

Computers and Accounting

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1. Introduction

Computer is an electronic machine that is capable of making computations or calculations, storing and analysing data and generating useful information or reports by acting on a set of instructions at a phenomenal speed and accuracy. Today, computers have entered in areas like accounting, business, education, research, transportation, weather, printing, communication, banking, defence, literature, space science, sports, music, medicines, spirituality and tax management. Today, most of the entities prepare their accounts using computers. Hence, it is essential for students of commerce to familiarise themselves with computerised accounting system.

When accounts are maintained using computers, raw data based on vouchers and other documents are entered into computer. Computer processes such raw data. This process includes recording, storing, analysing and retrieving information. Computers can store information, analyse them and such information can be retrieved when required. However, they respond according to set of instructions given to it and such instructions are known as programme or software. Based on such software only, computer processes raw data and generates meaningful information or reports as and when required.

Application of computers for accounting has grown phenomenally. Today, small grocery shop to giant business houses like Reliance, Hindustan Lever and ITC are using computers and software to maintain their accounts. Apart from use for routine accounting, computerised accounting system is also used in the accounting related to areas like tax collection and online sales using internet.

2. Components and Characteristics of Computerised Accounting System

Computerised Accounting System would comprise of following three important components :

- (1) Hardware (2) Software (3) Humanware

Hardware comprises of computer components that can be physically touched like keyboard, Central processing Unit (CPU), monitor, mouse, pen drive, CD or DVD Drive, speakers and sound card, printer etc. Basic components of a computer collectively form a system. These components of computers are also classified as input devices, CPU and output devices. Input devices can comprise of key board, mouse, pen based system that help in writing directly on the screen, touch screen that accepts input directly through the monitor and bar code reader that can read bar codes and translate them into numbers. CPU is known as brain of computer as it does all calculations, logical decisions and controls activities of machine. It gets instruction from input devices, stores them in memory, carries out different operations thereon and sends the final outcome to output device. Central Processing Unit (CPU) comprises of control unit, memory unit, and arithmetic and logic unit. Output devices comprise of Visual Display Unit or Monitor, Printer, speaker, etc.

Software is a set of instructions that can perform special tasks as required by users or machine. Software is very essential for different computer applications. Software can be divided mainly into two types: (i) System Software and (ii) Application Software. System software is used to control the operations and to extend processing capability of a computer system. Application software is used by users to perform specific functions. For example, Windows 7 is system software and for operating each computer system, usually such system software is used. Tally is application software that is designed to perform the function of accounting for the users thereof.

Humanware is the people who work with computer and software. It will include programmers, computer or data entry operators, software engineer, hardware engineer, system analyst etc. These people also play an important role in effective implementation of computerised accounting system.

It should be noted that each of these components i. e. hardware, software and humanware has its own importance in computerised accounting system. Desired outcome cannot be obtained if there is problem or lacuna in any of these components.

Some features of computerised accounting system are as under :

(1) Speed : It can perform functions at much higher speed than the speed of human beings. For example, if an accountant records transactions manually, he posts them into ledger accounts, then prepares trial balance and finally final accounts. As compared to this, if accounts are prepared with the help of computer, final accounts can be prepared in much lesser time.

(2) Accuracy: Accuracy is more important in accounts than the speed in accounts. Computers perform functions with high degree of accuracy. If hardware, software and humanware are proper, the computerised accounting system can assure of accurate outcome.

(3) Reliability: Computers are immune to tiredness, boredom or fatigue. They do not commit errors even if large volume of data is to be processed by it and thus provides reliable information.

(4) Versatility: Computer and accounting software has ability to perform diverse tasks. For example, by simply recording accounting entries through accounting software, one can get trial balance, profit and loss account, balance sheet and can get diverse reports based on analysis like different ratios, debtors' time-wise analysis etc. Accounting software can also be modified according to need.

(5) Cleanliness: As the computerised accounts are much clean as compared to manual accounts, it is easy to read and understand them.

(6) Automation of Accounting Process and its pros and cons: Automation of accounting process has its own pros and cons. If proper selection of computer system, accounting software and persons to manage them is made, automations will result into so many advantages. At the same time, if any of these components are faulty, it can distort the outcome. Automation can give benefit of speed, accuracy, reliability, versatility, cleanliness, etc. However, limitations of automation like huge investment, resistance from employees, mis-management of different components thereof, etc. should also be kept in mind while resorting to automation.

(7) Instant Information and Statements: One very important feature of computerised accounting system is that one can get instant information about any aspect of accounting and can generate statement or reports at phenomenal speed. For example, salary statements, value added tax (VAT)

statements, service tax related statements, statements of tax deducted at source (TDS), profit and loss account, balance sheet, cash flow statement, and much more information and many more reports can be obtained with ease. Further, such information or statements can be printed or can be sent by e-mail easily. Many accounting software permit use thereof from any part of the world with the help of internet.

3. Accounting Software

Accounting software are categorised as :

(1) Readymade Software: They are developed for need of users in general. As such software is developed keeping in mind users in general, it may have many features which may not be useful for all users. At the same time, it is also possible that it may not have features or utility which a particular customer needs. For example, it may have GST module which may not be useful to a service provider who is not liable to pay GST. It is also possible that a customer may need excise duty accounting related module but such module is not available in readymade software. Some readymade software available includes Tally, Tata Ex, Busy, Professional Accountant, Profit, etc. Out of all these readymade software available in market, Tally appears to be most popular and widely used accounting software. Such software is easily available in market. As they are used by so many customers, they are economical also. Such software is developed by a team of experts and hence it will have maximum features. As such software is used by so many people it is easy to get persons for operating the same. As this software is readily available in market, lot of time is saved.

(2) Customised Software: When readymade software is modified according to the need of the customer, it is called customised software. When readymade software is modified according the need of customer, it provides ease to customer. For example, design of invoice is modified according to the need of customer. Some developers of software provide such facility of customisation and sometimes they charge additional cost for the same. Advantages and disadvantages of this type of software are same as that of readymade software.

(3) Tailor-made Software: Some customers get accounting software developed completely as per their need. As such software are designed and developed according to need of a customer, they are not readily available in the market. Such software is designed and developed after detailed discussions and deliberations with the customer and after understanding the need of the customer. As such software is designed keeping in mind the requirements of the customer, customer gets all information, facilities and statements as required using such software. However, cost of developing such software is much more than the readymade software as special efforts are made by developers to develop it. There are so many people in the market who develop accounting software according to the need of customer.

While sourcing the accounting software, its cost, need of the organisation, flexibility, facility of data exchange or transfer, need for training, cost of maintenance etc. should be kept in mind.

Accounting software gives readymade groups of accounts and ledger accounts are opened under these groups. List of such groups appearing in Tally Accounting Software is given below.

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|-------------------------------------|---------------------------------|
| (1) Bank accounts | (2) Bank OCC A/c |
| (3) Bank OD A/c | (4) Branch/Divisions |
| (5) Capital Account | (6) Cash-in-Hand |
| (7) Current Assets | (8) Current Liabilities |
| (9) Deposits (Asset) | (10) Direct Expenses |
| (11) Direct Income | (12) Duties and Taxes |
| (13) Fixed Assets | (14) Income (Direct) |
| (15) Indirect Expenses | (16) Indirect Incomes |
| (17) Investments | (18) Loans and Advances (Asset) |
| (19) Miscellaneous Expenses (Asset) | (20) Provisions |
| (21) Purchase Accounts | (22) Reserves & Surplus |
| (23) Retained Earnings | (24) Sales Accounts |
| (25) Secured Loans | (26) Stock-in-Hand |
| (27) Sundry Creditors | (28) Sundry Debtors |
| (29) Suspense Account | (30) Unsecured Loans |

Accounting Software should provide facility for data exchange with other information system. With such features or facilities, lot of money and time is saved. For example, if information available in accounting software can be sent by e-mail directly from software, lot of time and money can be saved. If software does not have such feature or facility, such information will have to be written with hands or will have to be typed and then the same can be sent by e-mail. Some such features for data or information exchange in Tally software are given below.

(1) Through internet web browser, any information can be accessed at anytime from anywhere in the world. If authorised, such accounting information can be modified, copied, or print out can be taken.

(2) Accounting information can be uploaded. For example, if information about each sale bill is uploaded for filing GST return, filing of return will be very easy. Instead, if one has to enter details of each bill while filing return, lot of time will be wasted.

(3) Accounting information can be transferred by e-mail.

(4) Accounting information or statements can be exported. For example, balance sheet can be exported in Excel Sheet.

Accounting Reports can be prepared easily using accounting software. Data when processed becomes information. When related information is summarised and presented so as to meet a particular need, it is called Report. Accounting reports are designed keeping in mind the need for such report. Such reports become useful to the users thereof in decision making process. Quality of Accounting Report depends on its utility, brevity, accuracy, timeliness and design. While designing an accounting report, its objective, contents, completeness and utility should be kept in mind to make it meaningful. Examples of some such accounting reports are as under :

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|-------------------------|------------------------------|
| (1) Balance Sheet | (2) Profit and Loss Account |
| (3) Cash Flow Statement | (4) Debtors' Report |
| (5) Creditors' Report | (6) Product wise Cost Report |

4. Advantages of Computerised Accounting System

- (1) Various accounting information can be obtained speedily.
- (2) Chances of errors are reduced.
- (3) Accounting information can be obtained at any place and at any time.
- (4) Different accounting reports depending upon the need of organisation can be generated.
- (5) Information can be transferred or exchanged easily.
- (6) Information becomes more reliable.
- (7) Information can be manipulated as per need.
- (8) Information or report can be uploaded easily.
- (9) Cost of maintaining accounts can be reduced.
- (10) Chances of fraud or manipulation can be reduced.
- (11) Compliance of legal requirements can be made easily.
- (12) Space required for storage of accounting data is very less as huge volume of data can be stored in a small hard disc or any other storage device.

5. Limitations of Computerised Accounting System

Though there are so many advantages of automation or computerised accounting system, if the system is not implemented properly, it can have certain limitations or disadvantages. Following are some of the limitations of Computerised Accounting System. These are also limitations of automation.

(1) Trained Manpower: If trained manpower to handle the computerised accounting system is not available, we cannot get optimum benefit of automation.

(2) Investment: If computer hardware and software is selected improperly or without keeping need of the organisation in mind, one cannot derive desired benefit or reward for the investment made. Many times, units invest huge amounts in selection of improper hardware and software and they are not able to take due advantage of such investment.

(3) Unemployment: Computerisation can lead to increased unemployment as the accounting work with the help of automation requires small number of persons as compared to manual accounting. Therefore, if such system is introduced without proper work distribution, it can lead to resistance from employees.

(4) Changes in Technology: Frequent changes take place in computer hardware and software. Therefore, computer hardware and software should be selected keeping in mind the long term need in such manner that the investment does not become useless in a very short time. Investment in outdated technology will result into frequent expenses to upgrade the same.

(5) Defective Programmes: If software or computer programmes are defective, desired benefits thereof cannot be obtained.

(6) Limitation of Machines: A machine works according to the manner in which it is programmed. For any situation for which a machine is not programmed, the programme will have to be modified. For example, if accounting software does not have a module for printing of cheques, the computer and printer cannot print a cheque unless the programme is modified to get this facility. For each such modification, additional expenses have to be incurred.

(7) Dangers of Data Theft: When accounts are maintained with the help of computers, theft of data can be made easily and a third party can steal the data easily even if he gets access to the computer for very less time.

(8) Dangers of Loss of Data: If computer system crashes, all the data therein may get lost and one may lose the important information stored by hard work of so many years.

(9) Lack of Decision Making: Some steps in accounting cycle involve judgment and others are primarily mechanical. Computers lack ability to take decisions. Hence, wherever there is need for judgment, humans with power to think can do such work and machine cannot do it as it does not have the ability to think.

(10) Chances of Manipulation: In computerised accounting system, manipulations in accounting information can be done very easily. Therefore, there is possibility of presenting different information to different stakeholders by manipulating the information quickly.

6. Accounting Information System (AIS)

Accounting information system (AIS) is a system of processing data relating to financial transactions in such a manner that useful information is made available for internal decisions of the unit as also to outsiders. Information provided by AIS is most importance to managers in managing the organisation. Accounting Information System is a part of Management Information System (MIS). Management Information System can comprise of Production Information System, Marketing Information System, Accounting Information System, Human Resources Information System, etc. Basic objective of any information system designed for use of an organisation is to present information that is useful in decision making.

Accounting is a process of recording, classifying, summarising, analysing and interpreting data relating to financial transactions and communicating the results thereof to the parties interested in this information.

Information is food for thought. Such information is useful to managers in internal decision making. Such information also becomes useful to external parties. Accounting information emanates from Accounting Information System, it is money oriented and it helps interested persons in decision making. When raw data is organised in a meaningful manner, it becomes useful information.

System means working of a set of related components that work in cohesive manner in such a way that common objective can be achieved.

From the above discussion, we can state that Accounting Information System (AIS) makes various useful accounting information which available to internal and external users that helps users in decision making. For example, accounting information system can provide following reports or statements relating to accounting. Such reports can be designed according to need of different users.

(1) Profit and Loss Statement: From this statement, external parties can get information about profit or loss of business. This statement can be modified from the view point of internal users depending upon their needs. For example, if Board of Directors of a company wants segment wise profit and loss position, this Accounting Information Report can be designed in such a manner that it gives idea about profitability of each segment. Similarly, such report can be prepared to know profitability of different products or division or department.

(2) Balance Sheet: This is also an accounting report or statement which is used by external parties as also for internal use for useful information. For internal use, this statement can also be modified to give useful accounting information for decision making. For example, it can give information about assets and liabilities of each division.

(3) Debtors' Report: Such report can give information relating to debtors or customers as per organisation's need. For example, it can give information about period of debtors i.e. period since when the amount is due, sales made to say top 10 customers during a given period, list of customers who are paying money within due date, list of customers who always pay later than the due date, etc.

(4) Creditors' Report: Such report can give information relating to creditors or suppliers as per organisation's need. This report is also designed keeping in mind the requirements of each user of information of such report. For example, if Purchase Manager needs to know the top five suppliers in terms of value of goods during a period, such report can be designed to give this information.

(5) Other Reports: Management may require reports based on accounting information from time to time other than specific periodical reports. Such other reports are designed and developed according to need. For example, Managing Director needs daily information in the following format about bank transactions.

Date	Opening Balance	Amount Deposited During the Day	Amounts Paid During the Day	Closing Balance

7. Comparison of Manual and Computerised Accounting System

We have seen that Accounting is a process of recording, classifying, summarising, analysing and interpreting data relating to financial transactions and communicating the results thereof to the parties interested in this information. Such accounting can be carried out manually by an Accountant or by using computers. Following are the differences between the traditional manual system and computerised accounting system.

Basis of Difference	Traditional Manual System	Computerised Accounting System
(1) Recording transaction	Transactions are recorded in manual books of account like journal and subsidiary books	Transactions are recorded using computers and accounting software like Tally.
(2) Posting	Recorded transactions have to be posted in different ledger accounts manually.	Recorded transactions are processed by accounting software and posting into respective ledger account is automatically done.
(3) Trial Balance	After posting, trial balance is to be prepared taking balance of each ledger account.	Trial balance is automatically prepared using accounting software.
(4) Financial Statements	Financial statements like profit and loss account, balance sheet and cash flow statement are prepared based on trial balance and adjustments manually.	With the help of accounting software, such financial statements are automatically prepared after recording adjustment entries.

Basis of Difference	Traditional Manual System	Computerised Accounting System
(5) Rectification of Errors	Rectification entries are required to be passed for rectification of errors or for deletion of any wrongly passed entries.	With the help of Accounting software, any entry can be rectified or deleted easily without passing rectification entry.
(6) Need for recording opening balances	After close of the year, every year, in the beginning of year, opening balances are required to be carried forward in new books of accounts.	There is no need for recording opening balances as the accounting software automatically stores information about the closing balances in its data base.
(7) Chances of errors	There are more chances of errors in this system. For example, error can be there in recording transaction, in posting thereof, or in preparing trial balance.	There are less chances of error as accounting software has certain checks that prevent errors. For example if an account is debited by ₹ 500 and another account is credited by ₹ 50, the software will immediately draw attention that there is mismatch between these amounts.
(8) Grouping of Accounts	In traditional system, title of each account is manually decided and pre-defined groups of accounts also have to be designed manually.	Accounting software gives readymade groups of accounts and ledger accounts are opened under these groups. However, title of each account is to be manually decided.

Exercise

1. **Write short note on :**
 - (1) Components of computerised accounting system
 - (2) Features of computerised accounting system
 - (3) Accounting Software
 - (4) Accounting Reports
 - (5) Accounting Information System (AIS)
2. How does Accounting Software provide facility for data exchange with other information system?
3. State the advantages of Computerised Accounting System.
4. State the limitations of Computerised Accounting System.
5. State the differences between the traditional manual system and computerised accounting system.
6. **Give answer in brief :**
 - (1) State names of some readymade accounting software available in the market.
 - (2) Out of all the readymade accounting software available in market, which one appears to be the most popular and widely used accounting software?
 - (3) What is tailor-made accounting software?
 - (4) Give the name of any four groups of accounts.

