

UNIT 1

OVERVIEW OF COMPUTERISED ACCOUNTING SYSTEM

Key Concepts

- 1.1 Computerised Accounting System (CAS)
- 1.2 Components of Computerised Accounting System.
- 1.3 Data and Information
- 1.4 Accounting cycle
- 1.5 Grouping of accounts
- 1.6 Security Features of CAS
- 1.7 Merits and Demerits of CAS
- 1.8 Accounting Information System

Introduction

The advancement of Information Technology has brought enormous possibilities in the field of accounting. Usage of computers and accounting software packages help business men to carry out accounting process quickly and accurately. We have already learnt about the Manual Accounting System under which transactions are physically entered in the books of accounts. Computerised Accounting System processes voluminous data and variety of transactions with the help of computers. Both manual and computerised accounting system follow same principles and concepts of accounting.

1.1 COMPUTERISED ACCOUNTING SYSTEM (CAS)

The computerised accounting system facilitates timely production of management information reports, which will help management to monitor and control the business effectively. Computerised accounting makes use of computers and accounting software packages to record, store and analyse financial data. The need for this system arises from advantages of speed and accuracy in recording and retrieval of data and lower cost of handling business transactions.

A computerised accounting system is a system used by businesses for recording and manipulating financial data with the help of computers and various accounting software.

Today, accounting software packages are in abundance to help us to process accounting data and come up with reports instantly.

Features of CAS

Computer assisted accounting programmes have been widely used in the field of accounting.

- Can you imagine the purpose of using computer in accounting system?

Let us see this by narrating the features of CAS

1. Simple and Integrated

Computerised accounting system is integrated to provide accurate and up-to-date business information instantly. It is designed to automate and integrate all the business operations such as sales, finance, purchase, inventory and manufacturing.

2. Transparency and Control

Computerised accounting system provides sufficient time to plan, increases data accessibility and provides user satisfaction. It provides greater transparency for day-to-day business operations.

3. Accuracy and Speed

The accuracy of computer is very high. Each and every calculation is performed with same accuracy. Computer can also process data millions of times faster than human beings.

4. Scalability

The requirement of additional manpower is confined only to data entry operators and it costs almost nothing for processing additional transaction. Hence the cost of processing additional transactions is almost negligible.

5. Reliability

Since computer system is well adapted to performing repetitive operations, the generated financial information is more accurate and reliable in comparison with manual accounting systems.

1.2 COMPONENTS OF COMPUTERISED ACCOUNTING SYSTEM

Computerised accounting system has five components, namely procedure, data, people, hardware and software. They are regarded as five pillars of computerised accounting system (Figure 1.1).

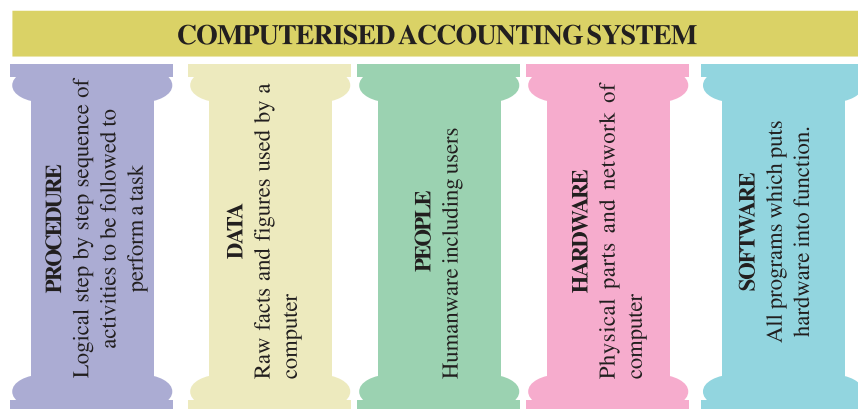


Fig 1.1 Components of Computerised Accounting System

1.3 DATA AND INFORMATION

See figure 1.2 and try to understand how data is transformed into information.



Fig 1.2 Conversion of Data into Information

In accounting, data comprises of one or more elements / items relating to a transaction. A data item or data element means the smallest unit or segment of data. When data is processed, it becomes information. Computerised accounting system is based on the concept of database wherein data is stored and processed with the help of software. The user can take various accounting reports such as Income Statement, Balance Sheet etc. Thus CAS converts the data into information.

Let's make this clear with the help of an example.

Think of a data that is created when the business makes a credit sale. This include

- Name of Account (Debtor)
- Account code (1.3.7)
- Date of transaction (1st June 2017)
- Amount (₹25,000)

This data needs processing at the point of sale in order to issue a valid receipt (information). The data would be useful to the Sales Manager for preparing reports showing the total sales (information) during a particular period of time.

Let's assess

1. Describe how computerised accounting helps in keeping of systematic records in a business organisation.
2. Which among the following is not a component of CAS?
a. data b. Software c. Procedure d. Decisions
3. Distinguish between Data and Information with an example.
4. Describe the features of computerised Accounting System.

1.4 ACCOUNTING CYCLE

The term accounting cycle refers to the specific steps that are involved in the completion of accounting process. We have learnt about different stages of accounting process in Plus One classes. The different stages of accounting cycle starts with recording of business transactions and ends with the preparation of financial statements which is given as follows:

1. Recording of transactions in journal
2. Posting of journal entries to ledger accounts
3. Preparation of Trial Balance from balance of accounts
4. Passing adjusting entries
5. Preparation of adjusted Trial Balance
6. Passing closing entries
7. Preparation of Financial Statements

In computerised accounting, the various stages of accounting cycle mentioned above are carried out with the help of computers.

1.5 GROUPING OF ACCOUNTS

In business, large number of transactions with varying nature is to be stored, processed and retrieved. Therefore it becomes necessary to have proper classification of data. Grouping of accounts in computerised accounting is based on accounting equation. We know that accounts are classified into assets, liabilities, income, expense and capital.

You can recollect that the accounting equation can be expressed as;

$$\text{Assets} = \text{Equities (A = E)}$$

Where

$$\text{Equities} = \text{Liabilities} + \text{Capital (E = L + C)}$$

Thus

$$\text{Assets} = \text{Liabilities} + \text{Capital (A = L + C)}$$

The amount of capital may be increased by profits or decreased by losses.

Thus the basic accounting equation can be re-written as;

$$\text{Assets} = \text{Liabilities} + \text{Capital} + (\text{Revenues} - \text{Expenses})$$

Revenue means inflow of resources, which results from the sale of goods or services in the normal course of business and increase in capital. Expenses imply consumption of resources in generating revenues and results in reduction of capital.

We can divide and group each component of the above equation as follows:

1. Assets

- Fixed Assets
 - Land
 - Buildings

- Plant and Machinery
- Furniture and Fixtures
- Current Assets
 - Cash
 - Bank
 - Debtors
 - Inventories
- 2. **Liabilities**
 - Secured loans
 - Unsecured loans
 - Creditors
 - Provisions
- 3. **Capital**
 - Share capital
 - Reserve and Surplus
 - Capital reserve
 - General reserve
 - Balance of Profit and Loss account
- 4. **Revenues**
 - Sales
 - Other Income
- 5. **Expenses**
 - Material consumed
 - Salary and wages
 - Manufacturing expenses
 - Administrative expenses

1.5.1 Codification of accounts

Systematic grouping is a pre-condition for proper codification, since each ledger under a group will have similar coding pattern. There is a hierarchical relationship between the groups and its components. Codification will help to ensure neatness of classification.

The term 'code' literally means a system of letter of figure with arbitrary meaning for brevity and for machine processing of information. It is an identification mark. Codification refers to allotting code numbers to accounts in a hierarchical structure. The codes are classified into each section and grouping of accounts can be done effectively. The grouping and codification depend upon the type of organisation and the extent of subdivision required for reporting on the basis of profit centres or product lines.

Codification is the essence of computerised accounting system. Here codes are necessary because the computer cannot understand that whether the item is an expense,

income, asset or liability. When it is coded, computer can easily identify them.

Methods of codification

The coding scheme of account-heads should be such that it leads to grouping of accounts at various levels so as to generate Balance Sheet and Profit and Loss Account. The codes so used shall be simple, understandable, concise and expandable. For example, we may allot numeric codes for the major account groups, their sub groups, next level sub groups and so on.

1 Assets

- 1.1 Fixed Assets
 - 1.1.1 Land
 - 1.1.3 Building
 - 1.1.5 Plant and Machinery
 - 1.1.7 Equipments
 - 1.1.9 Furniture and fittings
- 1.3 Current Assets
 - 1.3.1 Cash
 - 1.3.3 Bank
 - 1.3.5 Bills Receivable
 - 1.3.7 Debtors
 - 1.3.9 Stock in hand

2 Liabilities

- 2.1 Long term liabilities
- 2.3 Current Liabilities

3. Capital

- 3.1 Share capital
- 3.3 Reserve and Surplus
 - 3.3.1 Capital reserve
 - 3.3.3 General reserve

4. Revenues

- 4.1 Direct Income
 - 4.1.1 Sales
- 4.3 Indirect income
 - 4.3.1 Rent received
 - 4.3.3 Commission received

5 Expenses

- 5.1 Capital expenditure
- 5.3 Revenue expenditure
 - 5.3.1 Direct expenses
 - 5.3.1.1 Wages
 - 5.3.1.2 Carriage inwards
 - 5.3.3 Indirect expenses
 - 5.3.3.1 Salary
 - 5.3.3.2 Rent

- The codification given above is not rigid. The code numbers of sub groups are not given consecutively (See the above example) so as to provide flexibility. ie., we can add new sub groups in future, if necessary.

Types of codes

Codes can be classified in the following manner:

1. Sequential codes
2. Block codes
3. Mnemonic codes

1. Sequential codes

In sequential code, numbers and/or letters are assigned in consecutive order. They are applied primarily to source documents such as cheques, invoices etc.

For example:

CM001 – Excel Company Limited
CM002 – Premium Company Limited
CM003 – Modern Company Limited

This method of codification is simple, easy and concise. Here it is easy to identify the missing codes if any.

2. Block codes

In block code, a range of numbers is partitioned into a desired number of sub ranges and each sub range is allotted to a specific group.

For example

1001 – 1999 Televisions
2001 – 2999 Mobile phones
3001 – 3999 Refrigerators

Sub blocks can also be allotted inside a range of number. For example, in case of 1001 – 1999 Televisions, mentioned above the codes can be allotted in the following manner.

1001 – 1099 LED Televisions
1100 – 1199 LCD Televisions
1200 – 1299 Plasma Televisions

3. Mnemonic codes

It consists of alphabets or abbreviations as symbols to codify a piece of information. For example, Railway station codes – PGT for Palakkad, TVC for Trivandrum, TCR for Thrissur, etc.

Similarly, in accounting Codes may be assigned for day books as;

SJ	Sales Journal
PJ	Purchase Journal
CB	Cash book
JP	Journal Proper
SRJ	Sales Return Journal
PRJ	Purchase Return Journal

We can conclude here that it is convenient to code account heads, departments, places or locations. It is simple, meaningful and easy to remember but when size is increasing, grouping will become difficult.

1.5.2 Methodology to develop coding structure and coding

The coding system should be pre-planned by considering the scope and features of the piece of information. The codes should be designed to accommodate future additions. The hierarchy of data names should be strictly observed while developing codes.

The methodology can be explained with an example of assigning register number to a student. Register numbers are the individual codes allotted to students. Here the hierarchy of the schooling system should be identified first. The other relevant facts associated with the identification of a student are also taken.

The hierarchy may be decided as follows.

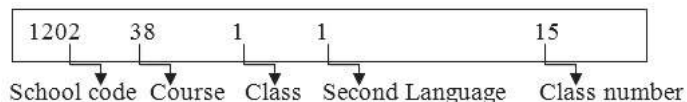
School → Course → Class → Second Language → Class number of Student.

Coding structure will be as follows.

- School – 4 digits
- Course – 2 digits
- Class – 1 digits
- Second Language – 1 digit
- Class number of student – 2 digit

Thus, every student will get a 10 digit code which helps to get the following details of a student from the code itself (eg. the school in which he/she is studying, the course for which he/she is studying, the second language of the student, the class number of the student etc).

Once the coding structure is decided, allotment of codes becomes easy. For example, the code number of a student with class number '15', with second language 'Malayalam' in class 'XI' 'Commerce' stream of School Code '1202' will be '1202381115'. Its coding is shown as follows;



Let's assess

1. Range of numbers are used for codification in
(Block codes, Mnemonic codes, Sequential codes, All of these)
2. Grouping of accounts should be done basically by considering
(The rules of debit and credit, Accounting equation, Capital investment, Method of codification)
3. Codification of accounts is required for the purpose of
(a) Hierarchical relationship between groups and components.
(b) Faster data processing .
(c) Keeping data secured.
(d) Easy preparation of final accounts.
4. Explain various types of codes with suitable examples.

1.6 SECURITY FEATURES OF CAS

Imagine the security features you have installed or made use of in your mobile phone;

- Pattern locking
- Biometric finger print scanning
- PIN

Why do you use such security features in your phone?

Ensuring data security, preventing unauthorised access etc. will be your answer. Think in terms of the level of security features an organisation must use to safeguard its accounting data when compared to a mobile phone.

It is necessary that all accounting information must be kept safe and secure for all the time. Any unauthorised access to this information may have adverse effects. Possibility of theft, deletion, and alteration in accounting data will affect its reliability and accuracy.

All accounting software must ensure data security, safety and confidentiality. Therefore, the software usually provides the following.

- (a) Password security
- (b) Data audit
- (c) Data vault

Password security

Password is a mechanism which restricts the access to the computer system and data to the user only. The system facilitates defining the user rights according to organisation policy. By setting passwords, a person in an organisation may be given access to a particular set of data, while he may be denied access to another set of data. Password is the key or code to allow the access to the system.

Data Audit

This feature enables us to know as to who and what changes have been made in the original data. This facility helps to fix responsibility to the person who has manipulated the data and thereby answers data integrity. In most software this is a separate menu available to the administrator to track unauthorised changes that have taken place in the data following his previous review.

Data vault

Accounting software provides additional security through data vault. Vaulting will save data in encrypted form to ensure its security. Encryption essentially scrambles the information so as to make its interpretation extremely difficult or impossible.

Encryption ensures security of data even if it lands in wrong hands, because the receiver of data will not be able to decode and interpret it.

1.7 MERITS AND DEMERITS OF CAS

The merits of CAS include ;

1. Timely generation of desired reports.
2. Efficiency in record keeping
3. Saves time and money
4. Confidentiality of data is maintained
5. Automated document preparation
6. Transparency and reliability
7. Accurate and updated information

The demerits of CAS include ;

1. Danger of hackers and stealing of data
2. Problems with technology
3. Non-availability of skilled personnel
4. Chances of data loss due to various reasons
5. Faster obsolescence of technology which leads to scrapping of heavy investment
6. Huge training cost of employees
7. Unprogrammed and unspecified reports that cannot be generated from the system.

Let's assess

1. Develop a coding structure suitable to assets with its different sub groups.
2. Explain the methodology to develop coding.
3. Mention the internal controlling methods in CAS.

1.8 ACCOUNTING INFORMATION SYSTEM (AIS)

Accounting Information System (AIS) and its various sub-systems may be implemented through computerised accounting system. Accounting is a huge information system for any organisation. CAS integrates the entire sub systems of the organisation and provides a sound accounting information system. The major sub-systems are depicted in figure 1.4.

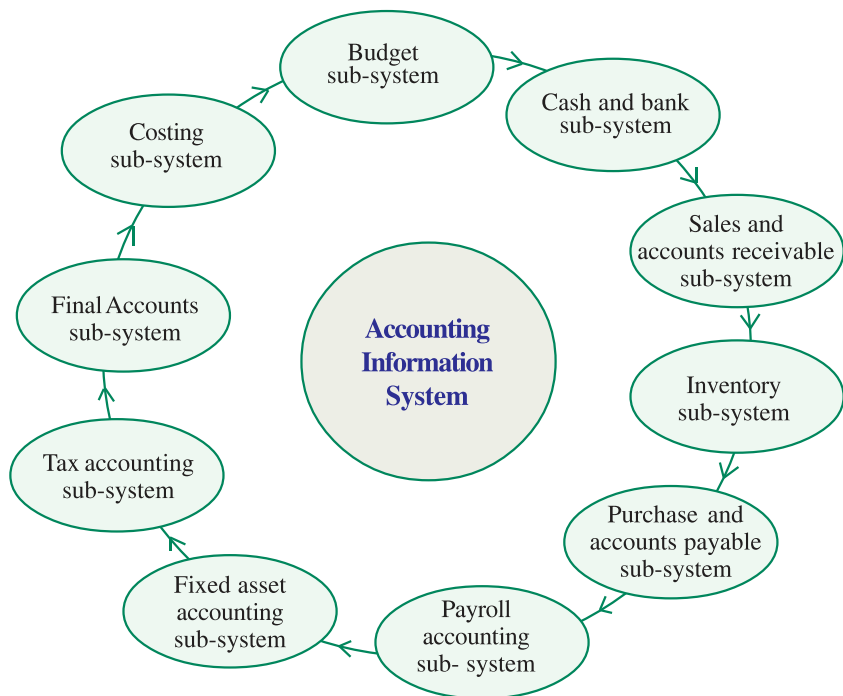


Fig 1.4 sub-systems of AIS

The sub systems of AIS are briefly explained below.

Cash and Bank Sub-system

It deals with the receipts and payments of cash (both physical and electronic). It includes electronic fund transfer, digital cash dealing etc.

Sales and Accounts Receivable Sub-system

It deals with recording of sales, maintaining of sales ledger and managing receivables. It generates periodic reports about sales, collections made, overdue accounts and receivables position.

Inventory Sub-system

It deals with the recording of purchases and issues of sale of products specifying the price, quantity and date. It generates the inventory position and valuation report.

Purchase and Accounts Payable Sub-system

It deals with recording of purchases and managing payables. It also generates periodic reports about the performance of suppliers, payment schedule and position of the creditors.

Payroll Accounting Sub-system

It deals with payment of wages and salary to employees. It gives information about basic pay, dearness allowance, and other allowances and deductions from salary and wages on account of provident fund, taxes, loans, advances and other charges. The system generates reports showing total pay of the employees .

Fixed Assets Accounting Sub-system

It deals with the recording of purchases, additions, deletions, usage of fixed assets such as land and buildings, machinery and equipments, etc. it also generates reports about the cost, depreciation, and book value of different assets.

Tax Accounting Sub-system

This sub-system deals with compliance requirement of various taxes. This sub-system used in large size organisation.

Final Accounts Sub-system

This subsystem deals with the preparation of Profit and Loss account / Balance Sheet and other statements for reporting purposes.

Costing Sub-system

It deals with recording of cost of materials, labour and other expenses with a view to ascertain cost of goods produced.

Budget Sub-system

It deals with the preparation of budget for the coming financial year as well as comparison of actual performances with the current budget.



Summary

- CAS is a system used by businesses for recording the financial information using computers and various accounting software.
- The features of CAS include;
Simple and integrated, transparency and control, accuracy and speed, scalability and reliability
- CAS has five components namely procedure, data, people, hardware and software.
- Data element is the smallest unit of data. Data when processed become information.
- The term accounting cycle refers to the specific steps that are involved in the completion of accounting process.
- There is a hierarchical relationship between the groups and its components.
- Codification of accounts refers to allotting code numbers to accounts in a hierarchical structure. The grouping and codification depend upon the type of organisation and the extent of sub-divisions required.
- Codes can be of sequential codes, block codes and mnemonic codes.
- Every accounting software ensures data security, safety and confidentiality.
- The merits of CAS include;
Timely generation of reports, efficient record keeping, less time and cost, confidentiality of data, transparency, reliability, and updated information
- The demerits of CAS include;
Danger of Hawkers, technological problems, skilled employees are required, chance of data loss, huge training costs of employees and obsolescence of technology.
- CAS integrates the entire sub systems of the organisation and provides a sound accounting information system.



I can

- describe the need of computerized accounting
- identify the various components of Computerised Accounting System (CAS)
- explain the need, importance and methodology of grouping and codification of accounts
- describe the uses of a software for CAS
- list out the merits and demerits of CAS
- list out the various sub systems of accounting information system and their functions

**TE QUESTIONS**

1. The code 301-399 for cosmetics is an example of code.
a. Sequential b. Block c. Mnemonic d. Numeric
2. Find the odd one out.
a. Data b. People c. Hardware d. Virus
3. Mention the name of any two coding methods with examples.
4. Classify the following into mnemonic codes, sequential codes and block codes.
a. CA, CL – for current assets and current liabilities.
b. 001, 002 for customer A and B.
c. 001 to 099 – soaps, 100 to 199 - face powder.
5. Computerised accounting has several merits over manual accounting. Describe any four.
6. Write a coding structure for a higher secondary school having Science, Commerce and Humanities batches of 1 each. Duration of course is 2 years maximum students in the class is 50. Second language available there are Hindi, Malayalam and Sanskrit.
7. Describe the accounting information system and its sub systems.