profit	90,000	Less: Depreciation	1,500
			18,500
		Business Premises	12,000
		Less: Depreciation	300
			11,700
		Furniture & Fixtures	10,000
		Less: Depreciation	1,000
			9,000
			2,18,900
	2,18,900		

Illustration 13

From the following Trial Balance extracted from the books of Kamalnath. Prepare Trading and Profit & Loss A/c and Balance Sheet for the year ended 31-12-96

Debit Balances	Rs.	Credit Balances	Rs.
Cash at Bank	2,610	Creditors	4,700
Book Debts	11,070	Discounts	150
Salaries	4,950	Creditors for expenses	400
Carriage inwards	1,450	Returns outwards	2,520
Carriage outwards	1,590	Sales	80,410
Bad debts	1,310	Capital	40,000
Office expenses	5,100		
Purchases	67,350		
Return inwards	1,590		
Furniture & Fixtures	1,500		
Stock	14,360		
Insurance	3,300		
Depreciation on property	1,200		
Freehold Property	10,800		
	1,28,180		1,28,180

ILLUSTRATIONS

(a) Where the amount is lent in different Instalments:

Illustration 1

Kannan purchased goods from Raman, the due dates for payment in cash being as follows:

	Rs.	
Mar. 15	1,000	Due 18th April
Apr. 21	1,500	Due 24th May
Apr. 27	500	Due 30th June
May 15	600	Due 18th July

Raman agreed to draw a bill for the total amount due on the average due date. Ascertain that date.

Solution:

Computation of Average due date

Base date 18th April

Due date 1	Amount Rs. 2	No. of days from Base date 3	Product Rs. 4 (2 × 3)
18th April	1,000	0	0
24th May	1,500	36	54,000
30th June	500	73	36,500
18th July	600	91	54,600
	3,600		1,45,100

$$\text{Average due date} = \text{Base date} + \frac{\text{Total of products}}{\text{Total of amounts}} \text{ days}$$

$$= 18\text{th April} + \frac{1,45,100}{3,600} \text{ days}$$

$$= 18\text{th April} + 40 \text{ days}$$

$$\therefore \text{Average Due Date} = \text{May 28}$$

Net worth (or) Statement of affairs Method

Illustration 1

Find out profit from the following data

Capital at the beginning of the year
 Drawings during the year
 Capital at the end of the year
 Capital introduced during the year

Solution:

Statement of profit

	Rs.
Closing capital	9,00,000
Add: Drawings	1,80,000
	10,80,000
Less: Additional capital	50,000
	10,30,000
Less: Opening capital	8,00,000
Net profit	2,30,000

Illustration 2

Mohan, a retail merchant commenced business with a capital of Rs. 12,000 on 1.1.94. Subsequently on 1.5.94 he invested further capital of Rs. 5,000. During the year, he has withdrawn Rs. 2,000 for his personal use. On 31.12.94, his assets and liabilities were as follows:-

	Rs.
Cash at Bank	3,000
Debtors	4,000
Stock	16,000
Furniture	2,000
Creditors	5,000

Calculate the profit (or) loss made during the year 1994.

Solution:

[Madras, B.Com., Sep. 1996 & Mar. 1994]

Calculation of Closing Capital

Statement of affairs of Mohan as on 31.12.94

Liabilities	Rs.	Assets	Rs.
Creditors	5,000	Cash at Bank	3,000
Capital (bal.fig)	20,000	Debtors	4,000
		Stock	16,000
		Furniture	2,000
	25,000		25,000