

OMCA-3rd

Subject- Stenography-II

Unit- I

1. Use of Initial Hooks R and L to Straight Strokes and Curves

Initial Hooks are small additions to the beginning of strokes to represent consonant sounds like R and L, allowing for faster writing.

R Hook:

- Represented by a small hook at the beginning of a straight stroke on the right side.
- Used on straight consonants: P, B, T, D, Ch, J, K, G.
- Example words:
 - PR – "prize"
 - TR – "train"
 - KR – "crime"

Rules:

- R Hook is pronounced immediately after the main consonant.
- When R is followed by a vowel, the full "R" stroke might be needed instead of a hook.

L Hook:

- Small hook at the beginning of straight consonants on the left side.
- Used on: P, B, T, D, K, G.
- Example words:
 - PL – "play"
 - KL – "clean"

On Curves:

- Some curved strokes may use hooks in modified ways.
- L and R Hooks on curved strokes often need practice due to legibility issues.

2. SHR and SHL (Shun Hook Right and Left)

SHUN Hook:

- Used to represent the "-tion", "-sion", "-cion", etc., sounds.
- Direction depends on the position of the stroke and the last letter:

- If the stroke curves to the left → the hook is placed on the right.
- If it curves to the right → hook is placed on the left.

Examples:

- "Attention" – written with "T" + "SHUN hook"
- "Application" – "PL" + "K" + "SHUN hook"

Special Notes:

- The SHUN Hook saves time by combining multiple sounds into one symbol.
- When followed by vowels or other consonants, size and placement may change slightly.

3. Small Hook to NG

The NG hook represents the "-ng" sound in words like "ring", "sing", "long".

Usage:

- Attached to the end of the stroke, usually "N".
- Often looks like a slightly enlarged final hook.

Examples:

- NG – "sing"
- LNG – "long"
- BNDNG – "bending"

Special Cases:

- NG can also follow other consonants depending on the sound structure of the word.
- Sometimes used in combination with vowels or circles.

4. Vowels and Double Consonants

Vowels:

- Represented by dots and dashes placed near consonants.
- Three positions: first, second, third, indicating where the vowel sound occurs.

Types:

1. Short Vowels – placed close to the consonant.
2. Long Vowels – placed farther or with different dash styles.
3. Diphthongs – combinations like "oi", "ow", "ay".

Examples:

- "Bat" (B + short A)
- "Boat" (B + long O)

Double Consonants:

- Usually simplified for speed.
- Some may be written as a single, thicker stroke (like TT, LL, SS) or by repeating loops or hooks.

Examples:

- "Letter" (T + small R hook)
- "Better" (B + T + R hook)
- "Success" (S circle repeated)

5. Extended Use of L Hook

Beyond basic words like play, clean, blow, the L hook can be extended into more complex constructions.

Advanced Examples:

- PLR – "player"
- KLR – "clear"
- FLMNT – "fulfillment"

Extensions Include:

- Adding suffixes like -ly, -ing, -ed after L hook forms.
- Combining with loops or final hooks (e.g., FL + shun hook → "fleshion" or "inflation").

6. Circle or Loop Preceding Initial Hooks

Circle (S/Z):

- Small circle represents the "S" or "Z" sound.
- Placed before the main stroke and its hook when needed.

Examples:

- SPR – "spring"
- SKR – "screen"
- SPL – "supply"

Loop (ST/STR):

- Small loop = "st", large loop = "str".
- Loops can also precede initial hooks to combine multiple sounds quickly.

Examples:

- STR – "strong"
- STL – "still"
- STPL – "staple"

Positioning Rules:

- The circle/loop always comes before the hooked consonant.
- Must be written cleanly to avoid confusion with final hooks or suffixes.

UNIT-II

1. Intervening Vowels

 Definition:

When a vowel sound occurs between a consonant and its hook, it is known as an intervening vowel. In such cases, the hook cannot be used, and the full stroke of the consonant must be written.

 Rule:

- Hooks (especially R and L) are used only if the vowel does not intervene between the consonant and the hook.
- If a vowel comes between the main consonant and the hook, use full strokes.

 Examples:

- Correct use of hook (no intervening vowel):
 - "Play" = PL (L hook on P)
- Incorrect for hook due to vowel in between:
 - "Pillar" = P + full L (not PL hook)
 - "Glory" = G + full L + R (not GL hook)

2. Final Hooks to N and F (N Hook and F/V Hook)

 Final N Hook:

- Placed at the end of straight strokes, representing an "n" sound.

- Appears on the opposite side of the R hook.

Examples:

- PN – “Pain”
- TN – “Ten”
- DN – “Done”

 Final F/V Hook:

- Added to represent “f” or “v” at the end of words.
- Used with straight strokes, written on the same side as the N hook.

Examples:

- TF – “Tough”
- DF – “Dive”
- BF – “Beef”

Note: Context and vowel placement will help differentiate between “f” and “v” when reading.

3. LN and SHN Hooks

 LN (L + N hook):

- Combination of L and N in one hook.
- Typically formed at the end of strokes.

Examples:

- FLN – “Fallen”
- PLN – “Plain”

 SHN (SH + N hook):

- Used to denote the "-shun" or "-tion" sounds.
- Added at the end of words like "nation", "action", "caution".

Examples:

- T+SHN Hook – “Attention”
- K+SHN Hook – “Caution”

4. Use of Hooks in the Middle of Words

 Middle Hook Usage:

Hooks can appear in the middle of words, especially in compound words or derivatives.

Examples:

- "Printer" → P (R hook) + N + T + R
- "Cleaner" → K (L hook) + N + R

This allows multi-syllable words to be written without lifting the pen.

5. Syllable "NER"

 The "NER" Ending:

- Common syllable in English (e.g., "manner", "dinner", "planner").
- Represented using N hook + R hook combinations efficiently.

Examples:

- DNR – “Dinner”
- MNR – “Manner”
- PNR – “Planner”

6. Use of Final Hooks in Phraseography

 Phraseography:

- Writing multiple words as a single outline for speed.

Use of Hooks:

- Hooks maintain their meaning even in joined phrases.

Examples:

- "In their" → N (hooked with R)
- "Of their" → V (F hook) + R

Be cautious with legibility. Hooks should remain distinct to avoid confusion.

7. Circle and Loops to Final Hooks

 Adding S/Z Circles:

- S/Z can be added after final hooks to pluralize or add “s” sound.

Examples:

- PN → “Pen”; PNS → “Pens”

- TN → “Ton”; TNS → “Tons”

☐ Adding Loops (ST/STR):

- Small loop = ST; Large loop = STR
- Used after final hooks to represent endings like "nce", "nst", "nsts", "sters".

Examples:

- DN + ST loop – “Danced”
- PL + N hook + STR loop – “Planster”

8. Curve Followed by NS

☐ When a curve (like M, N, L) is followed by “n” and “s” sounds, a small circle is added to indicate “s”.

Examples:

- M + NS – “Mince”
- N + NS – “Nonsense”

Special attention is needed for proper size and placement of the circle to avoid confusion with SHN or other final hooks.

9. Circle S Added to FV Hooks

☐ FV Hooks + Circle S:

- Circle S can follow F/V hooks just like N hooks.

Examples:

- BF + S – “Beefs”
- DF + S – “Dives”
- TF + S – “Toughs”

Keep circles small and ensure they are clearly attached to avoid misreading.

10. Medial NS or NG

☐ NS and NG in the Middle of Words:

- Frequently used in compound and derivative words.

Medial NS:

- Business, Tension, Witness

- Often simplified by using circle S + N stroke or loops.

Medial NG:

- Banging, Singing, Ringing
 - Use NG hook in the middle, maintain clarity with vowel placement.

These combinations help reduce writing effort while preserving phonetic accuracy.

UNIT-III

1. SHUN Hook (-tion / -sion / -cion)

 What is the SHUN Hook?

The SHUN hook is a special final hook used to represent the "-tion", "-sion", "-cian", "-cion" sounds in English, pronounced /ʃən/ — a very common suffix in nouns and verbs.

2. SHUN Hook Following Circle S and NS

 SHUN Hook After Circle S:

- When S or Z sounds come before -tion, the circle S comes first, followed by the SHUN hook.
- This combination saves multiple strokes and helps write common words faster.

 Examples:

Word Stroke Description

Session S + SHUN hook

Cessation Circle S + SHUN hook after stroke

Procession P + R + Circle S + SHUN hook

 SHUN After NS:

- When N and S precede a "shun" sound, a small loop can represent NS, followed by the SHUN hook.

 Examples:

Word Stroke Description

Suspension S + P + NS loop + SHUN hook

Extension K + T + NS loop + SHUN hook

Word	Stroke Description
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Dimension	D + M + NS loop + SHUN hook
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3. SHUN Hook in the Middle of a Word

While the SHUN hook is usually final, it can also occur in the middle of compound or multi-syllable words. In such cases, it connects smoothly between syllables.

 Examples:

Word	Breakdown
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Educational	E + D + SHUN hook + L
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Nationalist	N + SHUN hook + L + ST loop
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Professionalism	P + R + SHUN hook + L + SM blend
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 Important: The SHUN hook remains compact and does not interfere with vowel placement when in the middle.

THE ASPIRATE (H SOUND)

The aspirate H is a lightly pronounced sound at the beginning of many English words. In shorthand, it's represented by different methods based on where and how it appears.

4. Upward and Downward H

 Upward H Stroke:

- Slanted, light upward stroke (like a backslash \).
- Used at the start of words like:
 - Hope
 - Help
 - Hat

 Downward H Stroke:

- Occasionally used when upward H is difficult to join (especially in phrasing or with curved strokes).
- Less common than upward H.

 Examples:

Word Usage

Hill Upward H

Hall Downward H

House Upward H + S

5. H Following S

🌀 S + H Combination:

- When S is followed by H, the aspirate is represented after the S stroke.
- Typically, Upward H is used unless inconvenient.

📄 Examples:

Word Description

Shoe S + Upward H

Shame S + H + M

Shock S + H + K

⚠ Write carefully so that H is not mistaken for other light strokes like T or Ch.

6. Tick H

☑ Tick H:

- Short, light tick, slanted like an upward stroke.
- Used when joining full H stroke is awkward or when writing quickly.
- Common in:
 - Phrases (e.g., he has, he had)
 - Simple words (e.g., hill, ham)

📄 Examples:

Phrase/Word Usage

He had Tick H + D

He has Tick H + S

⚠ The tick H is always light and should not be mistaken for a full stroke.

7. Dot H

○ Dot H:

- Used only in very special cases where the H is silent or implied, or in vowel-initial words with silent “H” or French-derived words.
- Placed before or above the stroke depending on vowel placement.

 Examples:

Word	Notes
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Honest	Dot H indicates silent H
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Hour	Dot H + upward R
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Heir	Dot H + R
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UNIT IV: ADVANCED USE OF R, L, AND SH

1. Upward & Downward R

Upward R:

- Used after horizontal or downward strokes (like K, G, T, D).
- Helps maintain ease of joining and legibility.
- Slants slightly forward.

Downward R:

- Used after curved strokes or when upward R creates a clash or awkward join.
- Slants backward, like a mirror of Ch.

 Examples:

Word	Stroke Usage
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Care	K + Upward R
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Fire	F + Downward R
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Drawer	D + R + Circle
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2. Vowel Preceding or Following R

- The position of vowels affects whether to use upward or downward R.

Rules:

- If a vowel precedes R → Use Downward R for easier placement of the vowel sign.
- If a vowel follows R → Use Upward R.

 Examples:

- “Arrow” – Downward R (vowel before)
- “Ray” – Upward R (vowel follows)

3. Medial R

- R appears in the middle of words, often hooked or joined directly between strokes.

 Examples:

- “Correct” – K + R + KT
- “Forest” – F + R + ST loop

4. R Finally Hooked

- In certain words, R appears at the end and is represented by a hook, typically the R hook.

 Examples:

- “Father” – F + R hook
- “Lower” – L + R hook

5. Upward & Downward L

 Upward L:

- Common L stroke, upward slanted.
- Used after many strokes for ease of joining.

 Downward L:

- Less common, used when Upward L would create a difficult angle.
- Used mainly in phrases or abbreviations.

6. L Preceding or Following Curves and Circles

L After Curves:

- Join L naturally after curved strokes like M, N, NG.

Examples:

- “Mild” – M + L
- “Null” – N + L

L Before Curves:

- L can also precede curves but may require adjustments in joining.

7. L After N and NG

- Frequently used combinations in English.
- Written by joining L stroke after N or NG, or using hooks if applicable.

Examples:

- “Angle” – NG + L
- “Annual” – N + L

8. L and Vowel Indication

- The position of L affects where vowel signs are placed.
- Upward L → vowel goes on the left
- Downward L → vowel goes on the right

Example:

- “Ally” vs. “Ill”

9. Medial L

- Occurs in the middle of a word, joining smoothly between consonants.

Examples:

- “Bellow” – B + L + O
- “Relay” – R + L + A

10. Upward and Downward SH

Upward SH:

- Used after horizontal or vertical strokes.
- Maintains a smooth join.

⬇ Downward SH:

- Used where upward SH is difficult to join or where vowel placement requires it.

Examples:

- “Shoe” – S + Upward SH
- “Ash” – Downward SH

UNIT V: COMPOUND CONSONANTS & COMPLEX STROKES

📦 1. Initial W and WH

🔊 Initial W:

- Represented by a small semicircle before a consonant or vowel stroke.
- Always written before the main stroke.

Examples:

- “Way” – W circle + A
- “Wipe” – W circle + P

🔊 WH:

- Represented by the hooked version of W.
- Common in words like:
 - “What” → WH + T
 - “When” → WH + N

🖋 2. Strokes L and R Thickened

- L and R can be thickened to add additional sounds, such as D or T.

Examples:

- Thick L = LD (e.g., “Build”)
- Thick R = RD (e.g., “Guard”)

Ensure pressure control is accurate, as thickness changes meaning.

+ 3. Addition of P or B to M

- Represented as compound strokes where P or B is added to M.

Examples:

- “Bump” – M + P hook
- “Pump” – P + M
- “Plump” – PL + M

☐ 4. Aspirated W and Vowel Preceding W

Aspirated W:

- Represented using heavy W semicircle or combination with H stroke.

Examples:

- “Whale” – WH + L
- “Where” – WH + R

Vowel Preceding W:

- Use the dot or dash vowel, then write W circle.

Examples:

- “Away” – Dot A + W circle
- “Aware” – Dot A + W + R

☐ 5. Strokes L after KW

- When L comes after KW, it’s joined carefully to maintain clarity.

Examples:

- “Quell” – KW + L
- “Equal” – E + KW + L

KW = K + W circle

☐ 6. Use of LR and RR Signs

- LR and RR are special signs for frequent combinations used to simplify and speed up writing.

LR:

- Used in words like “collar,” “familiar,” “pillar.”

RR:

- Used in “horror,” “mirror,” “error.”

These are not hooks, but unique shorthand signs.

7. Hooked Form of MP

- The compound consonant MP is shown using a hook on M, or as joined strokes where needed.

Examples:

- “Lamp” – L + M + P hook
- “Jump” – J + M + P

Similar principles apply to MB.

Subject: BOOK KEEPING AND ACCOUNTANCY

INTRODUCTION

Meaning and Definition of Accounting:

Practice and body of knowledge concerned primarily with

1. methods for recording transactions,
2. keeping financial records,
3. performing internal audits,
4. reporting and analyzing financial information to the management, and
5. advising on taxation matters.

It is a systematic process of identifying, recording, measuring, classifying, verifying, summarizing, interpreting and communicating financial information. It reveals profit or loss for a given period, and the value and nature of a firm's assets, liabilities and owners' equity.

Accounting provides information on the resources available to a firm,

1. the means employed to finance those resources, and
2. the results achieved through their use.

Features of Accounting :

1Recording

Accounting is the art of recording of transactions. Only business relative transactions are recorded in which money is mentioned. All transactions are recorded in detail. Both journal and subsidiary books are used for this.

2.Classifying

Accounting's main feature is also classifying all business transactions. Accounting makes group of all similar accounting entries in one place. For example all receipt and payment will be shown in cash book. So, all transactions are collected under one common head . This system is also called classification of transaction. This process is completed by opening accounts in books. These books are called ledger.

3.Summarizing

Summarizing is the art of showing business results in summarize form .After this, it can use for all the interested parties. This feature tells about to financial

statement. One is Trading and profit and loss account and other is Balance Sheet.

4. Interpreting

By interpreting, we can know whether the position of profitability is good or bad. By knowing this, we can estimate business's performance.

OBJECTIVES OF ACCOUNTING:-

1. Identification and recording of transactions

The primary object of accounting is to identify the financial transactions and to record these systematically in the books of accounts. As a result, the true nature of each and every transaction is known without much exercise of memory.

With this end in view the transactions are primarily recorded in general and in a special journal and later on permanently various accounts are kept in the ledger.

2. Ascertainment of results

Every business concern is interested to know its operating results at the end of a particular period.

The amount of profit or loss for a particular period of a business concern can be ascertained by preparing income statement with the help of ledger account balances of revenue nature.

Surplus or deficit of revenue for a particular period of a non-trading concern can also be ascertained by preparing income and expenditure account or statement.

3. Ascertainment of financial affairs

Ascertainment of debts-liabilities, property, and assets i.e. total financial affairs of an organization at a particular date is another important object of Accounting.

Financial affairs of a concern at a particular date can be ascertained by preparing a balance sheet.

The balance sheet is the statement of assets and liabilities of a concern at a particular date.

4. Keeping accounts of cash

Cash book is a prominent book of the books of accounts. Cash receipts and cash payments are accounted for in this book. A number of daily cash receipts, payments, cash in hand and cash at the bank can be known from this book.

Fraud, forgery, and misappropriation of money are reduced by keeping cash book scientifically and accurately.

5. Control over assets and liabilities

For running a business successfully a businessman is to acquire various assets like land, building, machinery etc.

He is to face various debts and liabilities like accounts payable, notes payable, loan, bank overdraft etc. side by side with the acquisition of assets.

The actual position of these debts-liabilities, property, and assets can be ascertained through the proper keeping of accounts.

A businessman can take the right steps for controlling the quantity of assets decrease and liability increase.

6. Controlling money defalcation and cost

Prevention of money defalcation through fraud and forgery and controlling of the cost of a concern are also the main objects of Accounting.

Prevention of money defalcation and cost control become easier if accounts are kept scientifically.

7. Providing economic data

Another noble object of Accounting is to provide the concerned parties with all economic information preparing financial statements and reports etc. in time.

8. Helping tax fixation

Accounts prepared on the basis of accepted accounting principles are considered reliable to the income tax and VAT authorities for easy determination and settlement of tax and VAT.

9. Determination and evaluation of policy

The object of Accounting is to help the management in determining and evaluating the management policies in running the business successfully by supplying necessary, information, interpreting and analyzing the financial statements.

10. Testing the arithmetical accuracy of accounts

One of the main objects of scientific methods of accounting is to make sure that accounts have been kept in a proper way. The arithmetical accuracy of accounts kept in the ledger can be assured by preparing a trial balance.

Agreement of a trial balance is the proof of the arithmetical accuracy of accounts. The advantage in taking loan's Due to insufficiency of capital, borrowing capital from outsiders is felt necessary to run a business.

Loan givers are not willing to give a loan without knowing the financial position of a business. Financial statement of a business concern reflects the solvency or loan repayment capability of that concern.

11. Acceptability to others

Banks or financial institutions are interested to know the accurate financial position of a business concern for sanctioning loans.

On the other hand, government or other authorities may also ask about the financial position of a business concern for various reasons.

In these cases, the accounts maintained in a disciplined way become easily acceptable to the interested institutions or authorities.

12. Creation of values and accountability

The object of accounts maintained in an acceptable way is to create higher values among individuals and organizations and thereby creating awareness in preventing money defalcation, misappropriation of fund and cost control by ensuring transparency and accountability.

13. Following legal bindings and prohibition

As all kinds of business organizations have to abide by some legal bindings and prohibitions, they are to maintain their accounts accurately.

ADVANTAGES OF ACCOUNTING:-

- Provides financial information about the business
- Provides assistance to management
- Helps in comparison of financial results
- comparison of its own results of different years
- comparison of financial results with other firms in the industry
- Helps in decision making
- Accounting information can be used as an evidence in legal matters
- Helps in valuation of the business

DISADVANTAGES OF ACCOUNTING:-

1. Recording only monetary items

As per accounting principles only the events measurable in terms of money are recorded in the books of accounts. But events of great importance if not measurable in terms of money are not accounted for.

For that reason recorded accounting information fails to exhibit the exact financial position of a business concern.

2. Time Value of Money

Under accounting system money value is treated constant. But the value of money always changes due to inflation. Under existing accounting systems accounts are maintained considering historical cost ignoring current changed value.

As a result the accounts maintained fail to exhibit the exact financial position of a business concern.

3. Recommendation of alternative methods

There exists application of alternative methods in determining depreciation of assets and valuation of stock etc.

Information regarding activities of business is expressed in a misleading way if an alternative method is used to achieve a particular object.

4. Restrain of Accounting Principles

Exhibited accounting information cannot always exhibit true and fair picture of a business concern owing to limitations of accounting principles used.

For example,

Fixed assets are shown after deducting depreciation. In case of inflation, the value of fixed assets shown in the accounts does not correspond to the real position.

5. Recording of past events

In Accounting past events are accounted for. But naturally there is no system of recording events that may occur in future.

6. Allocation of problem

Allocation process is an important problem in accounting system. The value of fixed assets is exhausted charging depreciation for allocated period.

The useful life of fixed assets is fixed up hypothetically which does not stand accurate in most cases.

7. Maintaining secrecy

Secrecy cannot be ensured for involvement of many employees in accounting work although maintaining secrecy is very important.

8. Tendency for secret reserves

Often management creates secret reserves intentionally by increasing or decreasing assets and liabilities for which total financial picture of an organization is not reflected.

9. Importance of form over substance

At the time of preparing accounts for a particular period emphasis is laid on form, table etc. instead of giving importance to exhibition of substantial information.

As per Company Act, preparation of balance sheet in the prescribed form is mandatory.

Although there are some limitations in present accounting system, accounting in the present day world has generally been accepted as a recognized profession.

Efforts are on throughout the world to overcome these limitations. Economic activities of any society without accounting are neither possible nor legal.

The types of accounting:-

- **Financial accounting.** This field is concerned with the aggregation of financial information into external reports. ...
- **Public accounting.** ...
- **Government accounting.** ...
- **Forensic accounting.** ...
- **Management accounting.** ...
- **Tax accounting.** ...

Accounting Principles

Obviously, if each business organisation conveys its information in its own way, we will have a babel of unusable financial data.

Personal systems of accounting may have worked in the days when most companies were owned by sole proprietors or partners, but they do not anymore, in this era of joint stock companies.

These companies have thousands of stakeholders who have invested millions, and they need a uniform, standardised system of accounting by which companies can be compared on the basis of their performance and value.

Therefore, accounting principles based on certain concepts, convention, and tradition have been evolved by accounting authorities and regulators and are followed internationally.

These principles, which serve as the rules for accounting for financial transactions and preparing financial statements, are known as the “*Generally Accepted Accounting Principles*,” or GAAP.

The application of the principles by accountants ensures that financial statements are both informative and reliable.

It ensures that common practices and conventions are followed, and that the common rules and procedures are complied with. This observance of accounting principles has helped developed a widely understood grammar and vocabulary for recording financial statements.

However, it should be said that just as there may be variations in the usage of a language by two people living in two continents, there may be minor differences

in the application of accounting rules and procedures depending on the accountant.

For example, two accountants may choose two equally correct methods for recording a particular transaction based on their own professional judgement and knowledge.

Accounting principles are accepted as such if they are (1) objective; (2) usable in practical situations; (3) reliable; (4) feasible (they can be applied without incurring high costs); and (5) comprehensible to those with a basic knowledge of finance.

Accounting principles involve both accounting concepts and accounting conventions. Here are brief explanations.

Accounting Concepts:-

1. **Business entity concept:** A business and its owner should be treated separately as far as their financial transactions are concerned.
2. **Money measurement concept:** Only business transactions that can be expressed in terms of money are recorded in accounting, though records of other types of transactions may be kept separately.
3. **Dual aspect concept:** For every credit, a corresponding debit is made. The recording of a transaction is complete only with this dual aspect.
4. **Going concern concept:** In accounting, a business is expected to continue for a fairly long time and carry out its commitments and obligations. This assumes that the business will not be forced to stop functioning and liquidate its assets at “fire-sale” prices.
5. **Cost concept:** The fixed assets of a business are recorded on the basis of their original cost in the first year of accounting. Subsequently, these assets are recorded minus depreciation. No rise or fall in market price is taken into account. The concept applies only to fixed assets.

6. **Accounting year concept:** Each business chooses a specific time period to complete a cycle of the accounting process—for example, monthly, quarterly, or annually—as per a fiscal or a calendar year.
7. **Matching concept:** This principle dictates that for every entry of revenue recorded in a given accounting period, an equal expense entry has to be recorded for correctly calculating profit or loss in a given period.
8. **Realisation concept:** According to this concept, profit is recognised only when it is earned. An advance or fee paid is not considered a profit until the goods or services have been delivered to the buyer.

Accounting Conventions:-

There are four main conventions in practice in accounting: conservatism; consistency; full disclosure; and materiality.

Conservatism is the convention by which, when two values of a transaction are available, the lower-value transaction is recorded. By this convention, profit should never be overestimated, and there should always be a provision for losses.

Consistency prescribes the use of the same accounting principles from one period of an accounting cycle to the next, so that the same standards are applied to calculate profit and loss.

Materiality means that all material facts should be recorded in accounting. Accountants should record important data and leave out insignificant information.

Full disclosure entails the revelation of all information, both favourable and detrimental to a business enterprise, and which are of material value to creditors and debtors.

Basic Accounting Terms

Here is a quick look at some important accounting terms.

Accounting equation: The accounting equation, the basis for the double-entry system (see below), is written as follows:

$$\text{Assets} = \text{Liabilities} + \text{Stakeholders' equity}$$

This means that all the assets owned by a company have been financed from loans from creditors and from equity from investors. “Assets” here stands for cash, account receivables, inventory, etc., that a company possesses.

Accounting methods: Companies choose between two methods—cash accounting or accrual accounting. Under cash basis accounting, preferred by small businesses, all revenues and expenditures at the time when payments are actually received or sent are recorded. Under accrual basis accounting, income is recorded when earned and expenses are recorded when incurred.

Account receivable: The sum of money owed by your customers after goods or services have been delivered and/or used.

Account payable: The amount of money you owe creditors, suppliers, etc., in return for goods and/or services they have delivered.

Accrual accounting: See “accounting methods.”

Assets (fixed and current): Current assets are assets that will be used within one year.

For example, cash, inventory, and accounts receivable (see above). Fixed assets (non-current) may provide benefits to a company for more than one year—for example, land and machinery.

Balance sheet: A financial report that provides a gist of a company’s assets and liabilities and owner’s equity at a given time.

Capital: A financial asset and its value, such as cash and goods. Working capital is current assets minus current liabilities.

Cash accounting: See “accounting methods.”

Cash flow statement: The cash flow statement of a business shows the balance between the amount of cash earned and the cash expenditure incurred.

Credit and debit: A credit is an accounting entry that either increases a liability or equity account, or decreases an asset or expense account. It is entered on the right in an accounting entry. A debit is an accounting entry that either increases an asset or expense account, or decreases a liability or equity account. It is entered on the left in an accounting entry.

Double-entry bookkeeping: Under double-entry bookkeeping, every transaction is recorded in at least two accounts—as a credit in one account and as a debit in another.

For example, an automobile repair shop that collects Rs. 10,000 in cash from a customer enters this amount in the revenue credit side and also in the cash debit side. If the customer had been given credit, “account receivable” (see above) would have been used instead of “cash.” (Also see “single-entry bookkeeping,” below.)

Financial statement: A financial statement is a document that reveals the financial transactions of a business or a person. The three most important financial statements for businesses are the balance sheet, cash flow statement, and profit and loss statement (all three listed here alphabetically).

General ledger: A complete record of financial transactions over the life of a company.

Journal entry: An entry in the journal that records financial transactions in the chronological order.

Profit and loss statement (income statement): A financial statement that summarises a company’s performance by reviewing revenues, costs and expenses during a specific period.

Single-entry bookkeeping: Under the single-entry bookkeeping, mainly used by small or businesses, incomes and expenses are recorded through daily and monthly summaries of cash receipts and disbursements. (Also see “double-entry bookkeeping,” above.)

Types of accounting: Financial accounting reports information about a company's performance to investors and creditors. Management accounting provides financial data to managers for business development.

- **Current Assets** – Capital that has immediate value (typically that which will be used within one year), including cash, sellable products, or accounts receivable.
- **Fixed Assets** – Assets with long-term value, such as land and property, tools and machinery, or vehicles.
- **Liabilities** – All money and outstanding debts owed by the company. This could include accounts payable, loans, liens on property, or other long-term investments.
- **Equity** – All capital currently invested in the company, including any profits that have been re-invested as retained earnings.
- **Accounts Receivable** – Outstanding payments the company is currently owed by all customers/clients. (This is essentially anything the company bills out.)
- **Accounts Payable** – Outstanding payments the company currently owes to suppliers, vendors, and creditors. (Essentially any bills the company still has yet to pay.)

Income Statement – A report that tracks the company's revenues, costs, and expenses over a set period (typically quarterly or annually). This is also called a "profit and loss statement."

- **Revenue** – All incoming money from selling products and services or generated through a company's additional assets. Also referred to as "gross income."
- **Costs (of Goods Sold)** – The total money spent to produce goods and services, including production, labor, storage, and material costs.
- **Expenses** – Any additional money spent operating the company that's not associated with the production of sellable products and services. (Expenses are often divided into four categories: fixed, variable, accrued, and operation).
- **Net Income** – The company's total profit (or loss, if negative) once costs and expenses are subtracted from revenue.

MEANING AND TYPES OF ACCOUNTS

Meaning of Account:-- Financial records of an organization that register all financial transactions, and must be kept at its principal office or place of business. The purpose of these records is to enable anyone to appraise the organization's current financial position with reasonable accuracy. Firms present their annual accounts in two main parts: the balance sheet, and the income statement (profit and loss account). The annual accounts of a registered or incorporated firm are required by law to disclose a certain amount of information. And have to be certified by an external auditor that they present a 'true and fair view' of the firm's financial affairs.

There are mainly three **types of accounts in accounting**: Real, Personal and Nominal **accounts**, personal **accounts** are classified into three subcategories: Artificial, Natural, and Representative.

1. Real Accounts

All assets of a firm, which are tangible or intangible, fall under the category “Real Accounts”.

Tangible real accounts are related to things that can be touched and felt physically. Few examples of tangible real accounts are building, machinery, stock, land, etc.

Intangible real accounts are related to things that **can't be** touched and felt physically. Few examples of such real accounts are goodwill, patents, trademarks, etc.

Golden rule for real accounts

Debit what comes in

Credit what goes out

Example

The transaction below shows the interaction of two different real accounts: one is furniture and the other is cash, both of them are assets of the company and hence classified as real accounts.

- **Purchased furniture for 10,000 in cash**

Accounts Involved	Debit/Credit	Rule Applied
Furniture A/C	Debit	Real A/C – Dr. what comes in
To Cash A/C	Credit	Real A/C – Cr. what goes out

**Amount will be 10,000 in both debit and credit.*

Related Topic – Step by Step Process to create a Journal Entry

2. Personal Accounts

These accounts are related to individuals, firms, companies, etc. A few examples of personal accounts include debtors, creditors, banks, outstanding/prepaid accounts, accounts of credit customers, accounts of goods suppliers, capital, drawings, etc.

Natural personal accounts: This type of personal accounts is the simplest to understand out of all and includes all of God's creations who have the ability to deal, who, in most cases, are people. E.g. Kumar's A/C, Adam's A/C, etc.

Artificial personal accounts: Personal accounts which are created artificially by law, such as corporate bodies and institutions, are called Artificial personal accounts. E.g. Pvt Ltd companies, LLCs, LLPs, clubs, schools, etc.

Representative personal accounts: Accounts which represent a certain person or a group directly or indirectly. E.g. Let's say that wages are paid in advance to an employee – a wage prepaid account will be opened in the books of accounts. This wages prepaid account is a representative personal account indirectly linked to the person.

Golden rule for personal accounts

Debit the receiver

Credit the giver

Example

The transaction below demonstrates the interaction between two different personal accounts, one of which is a private limited company and the other one is a bank.

- **Paid Unreal Pvt Ltd. 24,000 by check**

Accounts Involved	Debit/Credit	Rule Applied
Unreal Pvt Ltd. A/C	Debit	Artificial Personal – Dr. the receiver
To Bank A/C	Credit	Artificial Personal – Cr. the giver

**Amount will be 24,000 in both debit and credit.*

Related Topic – Difference between Journal and Ledger

3. Nominal Accounts

Accounts which are related to expenses, losses, incomes or gains are called Nominal accounts. The dictionary meaning of the word “nominal” is “*existing in name only*” and the meaning remains absolutely true in accounting sense too, because nominal accounts do not really exist in physical form, but behind every nominal account money is involved. E.g. Purchase A/C, Salary A/C, Sales A/C, Commission received A/C, etc.

The final result of all nominal accounts is either profit or loss which is then transferred to the capital account.

Golden rule for nominal accounts

Debit all expenses & losses

Credit all incomes & gains

Example

The following example shows a transaction where a nominal account deals with a real a/c.

- **Purchased good for 15,000 in cash**

Accounts Involved	Debit/Credit	Rule Applied
Purchase A/C	Debit	Nominal A/C – Dr. all expenses
To Cash A/C	Credit	Real A/C – Cr. what goes out

The amount will be 15,000 in both debit and credit.

DOUBLE ENTRY SYSTEM OF ACCOUNTING

Double-entry bookkeeping, in accounting, is a system of bookkeeping so named because every entry to an account requires a corresponding and opposite entry to a different account. The double entry has two equal and corresponding sides known as debit and credit. The left-hand side is debit and right-hand side is credit

Accounting entries

In the double-entry accounting system, at least two accounting entries are required to record each financial transaction. These entries may occur in asset, liability, equity, expense, or revenue accounts. Recording of a debit amount to one or more accounts and an equal credit amount to one or more accounts results in total debits being equal to total credits for all accounts in the general ledger. If the accounting entries are recorded without error, the aggregate balance of all accounts having *Debit* balances will be equal to the aggregate balance of all accounts having *Credit* balances. Accounting entries that debit and credit related accounts typically include the same date and identifying code in both accounts, so that in case of error, each debit and credit can be traced back to a journal and transaction source document, thus preserving an audit trail. The accounting entries are recorded in the "Books of Accounts". Regardless of which accounts and how many are impacted by a given transaction, the fundamental accounting equation of *assets equal liabilities plus capital* will hold.

Approaches

There are two different ways to memorize the effects of debits and credits on accounts in the double entry system of bookkeeping. They are the Traditional Approach and the Accounting Equation Approach. Irrespective of the approach used, the effect on the books of accounts remains the same, with two aspects (debit and credit) in each of the transactions.

The British approach

Following the British approach (also called the traditional approach) accounts are classified as real, personal, and nominal accounts. Real accounts are accounts relating to assets and liabilities including the capital account of the owners. Personal accounts are accounts relating to persons or organisations with whom the business has transactions and will mainly consist of accounts of debtors and creditors. Nominal accounts are revenue, expenses, gains, and losses. Transactions are entered in the books of accounts by applying the following golden rules of accounting:

1. Real account: Debit what comes in and credit what goes out
2. Personal account: Debit the receiver and credit the giver
3. Nominal account: Debit all expenses & losses and credit all incomes & gains

Accounting equation approach

This approach is also called the American approach. Under this approach transactions are recorded based on the accounting equation, i.e., $\text{Assets} = \text{Liabilities} + \text{Capital}$. The accounting equation is a statement of equality between the debits and the credits. The rules of debit and credit depend on the nature of an

account. For the purpose of the accounting equation approach, all the accounts are classified into the following five types: assets, liabilities, income/revenues, expenses, or capital gains/losses.

If there is an increase or decrease in a set of accounts, there will be equal decrease or increase in another set of accounts. Accordingly, the following rules of debit and credit hold for the various categories of accounts:

1. Assets Accounts: debit entry represents an increase in assets and a credit entry represents a decrease in assets
2. Capital Account: credit entry represents an increase in capital and a debit entry represents a decrease in capital
3. Liabilities Accounts: credit entry represents an increase in liabilities and a debit entry represents a decrease in liabilities
4. Revenues or Incomes Accounts: credit entry represents an increase in incomes and gains, and debit entry represents a decrease in incomes and gains
5. Expenses or Losses Accounts: debit entry represents an increase in expenses and losses, and credit entry represents a decrease in expenses and losses

These five rules help learning about accounting entries and also are comparable with traditional (British) accounting rules.

DEBIT & CREDIT:-

Double-entry bookkeeping is governed by the accounting equation. If revenue equals expenses, the following (basic) equation must be true:

$$\text{assets} = \text{liabilities} + \text{equity}$$

For the accounts to remain in balance, a change in one account must be matched with a change in another account. These changes are made by debits and credits to the accounts. Note that the usage of these terms in accounting is not identical to their everyday usage. Whether one uses a debit or credit to increase or decrease an account depends on the normal balance of the account. Assets, Expenses, and Drawings accounts (on the left side of the equation) have a normal balance of *debit*. Liability, Revenue, and Capital accounts (on the right side of the equation) have a normal balance of *credit*. On a general ledger, debits are recorded on the left side and credits on the right side for each account. Since the accounts must always balance, for each transaction there will be a debit made to one or several accounts and a credit made to one or several accounts. The sum of all debits made in each day's transactions must equal the sum of all credits in those transactions. After a series of transactions, therefore, the sum of all the accounts with a debit balance will equal the sum of all the accounts with a credit balance.

Debits and credits are numbers recorded as follows:

- *Debits* are recorded on the left side of a T account in a ledger. Debits increase balances in asset accounts and expense accounts and decrease balances in liability accounts, revenue accounts, and capital accounts.
- *Credits* are recorded on the right side of a T account in a ledger. Credits increase balances in liability accounts, revenue accounts, and capital accounts, and decrease balances in asset accounts and expense accounts.
- *Debit accounts* are asset and expense accounts that usually have debit balances, i.e. the total debits usually exceed the total credits in each debit account.
- *Credit accounts* are revenue (income, gains) accounts and liability accounts that usually have credit balances.

	Debit	Credit
Asset	Increase	Decrease
Liability	Decrease	Increase
Income (revenue)	Decrease	Increase
Expense	Increase	Decrease
Capital	Decrease	Increase

The mnemonic **DEADCLIC** is used to help remember the effect of debit or credit transactions on the relevant accounts. **DEAD**: Debit to increase Expense, Asset and Drawing accounts and **CLIC**: Credit to increase Liability, Income and Capital accounts.

The account types are related as follows:
 current equity = sum of equity changes across time (increases on the left side are debits, and increases on the right side are credits, and vice versa for decreases)
 current equity = Assets - Liabilities
 sum of equity changes across time = owner's investment (Capital above) + Revenues - Expenses

JOURNAL

Journal entries are an important part of accountancy. A journal entry, in accounting, is the logging of a transaction into accounting journal items. The journal entry can consist of several recordings, each of which is either a debit or a credit. The total of the debits must equal the total of the credits or the journal entry is said to be "unbalanced". Journal entries can record unique items or recurring items such as depreciation or bond amortization. In accounting software, journal entries are usually entered using a separate module from accounts payable, which typically has its own subledger that indirectly affects the general ledger. As a result, journal entries directly change the account balances on the general ledger. **Recording**

In order to record journal entries, one needs to have knowledge about:

1. Type of Accounts
2. Golden Rules of Accounting
3. Experience of Working

Type of accounts:-

There are three type of accounts in accounting:

1. Personal account
2. Real account
3. Nominal account

Personal accounts consist of all those accounts which are related to a person, business, firm etc. There are also subtypes of personal account:

1. **Natural Personal** Any person like Mohan Account, Ram account etc.
2. **Artificial Personal** Any company or group of people like Microsoft account, Hindustan Petroleum account etc
3. **Representative Personal** this type of Personal a/c represents owner like. Capital a/c, drawings a/c etc

Dr. the receiver. Cr. the giver.

For example: Mohan's account, Apple ltd. account etc. Capital account

Real accounts consist of all those accounts which are related to assets.

For example: Plant and Machinery account, Stock account etc.

Dr. What is comes in. Cr. What is goes out.

Nominal accounts consist of all those accounts which are related to expenses, losses, Income and Gains.

Dr. are all expenses and losses. Cr. are all income and gains.

For example: Rent account, wages account etc.

Advantages of Journal:-

Journal is original book of entries in which we record first time all business transaction thoroughly. Its advantages are given below :-

1. Journal provides records of all business transactions in one place on the time and date basis.
2. All transactions are recorded on the basis of receipts or bill, so we can check authenticity of each journal entry with their bills.
3. There is minimum chance to avoid any particular transaction because in journal transactions are recorded date basis.
4. Accountant writes every journal entry's narration below of that journal entry, so other auditor can know what the reason of that journal entry is.
5. In journal, every transaction is recorded after deep analysis of two accounts on the basis of double entry system, so there is minimum chance of mistake in journal.
6. Journal is the basis of posting in ledger accounts. With making of journal, accountant can not make ledger accounts.
7. If there is mistake in ledger, we can rectify it with the help of journal or rectify journal entry in journal.
8. All opening journal entries , closing journal entries and all other transactions which is not recorded in any other subsidiary books , will be recorded in journal .
9. Journal is also needed in every type of accounting software . These accounting software can make auto system of posting journal entries by their automatic processing , but accountant must feed journal entries in journal and other specific vouchers of journal .

In journal , there is one column of ledger folio . It is very important for checking reference of each account's posting with its original journal entry .

DISADVANTAGES OF JOURNAL:-

Journal in spite of its above advantages suffers from the following limitations:

1. Huge and bulky size. A single journal for the entire business will be bulky and difficult to operate and handle.

2. Balance of accounts at a glance not available. The actual position of ledger balances as purchases, sales, returns, bills etc. is not known on a particular date from journal.

3. Difficulty in reconciling cash balance. In case all transactions including cash transactions are recorded in the journal and no cash book is maintained, it will be very difficult to reconcile daily cash balance.

CASH BOOK

Journal in which all cash receipts and payments (including bank deposits and withdrawals) are recorded first, in chronological order, for posting to general ledger. Cash book is regularly reconciled with the bank statements as an internal auditing measure. In larger firms, it is commonly divided into two parts: (1) Cash disbursement journal in which all cash payments (such as accounts payable, operating expenses, petty cash purchases) are recorded, and (2) Cash receipts journal in which all cash receipts (such as accounts receivable, cash sales, sale of assets) are recorded.

What is Cash Book:-

Cash Book contains cash transactions passing into and out of a business.

The primary book where transactions regarding cash receipts and payments are recorded in a chronological order of dates with explanations and balance is drawn at the end of the day or a particular period is called cash book.

Among the financial transactions of a concern, cash transactions carry much more importance. That's why these are recorded in a separate book of account.

Since all cash transactions are recorded in this book in the format of ledger account a separate cash account in the ledger is not needed.

Cash Book Example:-

The owner can know the accurate cash the position of his business from cash book. 'T' form cash book contains two sides: the left-hand side means the debit side and the right-hand side means the credit side.

The debit side stands for cash receipts and the credit sides' stands for cash disbursements.

All the receipts are recorded on the receipt sides and all cash disbursements are recorded on the payment side of the cash book.

At the end of the day or a particular period, the totals of receipts and payments are made and the difference of these two totals is shown as balance.

This balance indicates the amount of the cash in hand of an organization.

Cash Book is a book in which an account is kept of the receipts and disbursements of money.

Importance of Cash Book:-

The features of cash book are as follows;

1. Since only cash transactions are recorded in the cash book it is a special journal.
2. Cash book serves the purpose of journal and ledger.
3. Cash book always shows a debit balance.
4. The balance of cash book always means cash in hand. Balance of cash book and cash of a cash box must be equal.
5. Non-cash transactions of cash book are transferred to a relevant account in the ledger.

Cash Book is both a Journal and a Ledger:-

Some accountants term cash book as a journal and some other term it as a ledger. Modern accountants term cash book both as journal and ledger.

Cashbook is a journal; because:-

- After the occurrence of transactions, these are recorded in the cash book in chronological order of dates with explanations like a journal.
- The way in which transactions are posted into ledger from the journal is followed in case Of posting transactions to ledger from cash book.

- As separate special journals are maintained for various transactions similarly cash book is maintained for cash transactions.
- Cash transactions are recorded in the cash book according to debit and credit.
- Other than cash book no subsidiary journal is maintained for cash transactions.

For all these features of cash book, it is called journal.

Cashbook is a ledger; because:-

- The format of cash book is similar to that of a ledger account.
- Like ledger account, cash book consists of two sides – debit side and credit side if it is prepared in ‘T’ format.
- Like ledger accounts, the balance of cash book is determined and transferred to trial balance.
- Cash book serves the purpose of the cash account. In such case, the cash account is not prepared in the ledger.

Cash book is called ledger because of its above mentioned characteristics. It is very much evident from the above discussion, cash book is both journal and ledger as it contains all features of journal and ledger and serves purposes of both.

Advantages of Cash Book:-

1. Cash receipt and cash payments for a particular period can easily be ascertained from the cash book.
2. Since cash transactions are recorded in the cash book, it becomes convenient to find out any cash transaction for future reference.
3. It avoids journalization of huge cash transactions.
4. The amount of cash in hand can be ascertained at any time and it can be compared with the cash in cash box. This ensures the accuracy of the cash book and detects »misuse or misappropriation of cash.
5. Cash book minimizes time and labor in preparing ledger as it performs the functions of both the journal and ledger.
6. Proper maintaining of cash book influences morality of the cashier which refrains him from stealing cash.

For proper maintaining of cash book, preventive measures are taken to avoid fraud and forgery.

For example;

The officials entrusted with the responsibilities of preparing cash book are seated in a separate room and entrance of unauthorized employees is restricted there.

Types of Cash Book:-

Generally, **cash book is of two types** –

1. general cash book.
2. petty cash book.

General cash book is subdivided into;

1. Single column cash book,
2. double column cash book,
3. treble column cash book.

Double Column Cash Book:-

The cash book containing, two money columns – cash column and bank column in both sides for recording cash and bank transactions, is called a double column cash book.

All cash receipts and all bank deposits are recorded on the debit side and all cash payments and all payments through cheques are recorded on the credit side of this cash book.

Cash receipts are recorded in the cash column of debit side and cash payments are recorded in the cash column of the credit side. Cash and cheques, deposited in the bank, are recorded in the bank column of the debit side and payment by cheques are recorded in the bank column of the credit side.

The debit balance of double column cash book indicates cash in hand and cash at bank of a particular date of a concern.

There might be a credit balance of bank column which indicates bank overdraft or excess withdrawn over deposits.

Method of Preparing Double Column Cash Book

The method of preparing double column cash book is almost similar to that of single column cash book. The double column cash book system has been introduced to avoid complexity in posting bank transactions in single column cash book.

Here all bank transactions are directly recorded in bank columns.

At the time of preparing double column cash book, it is to be kept in mind that all types of cash receipts are to be recorded in the cash column of debit side and all bank deposits are to be recorded in the bank column of the debit side.

On the other hand, cash payments are recorded in the cash column of the credit side and payments through cheques are recorded on the debit side.

Treble Column Cash Book

The cash book containing three money columns in both sides is called treble column cash book. The columns are 'Cash', 'Bank' and 'Discount'.

In a treble column cash book, there are three money columns on both sides for recording transactions relating to cash, bank, and discount.

Like double column, cash book cash receipts and bank deposit are recorded in the debit cash column and bank column respectively of the treble column cash book and cash payments and payment by cheque are recorded in the credit cash column and bank column respectively.

The discount allowed to the customer for realizing debts is recorded in the debit discount column of treble column cash book and discount received from suppliers or creditors in making payment is recorded in credit discount column of the treble column cash book.

In preparing treble column cash book it is to be carefully noted that discount columns need not be balanced.

The total of debit discount column and the total credit discount column are treated as separate balances.

The total of debit discount column means expense and the total credit discount column means income.

Advantages of Treble Column Cash Book

The advantages of treble column cash book are stated below,

- Time and labor saving A good deal of time and labor are saved because for maintaining treble column cash book cash account, bank account and discount accounts are not needed to be prepared in the ledger.
- Knowing cash and bank balance Cash and bank balances can easily be ascertained whenever needed from treble column cash book.
- Knowing discount income and discount expense the amount of discount income and discount expenses can easily be known from the total credit discount column and debit discount column of treble column cash book.

Petty Cash Book

Companies maintains two types of Petty Cash Book for all cash transactions of a business.

1. Columnar petty cash book
2. Imprest petty cash book.

Subsidiary Books

Subsidiary Books of Account

Also known as special purpose books, special purpose subsidiary books, and subsidiary books of account are various books recording financial transactions of similar nature. They are sub-division of the **journal**.

During the lifecycle of a business, the volume of transactions in a business may rise to an extent that a single journal may no longer be adequate to keep the books. This is when special purpose books or subsidiary books may be required for more efficient **bookkeeping**.

List of supporting books

Subsidiary Books			
Cash Book	Sales Returns Book	Sales Book	Bills Receivable Book
Purchase Book	Journal Proper	Purchase Returns Book	Bills Payable Book

Types of Subsidiary Books:-

1. **Cash Book** – A cash book is a book of prime entry which records all transactions made by a business in both cash and a bank instrument.
2. **Purchase Book** – A purchase book is one of the special purpose books where all the credit purchases are recorded by a business.
3. **Sales Book** – A sales book is one of the subsidiary books where all the credit sales are recorded by a business.
4. **Purchase Returns Book** – Also known as returns outward book, a purchase returns book is prepared to record goods returned by a business to its suppliers.
5. **Sales Return Book** – Also known as returns inward book, a sales return book is prepared to record goods returned to a business by the customers.
6. **Journal Proper** – It is a book in which all miscellaneous transactions which are not recorded in any other subsidiary book is called a journal proper.

7. **Bills Receivable Book** – is a book that records all bills receivable to a business, the total of bills receivable book is posted on the debit side of the B/R account
8. **Bills Payable Book** – is one of the subsidiary books that records all bills payable by a business, the total of bills payable book is posted on the credit side of the B/P account.

LEDGER AND POSTING

What is a Ledger:-

In bookkeeping and accounting, a **ledger** is a book (or record) for collecting historical transaction data from a journal and organizing entries by account.

The ledger provides the transaction history and current balance in each accounting system account, throughout the accounting period. At the end of the period, ledgers, therefore, serve as the authoritative source of data for building a firm's financial accounting reports.

- The Income statement is mostly a summary of account activity for the period in the firm's Revenue and Expense Accounts.
- The Balance sheet is mostly a summary of the current balances in the firm's Assets, Liabilities, and Equities accounts, as they stand at the period end.

Posting refers to the process of transferring entries in the journal into the accounts in the **ledger**. **Posting** to the **ledger** is the classifying phase of accounting. ... While the journal is referred to as Books of Original Entry, the **ledger** is known as Books of Final Entry.

Ledger books are the books of final entry which contains the various accounts to which the entries made in the Books of Original entry are transferred.

All transactions are recorded in ledger accounts, which simply means individual records ('accounts') of every major type of asset and liability, income and expense (and also the owner's capital). 'Ledger' is the collective noun for a group of accounts. There are in fact three key sub-divisions of the 'ledger':

Division of Ledger Books:-

1. Sales Ledger: It contains all the individual accounts relevant to the business's debtors, i.e. those customers who buy from the business on credit terms (they are sent an invoice rather than paying straight away). This, unsurprisingly, might also be called the 'Debtors ledger'.

2. Purchases Ledger: It contains all the individual accounts relevant to the business's creditors, i.e. suppliers from whom the business has bought goods or services on credit terms (they have received an invoice rather than paying immediately). Alternatively, this can be called the 'Creditors ledger'.

These two ledgers are 'personal' ledgers, as each account they contain bears the name of a customer or supplier.

3. General Ledger or Nominal Ledger: It is referred to as being 'impersonal', as it contains all accounts other than those of debtors and creditors. Examples include asset accounts such as 'machinery', 'motor vehicles' and 'computers', liability accounts such as 'loans payable', income accounts such as 'sales' and 'rent receivable' and expense accounts such as 'purchases' (cost of goods for resale), 'wages', 'stationery' and 'advertising'. It also contains the 'capital' account.

An important sub-division of the general ledger is the cash book, which contains two accounts - 'bank' and 'cash', which tend to have many more entries than any other accounts. The bank account records all payments into and out of the bank, the cash account records all cash paid into or out of the business. Additionally, there might be a petty cash book which records all the relatively minor office expenses such as tea and coffee, car parking costs etc.

Assets Accounts, expenses account, losses account, etc., and also the Total purchases account, Total sales account, Total Sales returns account, Purchases Returns account. It is also called as Nominal ledger.

Advantages Of Dividing The Ledger:

1. It facilitates division of labour in the maintenance of ledger.
2. It becomes easy to locate errors in ledger accounts.
3. It helps the ledger clerks to complete their respective work in time with perfection.

4. It becomes easy to refer to any particular account.

Format of Ledger:-

Account Name				Folio number			
Date	Particulars	J.F	Debit(amt)	Date	Particulars	J.F	Credit(amt)
.....	To account		.....	.....	By account		.....
.....	To account		.....	.....	By account		.....
.....	To balance c/d (if credit side heavy)		.....	.....	By balance c/d (if debit side heavy)		.....
.....	To balance b/d (if debit side heavy)		.....	.....	By balance b/d (if credit side heavy)		.....

Posting:-

The process of transferring the debit and credit items from journal to classified accounts in the ledger is known as 'Posting'.

Rules Regarding Posting:--

- Separate account is opened in ledger book for each account and entries from ledger posted to respective account accordingly.
- Use the words 'To' (identifies the accounts to be written on the debit side) and 'By' (identifies the accounts to be written on the credit side)
- The concerned account debited in the journal should also be debited in the ledger but reference should be of the respective credit account.

Balancing:-

At the end of the each month or year or any specific day it is necessary to determine the balance in an account. To do that, add the totals of both sides (Debit and credit sides) and find out the difference in both the side. The difference in both the sides is 'Balance'. If the Debit is greater than the credit side, it is a Debit balance or vice-versa.

The Debit balance is written on the Credit side as, "By Balance c/d" (carried down) or the Credit balance is written on the Debit side as, "To Balance c/d. By doing this, two sides will be equal.

While preparing the Ledger accounts for next period, this balance would be transferred from last period Ledger accounts as 'To Balance b/d' (brought down) if there was debit balance or 'By Balance b/d' if there was credit balance in the last period Ledger.

It should be noted that Nominal accounts are not balanced, instead the balance at end need to be transferred to the Profit and Loss Account.

TRAIL BALANCE

A **trial balance** is a list of all the general ledger accounts (both revenue and capital) contained in the ledger of a business. This list will contain the name of each nominal ledger account and the value of that nominal ledger balance. Each nominal ledger account will hold either a debit balance or a credit balance. The debit balance values will be listed in the debit column of the trial balance and the credit value balance will be listed in the credit column. The trading profit and loss statement and balance sheet and other financial reports can then be produced using the ledger accounts listed on the same balance

Definition

: The aggregate of all debit and credit balances at the end of an accounting period that (1) shows if the general ledger is in balance (total debits equal total credits) before making closing entries, (2) serves as a worksheet for making closing entries, and (3) provides the basis for making draft financial statements.

Usage

The purpose of a trial balance is to prove that the value of all the debit value balances equal the total of all the credit value balances. If the total of the debit column does not equal the total value of the credit column then this would show that there is an error in the nominal ledger accounts. This error must be found before a profit and loss statement and balance sheet can be produced.

The trial balance is usually prepared by a bookkeeper or accountant who has used daybooks to record financial transactions and then post them to the nominal ledgers and personal ledger accounts. The trial balance is a part of the double-entry bookkeeping system and uses the classic 'T' account format for presenting values.

Limitations:-

A trial balance only checks the sum of debits against the sum of credits. That is why it does not guarantee that there are no errors. The following are the main classes of errors that are not detected by the trial balance.

- An **error of original entry** is when both sides of a transaction include the wrong amount.^[2] For example, if a purchase invoice for £21 is entered as £12, this will result in an incorrect debit entry (to purchases), and an incorrect credit entry (to the relevant creditor account), both for £9 less, so the total of both columns will be £9 less, and will thus balance.
- An **error of omission** is when a transaction is completely omitted from the accounting records.^[3] As the debits and credits for the transaction would balance, omitting it would still leave the totals balanced. A variation of this error is omitting one of the ledger account totals from the trial balance (but in this case the trial balance will not balance).
- An **error of reversal** is when entries are made to the correct amount, but with debits instead of credits, and vice versa.^[4] For example, if a cash sale for £100 is debited to the Sales account, and credited to the Cash account. Such an error will not affect the totals.
- An **error of commission** is when the entries are made at the correct amount, and the appropriate side (debit or credit), but one or more entries are made to the wrong account of the correct type.^[5] For example, if fuel costs are incorrectly debited to the postage account (both expense accounts). This will not affect the totals.
- An **error of principle** is when the entries are made to the correct amount, and the appropriate side (debit or credit), as with an error of commission, but the *wrong* type of account is used. For example, if fuel costs (an expense account), are debited to stock (an asset account).^[3] This will not affect the totals.
- **Compensating errors** are multiple unrelated errors that would individually lead to an imbalance, but together cancel each other out.^[3]

What are the functions of trial balance?

- One of the golden rule of accountancy is “every debit has an equal and corresponding credit”
- *A trial balance helps in affirming this picture of your accounts before you move ahead to the preparation of profit and loss account and the balance sheet.*
- The first step of accounting is recording of journal entries which are posted to the corresponding ledger accounts. The balances corresponding to each account in the ledger is then recorded in the trial balance.
- So, at the end of recording all the balances from the ledger accounts, ideally the trial balance must tally on its own i.e the total of debits equals the total of credits.
- In the absence of such equality, it can be concluded that the accounting has errors and needs to be rectified.

METHODS OF PREPARING TRIAL BALANCE:-

There are three methods of preparing trial balance. The total of both the debit and credit column the trial balance must be equal in all the methods. The following methods can be used for preparing balance:

1. Balance method
2. Total method
3. Total and Balance method

1. Balance Method

Trial balance, as its name itself points out is prepared with the balance of ledger accounts. Every ledger account has got the debit and credit side. At the end of a certain period, ledger accounts are balanced. Excess of the total of the debit side of an account over its credit side is known as debit balance and written in the debit column of the trial balance. In the same way, excess of credit side of an account over its debit side shows credit balance and will be written at the credit side of the trial balance. The total of both the debit and credit side must be equal.

2. Total Method

According to this method, the total of the debit and credit side of every account is separately written in the debit and credit column of the trial balance. The total of both the debit and credit must be equal. If it is not equal, there are definitely certain errors which should be located and rectified.

3. Total and Balance Method

This method presents both the balance and total method in the same trial balance. The amount column is divided between total and balance methods. Each method has further two columns of debit and credit. The total of the debit and credit under each method must be equal. There will be different totals according to the different methods but the total of debit and credit of each method will be equal.

ERRORS AND THEIR RECTIFICATION

Concept And Meaning Of Rectification Of Accounting Errors And Its Methods :-

Rectification Of Accounting Errors

Once an error is located, it should be properly corrected. The correction of accounting errors in a systematic manner is called the rectification of errors. In other words, the process of systematically correcting the accounting errors is known as rectification of errors. The presence of accounting errors affects accuracy of the profit and loss and the financial position of the business shown by the final accounts, therefore, no error should be left uncorrected.

Methods Of Rectification Of Accounting Errors

The following method should be followed to rectify the accounting errors

1. Rectification of errors located before preparation of trial balance
2. Rectification of errors after preparation of trial balance

1. Rectification Of Errors Located Before Preparation Of Trial Balance

Errors may be detected in the process of closing books and accounts for preparation of trial balance. The errors detected in the process may be either one-sided errors or two-sided errors. However, once such errors are located they must be rectified immediately.

**** Rectification Of One-sided Errors Located Before Preparation Of Trial Balance***

One-sided errors are those errors which affect only one side of an account. Wrong totaling of subsidiary books, posting a wrong amount, posting on the wrong side are some of the examples of one-sided errors. Since two accounts are not involved in these errors, journal entry can not be passed for rectifying such errors. The one-sided error is rectified by making an additional posting on the affected side of the ledger account.

**** Rectification Of Two-sided Errors Located Before Preparation Of Trial Balance***

The errors that affect two or more accounts are called two-sided errors. Correction of such two-sided errors needs to make rectification journal entries since such errors involve two or more accounts. Therefore, one account is debited and another account is credited to rectify two-sided errors. The rules of debit and credit are applied to rectify these errors. The following three steps are taken to rectify the two-sided errors.

- a. Identify correct entry
- b. Rewrite wrong entry

c. Find rectifying entry by making adjustment of correct entry and wrong entry

2. Rectification Of Errors After Preparation Of Trial Balance

Sometimes, errors may be detected after an accounting year is over. Those are the errors detected after preparation of trial balance. The errors detected after the completion of accounting year may be **one-sided and two-sided errors**. Rectification of the errors seen after preparation of trial balance can be made by preparing rectifying journal entries in the subsequent year only. Double entry system is followed to rectify the errors detected after preparation of trial balance. Two accounts are affected by the two-sided errors. Therefore, one account is debited and another affecting account is credited for such errors. But one-sided errors are rectified by opening 'Suspense Account'.

Types Of Accounting Errors Based On Their Nature

The accounting errors based on their nature can be of the following types:

1. Clerical Errors
2. Errors Of Principle

1. Clerical Errors

The errors which are committed by accounting clerks are called clerical errors. These errors are committed in the process of recording financial transactions. These take place due to the carelessness of the clerk responsible for recording financial transactions. Clerical errors are also called technical errors. The principal types of clerical errors are as follows:

a) Errors Of Omission

The errors committed by not recording a transaction either in the book of original entry or in the ledger book are errors of omission. Such an omission may be either complete or partial.

Complete Omission

Complete omission takes place if a transaction is not recorded in the journal at all. for example, goods sold to John for \$ 10,000 were not recorded in the sales book at all. A complete omission of transaction may occur due to many reasons such as sales invoice misplaced or lost.

Partial Omission

Partial omission occurs if a financial transaction is recorded only partially. For example, partial error of omission occurs if goods sold to John for \$ 4000 is

recorded in sales book but failed to be posted in John's account.

b) Errors Of Commission

The errors which are committed while recording or posting a transaction are called errors of commission. Errors of commission may take place either in the journal or in the subsidiary books, or in the ledger. Such errors include posting wrong amounts, posting on wrong side of accounts, wrong totaling or carrying forward, and wrong balancing. For example, if purchase of goods for \$ 10,000 is entered as \$ 1000 in the journal or in the ledger, such error is called errors of commission.

c) Compensating Errors

Compensating errors refer to two or more errors which mutually compensate the effects of one another. If one error balances the effect of another error, then the two error are called compensating errors. For example, goods sold for \$ 5000, but wrongly posted to the customer's account as \$ 500. Similarly, goods purchased for \$ 5000, but by chance, wrongly posted to the supplier's account as \$ 500 . The errors in the personal account are compensated by each other, as \$ 4500 short on the debit side of the customer's account and on the credit side of the supplier's account.

d) Errors Of Duplication

Errors of duplication are those errors which arise because of double recording. Double posting of a transaction from journal or subsidiary books to ledger also create such errors. For example, goods sold to John, but this transaction is wrongly entered twice or more in the sales book or wrongly posted twice or more in John's account then it is called the errors of duplication.

2. Errors Of Principle

Errors of principle are those errors which occur by violating the principles of accounting. Errors of principle may occur due to wrong allocation between capital and revenue expenditure, or wrong valuation of assets. For example, debiting the wage account instead of machinery account for the wage paid to the mechanics used for the installation of machine and debiting the customer's account instead of cash account for the cash sales made. Errors of principle may also occur due to wrong valuation of assets by higher level staff.

BANK RECONCILIATION STATEMENT

*A **bank reconciliation statement** is a process that explains the difference on a specified date between the bank balance shown in an organization's bank statement, as supplied by the bank and the corresponding amount shown in the organization's own accounting records.*^[1]

Such differences may occur, for example, because

- cheques issued by the organization have not been presented to the bank
- a banking transaction, such as a credit received, or a charge made by the bank, has not yet been recorded in the organization's books
- either the bank or the organization itself has made an error.

Sometimes it may be easy to reconcile the difference by looking at very recent transactions in the bank statement and the organization's own accounting records (cash book) and seeing if some combination of them tallies with the difference to be explained. Otherwise it may be necessary to go through and match every transaction in both sets of records since the last reconciliation, and see what transactions remain unmatched. The necessary adjustments should then be made in the cash book, or reported to the bank if necessary, or any timing differences recorded to assist with future reconciliations.

For this reason, and to minimise the amount of work involved, it is good practice to carry out such reconciliations at reasonably frequent intervals. Reconciliations may be assisted by specialised accounting software.

A **Bank reconciliation statement** is a statement prepared as part of the reconciliation which sets out the entries which have caused the difference between the two balances.

Preparation of a Bank Reconciliation Statement

Preparing a Bank Reconciliation Statement is quite simple. At first, it can appear quite cumbersome and tedious to prepare the statement but in reality, all it needs is a little time and patience. Before preparing the Bank Reconciliation Statement, an accountant should have access to all the relevant values related to the cash book and passbook.

Thus, an accountant can start reconciling the differences in the cash book and passbook by taking the balance available in either. After this, the accountant's job is to find out all the entries or transactions that are giving rise to a difference in the balance of passbook and cash book. By giving effect to the nature of such entries, the accountant would have to add or subtract the amount of such entry from the initial balance of the passbook or cash book.

By doing so, he will be able to arrive at the value of balance in the other book. This balance is imperative to arrive at, for the purpose of preparing the accounts.

Reasons for Differences in Balances of Cashbook and Passbook

There are many reasons because of which there is always some difference in passbook and cashbook balances:-

1. Cheques issued but not yet presented for payment in the bank

When a cheque is issued to a creditor by the firm, it is immediately recorded on the credit side of the bank column of the cash book. But the bank will debit the firm's account only when this cheque is actually presented to the bank for payment. Generally, there is a gap of some days between the issue of a cheque and its presentation to the bank.

2. Cheque paid into bank for collection but not yet credited/collected by the bank

When a firm receives cheques, drafts etc. from its customers, they are immediately deposited into bank for collection and an entry is made on the debit side of the bank column of the cash book. But the bank will credit the firm's account only when it has actually collected the payment of these cheques from other banks. Again there will be gap of some days between the depositing of the cheques into the bank and credit given by the bank

3. Cheques paid into the bank for collection but dishonoured by the bank

When cheque received from outside parties are deposited with the bank, these are immediately recorded on the debit side of the bank column of the cash book, but if the cheques are dishonoured, the bank will not make any entry in the credit of the customer's account. As a result, the cash book will show an increased balance in comparison to the passbook.

4. Interest allowed by the bank

Interest allowed by the bank is credited to the firm, but unless intimation is received by the firm from the bank to this effect, no entry is recorded in the bank column of the cash book. The difference of these balances may arise because of the following reasons.

5. Interest and dividend collected by the bank

If the bank collects dividend on shares, interest on investments, etc on behalf of its customer, it credits the amount in the pass book. This will increase the balance in the pass book and a difference in the two balances will exist unless a corresponding entry is recorded in the cash book by the firm.

6. Direct payment through bank

An account holder can instruct the bank to make certain payments such as insurance premium, rent of the shop, electricity and mobile bills, loan instalment, etc. on the behalf. The bank will debit the party's account on making the payment.

7. Direct payment into bank by a customer

If any customer of the firm directly deposits the amount of payment into bank account of the firm, then credit entry in the passbook will be recorded by the bank. Unless the corresponding entry is recorded in the cash book, the balance of cash book and pass book will differ.

8. Advancement in technology

Today, there is a great impact of technology on banking sector. This is the era of internet banking as well as mobile banking. The funds are transferred from one branch to another branch or from one bank to the other bank electronically. The electronic transfer will change the balance as per pass book but balance as per cash book will remain unaffected.

9. Demat Services

Today, shares, debentures and bonds are purchased and sold in demat form. Demat means shares and debentures exist in electronic form, not in paper form. If a businessman applies for shares and debentures from his business account and he is given partial allotment; the refund is directly transferred to his account. The transaction increases the balance as per pass book on a particular day but the balance as per cash book will be short by that amount.

10. Errors

There may be errors in the account maintain by the customer or bank. The two balances therefore, may not tally.

11. Retiring a bill under rebate

When the bills are sent to bank for making payment of the bill before its due date and earn some rebate for customers the bank will debit the customer's account with fewer amounts. Until the information is received from the bank regarding the retirement of the bill under rebate, the balances as per pass book will be more than the balance as per cash book

12. Bank charges and commission charged by the bank

Bank provides a number of services to its customers. It collects their outstation cheques, dividends on their shares, pays some expenses on their behalf etc. bank charges commission in lieu of the services provided to the customer. Such charges and commission is debited in the passbook but no entry is recorded in the cash book unless the firm obtains the passbook from the bank and record these entries. This will cause the difference between two balances.

13. Interest on bank overdraft charged by bank

Generally, the bank allows overdraft facility to traders on current accounts. If bank charges interest on overdraft, an entry will be made in the debit side of the passbook but no entry will be recorded in the cash book unless the firm receives information about the interest charged by the bank. This causes the difference in the two balances.

Need for Preparing a Bank Reconciliation Statement

Among other reasons, enlisted below are some of the most important reasons why it is important to prepare a bank reconciliation statement:

Accuracy Each month, the passbook of the bank and the cash book of a firm, display a particular amount, which is the balance in the bank as on that date. However, due to delay in the recording time and period of the same in the respective books, there is a high possibility that on the day of comparison the balances in the two books, would not match.

Hence, having prepared a bank reconciliation statement, one can determine the reasons and amounts by which the two balances differ. This analysis would further help the accountant in recording the missing amounts in each book. Hence, after the preparation of a bank reconciliation statement, the books of accounts would actually display a true and fair position of the firm.

Check on the Entries: In the process of preparing a bank reconciliation statement, an accountant will be able to point out all entries or amounts, recorded incorrectly in either of the books. Thus, it is quite useful to prepare a bank reconciliation statement, which would help in eliminating any entries recorded erroneously.

Rectifying Incorrect Entries: In case an amount or entry has been recorded incorrectly in both, the passbook and the cash book, the accountant will be able to rectify those entries, so as to arrive at the amount of correct bank balance in the passbook and the cash book.

Updated Cash Book: Again, due to the irregularity in posting amount of entries in the cash book and due to the delays in the recording of such amounts, it is quite possible that the cash book would fail to show the updated balance of bank as on a particular date. When compared with the passbook, an accountant would be able to identify such entries and record them in the cash book instantly. This would help in reconciling the balances of both the cash book and the bank book instantly.

Detection of Delays: Due to the preparation of bank reconciliation statement, it is possible to discover any amount of cheques that gets deposited in the bank but have aren't credited. This difference would be evident because the amount of such deposit would appear in the cash book but not in the bank book, hence giving rise to a difference in the bank balance of both. Thus, cheques deposited but not yet collected can come to notice quickly.

Check on the Dishonest Behavior of Employees

Preparation of regular bank reconciliation statement has several benefits. It would act as a moral check on employees so that they do not indulge in the embezzlement of bank cheques, which would ultimately cause loss to the firm. This is so because even a low-value cheque can come in detection if it has been accepted but not deposited. In this way, a bank reconciliation statement serves a large purpose for a firm's accounting cycle and people.

SUBJECT: E-COMMERCE

UNIT - I

E-commerce, short for electronic commerce, refers to the buying and selling of goods and services over the internet. It's a digital way for businesses and consumers to interact, transact, and exchange value without needing to meet in person.

Key Features of E-commerce

- **Online transactions:** Products or services are purchased through websites, apps, or online marketplaces.
- **Digital payments:** Payments are made using credit/debit cards, mobile wallets, UPI, or net banking.
- **Global reach:** Sellers can reach customers across the world, breaking geographical barriers.
- **Convenience:** Shoppers can browse, compare, and buy anytime—24/7.

History of E-Commerce

E-commerce (short for *electronic commerce*) means buying and selling goods and services over the internet

1. **1960s – The Beginning (Before Internet)**
 - Businesses started using computers to send business documents (like orders or invoices) electronically through a system called **EDI (Electronic Data Interchange)**.
2. **1990s – Internet Boom**
 - The internet became public.
 - In 1995, **Amazon** and **eBay** were launched — two of the first big e-commerce companies.
 - People started shopping online for the first time.
3. **2000s – Growth Period**
 - More businesses went online.
 - Online banking, digital payments (like PayPal), and online stores became common.
4. **2010s – Mobile and Social E-Commerce**
 - People began shopping using smartphones (mobile commerce or m-commerce).
 - Social media apps like Facebook and Instagram started supporting online selling.
5. **2020s – Fast Delivery & Global Growth**
 - E-commerce exploded during the COVID-19 pandemic.
 - New tech like AI, chatbots, and drone delivery started being used.

Framework of E-Commerce

A **framework** means the basic structure or building blocks. Here's what e-commerce is made of:

1. Website or App

- Where customers see products and place orders.

- Examples: Amazon app, Flipkart website, Shopify store.
2. *Product/Service Catalog*
 - List of items or services for sale with descriptions, prices, and pictures.
 3. *Shopping Cart*
 - A virtual cart where customers add products before checkout.
 4. *Payment Gateway*
 - A system that processes online payments securely (credit cards, UPI, PayPal, etc.).
 5. *Order Management System*
 - Tracks order status from placement to delivery.
 6. *Logistics & Delivery*
 - Warehousing, packaging, shipping, and delivery of goods to the customer.
 7. *Customer Support*
 - Help through chat, email, or phone to solve issues or take feedback.
 8. *Security System*
 - Protects customer data and payment details from hackers.

Basics of E-Commerce

E-commerce means **buying and selling products or services over the internet**. It can be between businesses, customers, or both.

Main Types of E-Commerce:

- | | | | |
|--|------------------|-------------------|------------------|
| 1. B2C | (Business | to | Consumer) |
| → Businesses | sell | to individual | customers |
| Example: Amazon, Myntra | | | |
| 2. B2B | (Business | to | Business) |
| → Companies | sell | to other | companies |
| Example: Alibaba, IndiaMART | | | |
| 3. C2C | (Consumer | to | Consumer) |
| → People | sell | to other | people |
| Example: OLX, eBay | | | |
| 4. C2B | (Consumer | to | Business) |
| → People | offer | products/services | to companies |
| Example: Freelancers on Fiverr, Upwork | | | |

Common Tools Used in E-Commerce

These tools help in building, running, and growing an e-commerce business:

1. E-Commerce Platforms

Used to create and manage online stores.

Examples:

- Shopify

2. Payment Gateways

Used to accept payments online securely.

Examples:

- Paytm

3. Logistics & Delivery Tools

Used to manage shipping, tracking, and delivery.

Examples:

- Blue Dart

4. Inventory Management Tools

Keep track of stock, orders, and reorders.

Examples:

- Zoho Inventory
- TradeGecko (now QuickBooks Commerce)

5. Marketing Tools

Help attract and engage customers.

Examples:

- Google Ads (for paid marketing)
- Facebook Ads Manager

6. Customer Support Tools

Used to chat with or help customers.

Examples:

- WhatsApp Business
- Zendesk

7. Security Tools

Protect data and ensure safe transactions.

Examples:

- SSL Certificates (like GoDaddy SSL)

8. Analytics Tools

Help understand user behavior and improve sales.

Examples:

- Google Analytics

comparison between web based with traditional business

Web-Based Business vs Traditional Business

Aspect	Web-Based Business	Traditional Business
Location	Online, no physical shop needed	Physical location/store is required
Cost	Lower setup and maintenance cost	Higher cost (rent, utilities, staff, etc.)
Reach	Global – can sell to anyone with internet	Local or limited area
Working Hours	24/7 (Open all the time)	Fixed hours (e.g., 10 AM – 9 PM)
Customer Interaction	Virtual (chat, email, phone)	Face-to-face interaction
Inventory Management	Can use automated tools and dropshipping	Needs physical space for storing stock

Aspect	Web-Based Business	Traditional Business
Marketing	Digital marketing (SEO, ads, social media)	Traditional marketing (posters, word of mouth)
Payment Methods	Online payments (UPI, cards, wallets)	Mostly cash or card
Scalability	Easy to scale quickly across cities/countries	Expensive and slower to expand
Setup Time	Quick – can launch a website in days	Slower – needs licenses, space, stock, etc.
Customer Trust	Needs to build trust online (ratings, reviews)	Often trusted due to personal connection
Examples	Amazon, Flipkart, Myntra, Nykaa	Local grocery shop, clothing store, restaurant

Web-based business is faster, cheaper, and has a wider reach.

Traditional business offers personal contact and local trust, but costs more to run.

Growth of E-Commerce: Present, Future & Potential

1. Present Growth of E-Commerce (2024–2025)

E-commerce is **growing very fast**, especially after COVID-19 changed shopping habits.

- More people are shopping online than ever before.
- Mobile apps and one-day delivery services are booming.
- Social media platforms like Instagram and Facebook now allow shopping directly.
- Popular categories: clothing, electronics, groceries, medicines, and education.
- Small businesses and even villages are joining online marketplaces (via Amazon, Meesho, etc.).

Example:

- India's e-commerce market crossed **\$100 billion in 2024**.
- Platforms like Amazon, Flipkart, Nykaa, and Blinkit are growing rapidly.

2. Future Growth of E-Commerce (2025 & Beyond)

The future of e-commerce looks even more exciting and powerful.

Expected Trends:

- **AI and Chatbots** will improve shopping experience (personalized suggestions).
- **Voice Shopping** (like saying “order shampoo” to Alexa).
- **Drone Deliveries** for faster shipping in some cities.
- **Augmented Reality (AR)** to try products virtually (like glasses or furniture).
- **Green E-Commerce** – focus on eco-friendly packaging and delivery.
- **Rural Expansion** – more internet in villages means more rural online shopping.

By 2030 (Global Estimates):

- The global e-commerce market may cross **\$8–10 trillion**.
- India could become the **3rd-largest** e-commerce market after China and the US.

3. Potential of E-Commerce

E-commerce still has **huge potential** to grow in many areas:

Untapped Areas:

- Rural and remote regions with growing internet access.
- Older generations starting to shop online.
- New sectors like online healthcare, digital education, and home services.

💰 *Business Opportunities:*

- Small sellers and artisans can now sell nationally or globally.
- Dropshipping and affiliate marketing allow people to earn online without big investments.
- Local shops are going hybrid (offline + online).

Socio economic impact of e commerce

The **socio-economic impact of e-commerce** is significant and multifaceted, affecting individuals, businesses, communities, and national economies. Here's a breakdown of the **key social and economic effects** of e-commerce:

Economic Impact

1. Business Growth & Market Expansion

- **Global reach:** Small businesses can now sell internationally, reducing dependence on local markets.
- **24/7 operations:** Online stores remain open around the clock, increasing sales opportunities.
- **Lower operational costs:** E-commerce reduces the need for physical stores, cutting rent and staffing expenses.

2. Job Creation & Transformation

- **New job opportunities:** Growth in sectors like logistics, digital marketing, IT, and customer support.
- **Gig economy expansion:** Freelancers and part-timers benefit from platforms like Amazon, Etsy, Upwork, etc.
- **Skill shifts:** Increased demand for digital literacy, e-commerce management, and data analysis.

3. Impact on Traditional Retail

- **Decline in brick-and-mortar stores:** Many physical retailers face closures or reduced sales.
- **Hybrid business models:** Retailers adopt online-offline strategies to stay competitive (e.g., click-and-collect).

4. Supply Chain & Logistics Innovation

- Growth in **last-mile delivery, automation, and inventory optimization**.
- Rise of **third-party logistics (3PL)** and **dropshipping** models.

5. Taxation and Regulation Challenges

- Difficulties in taxing cross-border e-commerce transactions.
- Governments are developing new policies to capture online sales revenue.

Social Impact

1. Increased Consumer Access & Convenience
 - Rural and remote areas can access goods and services not available locally.
 - Greater variety and competitive pricing benefit consumers.
2. Digital Divide
 - Populations without internet access or digital literacy are excluded from e-commerce benefits.
 - Can deepen socio-economic inequalities between urban and rural or rich and poor regions.
3. Changing Consumer Behavior
 - Instant gratification culture due to fast delivery and digital convenience.
 - Shifts toward mobile shopping, personalized recommendations, and cashless payments.
4. Environmental Effects
 - **Positive:** Reduction in commuting/shopping trips may lower carbon emissions.
 - **Negative:** Increase in packaging waste and delivery-related pollution.
5. Empowerment of Entrepreneurs
 - Individuals, especially women and marginalized groups, can start businesses with minimal capital.
 - Platforms like Shopify, Amazon, and social commerce tools enable self-employment and financial independence.

UNIT - II E – Business

Meaning of E-Business:

E-Business (Electronic Business) refers to the use of internet and digital technologies to conduct business processes and activities. It involves buying and selling of goods and services, servicing customers, and collaborating with business partners using digital platforms.

It goes beyond **e-commerce** (which focuses mainly on buying and selling online) by including other aspects like:

- Online customer support
- Supply chain management
- Digital marketing
- Electronic data interchange (EDI)
- Online inventory control and management

Importance of E-Business:

1. **Global Reach:**
 - Businesses can reach customers across the world, 24/7, breaking geographical boundaries.
2. **Cost Efficiency:**
 - Reduces costs related to physical infrastructure, staffing, and paperwork.
3. **Improved Customer Experience:**
 - Enables personalized services, instant support, and faster transactions.

4. **Faster Business Operations:**

- Automates processes such as order processing, payments, and inventory tracking.

5. **Increased Competitiveness:**

- Allows businesses to respond quickly to market changes and customer demands.

6. **Flexibility and Convenience:**

- Customers can shop from anywhere at any time, and businesses can operate remotely.

7. **Access to Data and Analytics:**

- Provides valuable insights into consumer behavior and market trends, helping improve decision-making.

8. **Innovation and New Opportunities:**

- Opens the door to new business models such as dropshipping, subscription services, and digital goods.

E-Commerce Models

E-commerce transactions can be classified into different models based on **who is buying and who is selling**. Here are the **four major types**:

1. B2B – Business to Business

A business sells products or services to another business.

Examples:

- **Alibaba.com** – bulk purchases by retailers
- **IndiaMART, ThomasNet, Amazon Business**

Characteristics:

- High-volume transactions
- Long-term relationships
- Negotiated pricing
- Often involves wholesale or industrial goods

Use Cases:

- Manufacturers selling to distributors

2. B2C – Business to Consumer

A business sells products or services directly to individual customers.

Examples:

- **Amazon, Flipkart, Zara, Netflix**

Characteristics:

- Large customer base
- Standard pricing
- Fast order cycle
- Focus on user experience

Use Cases:

- Retail products

3. C2C – Consumer to Consumer

Individuals sell products or services to other individuals, usually through a third-party platform.

Examples:

- **eBay, OLX, Facebook Marketplace, Poshmark**

Characteristics:

- Peer-to-peer transactions
- Often involves second-hand goods
- Platforms provide trust, payment, and dispute resolution

Use Cases:

- Selling used electronics, clothes, furniture

4. C2B – Consumer to Business

Individuals (consumers) offer products or services to businesses.

Examples:

- Social media influencers promoting brands

Characteristics:

- Individuals set prices or submit proposals
- Businesses choose from bids or hire talent
- Popular in digital services and gig economy

Present Status of E-Commerce in India

1. Fast Growth

- E-commerce in India is growing very quickly.
- It is worth around **₹13 lakh crore** (about **\$150 billion**) in 2025.

2. More Online Shoppers

- Over **34 crore (340 million)** people shop online.
- Most people use **mobile phones** to shop.

3. Small Cities Are Leading

- More than **60% of online orders** now come from **Tier 2 and Tier 3 cities**.
- Villages and small towns are joining the online shopping trend.

4. Digital Payments Are Popular

- People use **UPI, PhonePe, Google Pay, Paytm**, etc.
- Cash-on-delivery is still used but less common than before.

5. Most Bought Products

- **Clothes, mobile phones, electronics, and groceries** are the top categories.
- Apps like **Amazon, Flipkart, Meesho, BigBasket, and JioMart** are popular.

6. Quick Delivery is Trending

- Apps like **Blinkit, Zepto, Instamart** deliver groceries in **10–20 minutes**.
- This is called **Quick Commerce (Q-Commerce)** and is growing in big cities.

7. Government Support

- Platforms like **ONDC** help small businesses sell online.
- **GeM** (Government e-Marketplace) supports government-related e-commerce.

8. Big Companies Competing

- Companies like **Amazon, Flipkart, Reliance, Tata, and Meesho** are in strong competition.
- Many are offering big discounts and faster services.

9. Challenges Remain

- Local shops are losing business due to online stores.
- Quick delivery is expensive and not always profitable.
- Government is keeping a close eye on big companies for fair practices.

10. Future Looks Bright

- The market may reach **₹30–40 lakh crore** by 2030.
- More people will shop online as internet access spreads.

Regulatory Aspects of E-Commerce in India

Regulatory aspects mean the **rules and laws** that the **government** sets to **control and guide** how a business or activity works.

1. **Foreign Direct Investment (FDI) Rules**
 - Foreign companies like Amazon can only act as a **marketplace**, not sell their own products directly.
 - FDI is **not allowed** in inventory-based e-commerce for B2C (business to consumer).
2. **Marketplace Model Rules**
 - Platforms like Amazon and Flipkart must only **connect buyers and sellers**.
 - They **cannot control prices** or own the products they sell.
3. **Product Information (Labelling Rules)**
 - E-commerce websites must show **MRP, brand name, size, origin**, etc. clearly on the product page.
 - This is part of **Legal Metrology (Packaged Commodities) Rules, 2011**.
4. **Consumer Protection (E-commerce) Rules, 2020**
 - Protects buyers from fake products and unfair practices.
 - Platforms must:
 - Show **seller details** clearly
 - Have a proper **return & refund policy**
5. **Data Privacy & Protection**
 - E-commerce platforms must keep customer data **safe and private**.
 - They must follow IT Act, 2000 and upcoming **Digital Personal Data Protection Act**.
6. **GST and Taxation**
 - E-commerce sellers and platforms must register under **GST**.
 - Platforms must **collect and deposit tax** (TCS - Tax Collected at Source) on sales.
7. **Ban on Unfair Practices**
 - Platforms should not give **preferential treatment** to certain sellers.
 - Deep discounts and fake flash sales are discouraged by regulators.
8. **Return & Cancellation Rules**
 - Customers must be allowed to **easily return** or cancel products if not satisfied or if the item is defective.
9. **Invoice and Billing Rules**
 - Every online purchase must come with a **valid bill/invoice**, showing all charges clearly.
10. **Monitoring by Authorities**
 - Regulators like **CCI (Competition Commission of India)**, **Department for Promotion of Industry and Internal Trade (DPIIT)**, and **Ministry of Consumer Affairs** keep a watch on e-commerce practices.

Impact of E-Commerce on Various Sectors

1. Entertainment Sector

1. People can now **watch movies, shows, and listen to music online** anytime using apps like **Netflix, Amazon Prime, Spotify, YouTube**, etc.
2. No need to buy CDs or go to theatres – everything is **digitally available** at home.
3. Artists and creators can **sell music, art, or content online** easily.
4. E-commerce helps sell **movie tickets, merchandise, and games** through platforms like **BookMyShow** or online stores.

2. Education Sector

1. Students can **buy books, courses, and study materials online**.
2. Platforms like **Byju's, Unacademy, Udemy, Coursera** offer **online classes and certifications**.
3. E-learning has made **education accessible to remote villages**.
4. Teachers and tutors can **teach and earn from home** using digital platforms.
5. Exams, notes, assignments – everything can now be **shared digitally**.

3. Health Services Sector

1. People can **book doctor appointments online** using apps like **Practo, Tata 1mg**.
2. Medicines can be **ordered online and delivered at home**.
3. E-commerce supports **telemedicine** – doctors can treat patients via **video call**.
4. Health reports and test results are **available digitally**.
5. Buying health products, vitamins, and wellness items is now **very easy online**.

UNIT – III

Internet Resources for commerce

Internet resources are the tools, websites, and services available online that help businesses do their work better and faster.

For example:

- Websites and online stores like Amazon, Flipkart
- Payment systems like Paytm, Google Pay
- Communication tools like email, WhatsApp, video calls
- Advertising platforms like Google Ads, Facebook Ads
- Business software available on the cloud like online accounting, inventory management

Technologies for Web Servers

Web Server

A **web server** is a **computer or software** that stores websites and **sends them to users** when they visit using a browser (like Chrome or Firefox).

Think of it as a **waiter** in a restaurant who brings the **menu (website)** to your **table (browser)** when you ask for it.

Technologies Used for Web Servers

1. HTTP/HTTPS (Protocols)

- These are the rules that help web servers **send web pages** to browsers.
- **HTTPS** is secure and protects your data.

2. Web Server Software

These are programs that run on the server to manage websites.

-  **Apache** – Most common, free, and open-source
-  **Nginx** – Fast and lightweight, used for big websites
-  **Microsoft IIS** – Used in Windows-based systems
-  **LiteSpeed** – Known for high performance and speed

3. Operating Systems

- Web servers need an operating system to work.
- Common ones are **Linux, Windows Server, and Ubuntu**.

4. Databases

- Store website data (like user info, orders, posts).
- Examples: **MySQL, MongoDB, PostgreSQL**

5. Server-Side Languages

- These help the server to process requests and give dynamic results.
- Examples: **PHP, Python, Node.js, Java, Ruby**

6. Control Panels

- These are tools to manage web servers easily without using code.
- Examples: **cPanel, Plesk**

7. Cloud Hosting Technologies

- Many websites now use **cloud servers** (like **AWS, Google Cloud, Azure**) for better speed and flexibility.

Internet Tools Relevant to Commerce

These are the tools available on the internet that help businesses in **buying, selling, communicating, marketing, and managing work** online.

1. E-Commerce Platforms

- Help businesses **sell products online**.
- Examples: **Amazon, Flipkart, Shopify, Meesho**

2. Online Payment Tools

- Used to **send and receive money safely** online.
- Examples: **Paytm, PhonePe, Google Pay, Razorpay, PayPal**

3. Email Services

- Used to **communicate with customers and employees**.
- Examples: **Gmail, Outlook, Zoho Mail**

4. Digital Marketing Tools

- Help businesses to **advertise their products and reach more people.**
- Examples:
 - **Google Ads** (ads on websites and YouTube)
 - **Face book Ads**

5. Analytics Tools

- Help to **track website traffic and customer behavior.**
- Examples:
 - **Google Analytics**
 - **Facebook Insights**

6. Cloud Storage Tools

- Used to **store and share business files online** safely.
- Examples: **Google Drive, Dropbox, OneDrive**

7. Business Management Tools

- Help in **managing tasks, employees, and customer support.**
- Examples:
 - **Trello, Asana** (task management)
 - **Slack, Microsoft Teams** (team communication)

8. Website Creation Tools

- Help to **create and manage websites easily** without coding.
- Examples: **Wix, WordPress, Shopify, Squarespace**

9. Inventory & Billing Tools

- Help track **product stock** and **generate bills/invoices.**
- Examples: **Tally ERP**
- Help businesses talk to customers and **solve problems online.**
- Examples: **WhatsApp Business,**

Internet Applications for Commerce

These are the **ways in which the internet is used to support business and commercial activities** like buying, selling, marketing, payments, and customer service.

Internet Applications for Commerce:

1. Online Shopping (E-Commerce)

- Buying and selling products and services using websites or apps.
- Examples: **Amazon, Flipkart, Meesho, Myntra**

2. Online Payment Systems

- Sending or receiving money safely using the internet.
- Examples: **UPI (Google Pay, PhonePe), Paytm, Razorpay, PayPal**

3. Email Communication

- Sending and receiving messages, bills, offers, or customer support through email.
- Examples: **Gmail, Outlook, Zoho Mail**

4. Online Marketing & Advertising

- Promoting products using internet tools like social media, Google Ads, or email marketing.
- Examples: **Facebook Ads, Instagram Ads, Mailchimp, Google Ads**

5. Website for Business

- Having a company website to show products, share information, and connect with customers.
- Examples: **Business websites made with WordPress, Wix, Shopify**

6. Customer Support Tools

- Using chat, email, or bots to solve customer problems online.
- Examples: **WhatsApp Business, Live Chat, Freshdesk, Chatbots**

7. Inventory & Order Management

- Managing stock and tracking orders using online tools.
- Examples: **Zoho Inventory, Tally, Vyapar App**

8. Billing and Invoicing

- Creating and sending bills or invoices online.
- Examples: **Zoho Books, QuickBooks, Razorpay Billing**

9. Market Research & Data Analytics

- Studying customer behavior and website visits to make better business decisions.
- Examples: **Google Analytics, Hotjar, SEMrush**

10. Cloud Storage and File Sharing

- Storing and sharing business documents online.
- Examples: **Google Drive, Dropbox, OneDrive**

Advertising on the Internet – Issues and Technologies

It means showing ads on websites, apps, or social media to **promote products or services** using the internet.

Technologies Used in Internet Advertising

These are tools and platforms that help in showing, targeting, and tracking ads:

1. Ad Networks

- Platforms that connect advertisers with websites/apps to display ads.
- Example: **Google AdSense, Media.net**

2. Programmatic Advertising
 - Uses **AI and automation** to buy and place ads in real-time.
 - Saves time and targets the **right users automatically**.
3. Search Engine Advertising (SEA)
 - Ads shown on search engines like **Google** when someone searches.
 - Example: **Google Ads (formerly AdWords)**
4. Social Media Advertising
 - Ads shown on platforms like **Facebook, Instagram, YouTube, Twitter**.
 - Helps reach **target audiences** based on age, location, interests, etc.
5. Display Ads & Banner Ads
 - **Images or videos** that appear on websites and apps.
 - Can be placed using ad networks or directly by advertisers.
6. Video Ads
 - Shown before or during videos on **YouTube, OTT apps** (like Hotstar, Netflix).
 - Very engaging and often used by big brands.
7. Email Marketing Tools
 - Sending ads or offers directly to people's inboxes.
 - Tools: **Mailchimp, Constant Contact**

Issues in Internet Advertising

1. Privacy Concerns
 - User data is often tracked to show ads.
 - People worry their **personal information** is not safe.
2. Ad Fraud
 - Fake clicks or views done by bots, not real people.
 - Wastes advertiser money.
3. Ad Blockers
 - Many users install ad blockers, so ads are **not shown** at all.
4. Too Many Ads (Ad Overload)
 - Seeing too many ads can **annoy users** and make them avoid websites.
5. Fake or Misleading Ads
 - Some online ads show **false information** or **scam offers**.
6. Targeting Accuracy
 - Sometimes ads are shown to **wrong people**, which is a waste of money.

Advertising on the Web

Web advertising (also called **online** or **internet advertising**) means **promoting products or services using websites, apps, or search engines**.

It helps businesses reach customers **anywhere, anytime** through the internet.

Types of Web Advertising

1. **Banner Ads**
 - Image ads shown on top, side, or middle of websites.
 - Example: Ads you see on news or blog sites.
2. **Search Engine Ads**

- Ads that appear when you **search something on Google or Bing**.
- Example: The top results marked as “Sponsored”.
- 3. **Social Media Ads**
 - Ads shown on **Facebook, Instagram, Twitter, LinkedIn**, etc.
 - Targeted based on **age, location, interest, etc.**
- 4. **Video Ads**
 - Ads played before or during videos on **YouTube, Hotstar**, etc.
- 5. **Pop-up Ads**
 - Small windows that **"pop up"** when you open a site.
- 6. **Email Ads (Email Marketing)**
 - Promotional emails sent directly to your inbox.

- 7. **Influencer or Affiliate Ads**
 - Ads promoted by **influencers or bloggers** through their websites or social media.

Marketing by Creating a Website

Creating a website for marketing means making a website to:

- Show your **products or services**
- Attract **new customers**
- **Promote your brand**
- Help people **know about your business**

Website is Useful for Marketing

1. You can **reach people all over the world**
2. Your website works **24 hours a day**
3. People can **find you on Google**
4. You can **advertise your products or offers**
5. Customers can **contact you easily**

UNIT - IV

Electronic Payment System

Introduction to Electronic Payment System (E-Payment)

- An **electronic payment system** is a way to **pay money using the internet or digital methods**, instead of using cash or cheques.
- It helps people and businesses make **quick, safe, and paperless payments**.
- Commonly used in **online shopping, bill payments, mobile recharge, ticket booking**, etc.

Benefits of E-Payment Systems:

- **Fast** – Transactions happen in seconds

- **Secure** – Encrypted and safe
- **Paperless** – No need for physical receipts
- **Anywhere, Anytime** – Pay from mobile or computer
- **Trackable** – Every payment is recorded

Types of Electronic Payment Systems

1. Credit Card / Debit Card Payments
 - Physical cards used **for online or POS payments**.
2. Mobile Wallets (E-Wallets)
 - Apps where you store money digitally and pay directly.
3. UPI (Unified Payments Interface)
 - Instant payment between bank accounts using a **mobile number or UPI ID**.
4. Net Banking (Online Banking)
 - Paying directly from your bank account using the bank's website or app.
5. Payment Gateways
 - A service that helps businesses **collect online payments from** customers.
6. Electronic Funds Transfer (EFT / NEFT / RTGS / IMPS)
 - Bank-to-bank money transfer methods.
7. EMI Payment Systems
 - Used to **buy now and pay later** in parts (monthly).

E-Cash and Currency Servers

E-Cash (Electronic Cash)

- **E-Cash** is **digital money** used for making payments over the internet.
- It works like **physical cash**, but you **store and use it on your mobile or computer**.
- You can use e-cash to **buy things online**, pay for services, or transfer money.

Main Features of E-Cash:

- **No need for physical cash**
- **Secure and private**
- **Fast payments**
- Can be used on **websites or apps**

Examples of E-Cash in Daily Life:

- Wallet balance in **Paytm, Amazon Pay, PhonePe**

Currency Servers

- **Currency servers** are special **computers or systems** that **manage, verify, and track e-cash transactions**.
- They make sure that:
 - The digital money is **valid**
 - It is **not used more than once** (no double-spending)
 - The transaction is **safe and complete**

Functions of a Currency Server:

1. **Generates E-Cash**
 - Creates and issues e-cash tokens (like digital coins)
2. **Authenticates Transactions**
 - Checks if the payment is real and from the right person
3. **Prevents Double Spending**
 - Makes sure e-cash is not reused illegally
4. **Records Transactions**
 - Keeps track of how much e-cash is used, sent, or received

E-Cheque (Electronic Cheque)

- An **electronic version of a paper cheque**.
- It is used to **transfer money from one bank account to another** over the internet.

Features:

- Works just like a normal cheque
- Can be signed using **digital signatures**
- Safe and **paperless**
- Used for **online payments** or **bank transfers**

*Example: Paying a utility bill online using your **bank's e-cheque system**.*

2. Credit Card

A **plastic card** given by banks or companies to **borrow money for shopping or payments**.

Advantages of Credit Card

- **Buy now, pay later**—flexible payment options
- Can build your **credit history and credit score**
- Useful in emergencies when you don't have cash
- Offers **rewards, cashback, discounts, and offers**
- Comes with **fraud protection** and dispute resolution
- Can pay bills and shop online securely
- Option for **EMI (installments)** on big purchases

Disadvantages of Credit Card

- If not paid on time, you'll pay **high interest charges**
- Can lead to **debt and overspending**
- May have **annual fees and hidden charges**
- Poor usage can **harm your credit score**
- Sometimes credit limits may be **low** or get reduced
- You pay the money back **later**, usually every month.

Smart Card

A **card with a microchip** that **stores your data** (money, ID information. it Can be used to **make secure payments** or **identify a user**.

Advantages of Smart Card

1. **High Security**
 - Stores data securely using a microchip, making it hard to copy or hack.
2. **Multi-Purpose Use**
 - Can be used for payments, identification, access control, health records, and more.
3. **Fast Transactions**
 - Payments and data reading happen quickly when you tap or insert the card.
4. **Portable and Durable**
 - Small and easy to carry, more durable than magnetic stripe cards.
5. **Can Store More Data**
 - Stores more information than traditional cards, enabling advanced features.
6. **Reduces Fraud**
 - Difficult to clone or counterfeit compared to regular cards.

Disadvantages of Smart Card

1. **Costly to Produce**
 - More expensive to manufacture than regular magnetic stripe cards.
2. **Requires Special Readers**
 - Needs smart card readers or compatible machines, which may not be available everywhere.
3. **Technical Issues**
 - Chip can get damaged or malfunction, making the card unusable.
4. **Compatibility Problems**
 - Not all merchants or systems accept smart cards yet, especially in rural or less-developed areas.
5. **Data Privacy Concerns**
 - If not managed properly, stored personal data might be at risk.

Electronic Wallet (E-Wallet)

- An **electronic wallet** is a **digital app or software** that stores your money **electronically**.
- It lets you **pay online or in stores** without using cash or cards.
- Think of it like a **digital purse or wallet** on your phone or computer.

E-Wallet Work

1. You **add money** to your e-wallet from your bank account, debit/credit card, or cash at a shop.
2. When you buy something online or offline, you **pay using your e-wallet**.
3. The money is **deducted instantly** from your e-wallet balance.
4. You can also **send or receive money** from friends or family using the wallet.

Popular Examples of E-Wallets

- **Paytm**
- **Google Pay**
- **PhonePe**
- **Amazon Pay**
- **Apple Pay**

Advantages of E-Wallets

- **Fast and easy payments**
- Can link to your bank account or cards
- Pay using mobile phone anytime, anywhere
- No need to carry cash or cards
- Often offer **cashbacks and discounts**
- Usually have security features like passwords or OTPs

Disadvantages of E-Wallets

- Need internet connection to use
- If phone is lost or hacked, risk of money theft
- Limited to the amount of money in the wallet
- Refunds can sometimes be slow
- Some merchants may **not accept e-wallet payments**

Debit Card: Advantages and Disadvantages

A **debit card** is a **plastic or digital card** given by a **bank** that allows you to **spend money directly from your bank account**.

Advantages of Debit Card

- **Spend your own money** directly from your bank account
- **Easy to use** for shopping online and offline
- **No interest charges** since you are using your own money
- **Instant payment**—money is deducted immediately
- **Widely accepted** at stores, ATMs, and websites
- Usually comes with **fraud protection**

Disadvantages of Debit Card

- **No credit facility**—you can only spend what you have
- If money is low in the account, payment will **fail**
- Sometimes takes time to **refund** if fraudulent transactions happen
- May get declined if there's a **technical or network issue**
- Limited benefits or rewards compared to credit cards

Internet Monetary Payment and Security System

- **Internet Monetary Payment System** means **paying money online** using digital methods like **debit cards, credit cards, UPI, net banking, e-wallets**, etc.
- **Security System** means the **methods used to keep these online payments safe** from fraud, theft, or misuse.

Types of Internet Payment Systems:

1. **Credit / Debit Card Payments**
 - Use card number, expiry date, and OTP to make secure payments.
2. **UPI (Unified Payments Interface)**
 - Instant payment using UPI ID or mobile number.
 - Example: Google Pay, PhonePe
3. **Net Banking**
 - Paying directly from your bank account using the bank's website.
4. **E-Wallets**
 - Store money digitally and pay easily.
 - Example: Paytm, Amazon Pay, PhonePe
5. **Payment Gateways**
 - A service that processes online payments for websites.
 - Example: Razorpay, CCAvenue

Security Requirements for Internet Payments

To protect online money transactions, certain **security requirements** must be followed:

1. Authentication
 - To **confirm the identity** of the user.
 - Example: Username + Password, OTP (One Time Password), Fingerprint.
2. Authorization
 - To **ensure the user is allowed** to make the payment.
 - Example: The system checks if your card or bank account has enough balance and permission.
3. Encryption
 - Converts sensitive information (like card numbers) into **secret code**.
 - Keeps your data **safe from hackers** during transmission.
4. Data Integrity
 - Makes sure the information **is not changed or tampered** with during transfer.
 - Helps in **secure and accurate transactions**.
5. Confidentiality
 - Ensures that your payment details (card number, CVV, passwords) are **kept private**.
 - Only authorized systems can **read or process your information**.
6. Non-repudiation
 - Prevents anyone from **denying** that they made a payment.
 - Ensures proof of transaction is recorded.

Other Security Features Used:

- **SSL Certificate** – Secures the website connection.
- **Digital Signature** – Confirms that data is from a trusted sender.
- **Two-Factor Authentication (2FA)** – Extra layer of security using OTP or fingerprint.

- **PCI-DSS Compliance** – Global security standard for card payments.

UNIT – V

Electronic Data Interchange

Digital Signatures

A **digital signature** is like an **electronic version of your handwritten signature**, but more secure.

Benefits of Digital Signatures

- **High Security** – Very hard to fake or change
- **Proof of Identity** – Confirms who signed the message
- **Easy to use** – Used in emails, PDFs, and online forms
- **Legal Validity** – Recognized by law in many countries (like India)

Limitations of Digital Signatures

- Needs **special software or tools** to create and verify
- If the **private key is lost or stolen**, it can cause problems
- Requires **internet and system compatibility**

Digital Signatures Used

1. E-filing income tax returns
2. Signing legal or government documents online
3. In businesses for contracts and invoices
4. In banks for secure transactions

Cryptography

Cryptography is the science of **protecting information** by changing it into a **secret code** so that **only the right person can read it**.

It helps keep **messages, data, and passwords safe** from hackers or others who should not see it.

Example:

If you write:

"Hello" → Cryptography turns it into something like → "Xy\$#@9"

Only the person who has the **key** can turn it back into "Hello".

Cryptography Important

- **Keeps data safe**
- **Protects messages and emails**
- **Secures online payments**
- **Verifies identity in digital signatures**
- **Used in banking, e-commerce, and government websites**

Types of Cryptography

1. Symmetric Key

- The **same key** is used to **encrypt** and **decrypt** the message.
- Fast but both sender and receiver must have the **same secret key**.

2. Asymmetric Key Cryptography

- Uses a **pair of keys**:
 - A **public key** (to encrypt)
 - A **private key** (to decrypt)
- More secure, used in **digital signatures** and **secure emails**.

Common Uses of Cryptography

- **Passwords** – Stored safely in encrypted form
- **Banking & UPI apps** – Your transactions are encrypted
- **Emails** – Secure messaging
- **Data Storage** – Keeps files private
- **Digital Signatures** – Verify identity and prevent tampering

Interoperability and Inter-compatibility

1. Interoperability

- Interoperability means that **different systems, apps, or devices can work together and share information easily**, even if they were made by different companies.

Example:

- You send money from **Google Pay** (UPI) to someone using **PhonePe** – both apps can talk to each other and process the payment.

Where it's used:

- UPI apps
- Healthcare systems sharing patient data
- Computer networks and software

Benefits:

-  Smooth communication between systems
-  Works across different platforms
-  Better user experience

Inter-compatibility

Meaning:

- Inter-compatibility means that **one system or device works correctly with another** without needing changes or extra tools.

EXAMPLE

- Hardware (like chargers, printers)
- Software formats (like PDF files opening in different apps)
- Websites opening in different browsers

Benefits:

- Easy to connect and use
- No format or device issues
- Saves time and cost

