UNIT 11 : OFFICE AUTOMATION

UNIT STRUCTURE

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11.1 LEARNING OBJECTIVES

After going through this unit, you will be able to :

- discuss the uses and abuses of Labour saving appliances
- learn the various types of commonly used appliances

11.2 INTRODUCTION

In the previous unit we discussed about office stationaries and supplies. In this unit we are going to discuss about uses and abuses of Labour saving appliances. Modern offices are a reflection of the growing dependence on technology or mechanisation process for getting the job done. In fact the primary purpose of office automation is the minimal dependence on human labour and the optimum control and monitoring of organisation functions. Better known as the time and labour saving devices, these office machines and equipment that enable office automation have become an indispensable part of modern offices. There are several appliances that account for optimising office work, performance and productivity. Some of the common labour saving devices includes typewriters, accounting machines, calculators, franking machines, photocopier, telephones, facsimile, computer, scanner, printer etc. At the end of this unit you will be able to know the various types of commonly used appliances.

11.3 USES AND ABUSES OF LABOUR SAVING APPLIANCES

Office automation process through the use of diverse machines and equipment brings forth several benefits for the organisation, over and above the advantage of saving time and labour. However, the demerits or the disadvantages associated with the use of these labour saving devices cannot be ignored. Some of the uses and abuses have been stated as follows:

Uses of labour saving appliances:

1) ***Increase productivity:*** The labour saving devices relieve the man power from exertion in physical capacity and from limited performing working hours. Devices can be used for longer working hours thereby resulting in comparatively increased productivity.
2) ***Increase efficiency:*** One of the primary uses of labour saving devices is to increase efficiency by getting the job accomplished within comparatively lesser time than in case of being done manually. These devices enable to speed up work thereby increasing the efficiency level of job performance.
3) ***Increase accuracy:*** Office automation helps in minimising errors and thorough checking resulting in increased accuracy of the work done.
4) ***Reduce operating costs:*** Labour saving devices enable the reduced use of manual labour which in turn reduces the cost of engaging manual labour and efforts. Increase in productivity further facilitates reduction in the overall operating costs.
5) ***Better control:*** Since these devices help in minimising errors and allow better monitoring for checking performance, it further leads to better control of operations.
6) ***Breaks monotony:*** The use of devices and equipment in doing office work helps in breaking the monotony of work thereby resulting in increased involvement and satisfaction of the workers in their job performance.

Abuses of labour saving appliances:

1) ***Breaks employee morale:*** The introduction and use of machines and devices tend to disrupt the morale of employees since they fear loss of job and unemployment. Further, the need for skilled workers demotivates the less technically literate employees. This further leads to resistance by the employees and affects the working atmosphere adversely.
2) ***Increase costs:*** The whole process of office automation involves huge costs in the form of initial installation costs for different machines and equipment and also as maintenance costs. Further inadequate use may lead to idle machines resulting in idle costs and also breakdown and repair expenses.
3) ***Adaptation difficulty:*** Adapting the existing organisational system to new machines and devices is a difficult and time consuming procedure. Further, it does not guarantee success as early and easily as it may seem initially thereby leaving the changed system inflexible and rigid.
4) ***Increase in need for skilled employees:*** Use of machines demand highly skilled employees to operate them. As a result it demotivates the employees with lesser technical skills. It further raises the demand and costs of training facilities as well as higher payment to skilled workers.
5) ***Enthusiasm killer:*** Though automation helps to make the work interesting, systematic and organised for the workers, it also tends to make the work more routine and repetitive by nature. This and the too much dependence on machines and equipment eventually kill their enthusiasm and creativity resulting in a loss of spirit and lethargy amongst the workers.
6) ***Threat of obsolescence:*** The organisations that reap the benefits of automation are also under a constant threat of obsolescence of their machines and equipment. Especially in case of expensive ones which have lesser use or turn idle, the threat is of higher magnitude.

11.4 VARIOUS TYPES OF COMMONLY USED APPLIANCES

The commonly used appliances are : Typewriter, Duplicator, Accounting Machines, Addressing Machines, Calculator, Franking Machines, weighting and folding machine,Dictaphone, cash register, Time Recorder, Photocopier, Telephone, Facsimile, Computer, Scanner, Printer, Letter Opener and Time and date Stamps.

Let us now discuss these appliances:

- **TYPEWRITER:** One of the most popular mechanical devices in modern offices is the typewriter that enables easy and quick printing of characters and other written matter on paper by typing individual keys depending upon the requirements, typewriters may be made available in various languages. Typewriters facilitate the typing of letters and documents within very short time. There are different types of typewriters that are available and used depending upon the purpose and facilities offered by each. Some of the most common types are discussed as follows:

a) ***Standard typewriters:*** These are the standard office typewriters that facilitate the neat performance of any kind of paper work, especially in regard to printing of cheques, invoices, staff cards etc.

b) ***Noiseless typewriter:*** This is a special typewriter designed to minimise the noise effect of the typing bar on the paper. Used mostly in case of several typewriters that need to work simultaneously, these are a little costlier than the ordinary typewriters and are not suitable for multicopy work.

c) ***Portable typewriter:*** Meant for creating convenience of carrying around a typewriter, the portable typewriter is popular amongst the travellers and journalist who need to move around for work. These are lightweight and can be easily placed anywhere and carried in a briefcase.

d) ***Electric typewriter:*** The electric typewriter runs on power based motor that minimises the energy intake of the typist and helps to create uniform work despite the erratic fingers of the typist. It involves mere touching of a key to type the desired content and reduces the level of tiredness of the typist.

e) ***Variable type machine:*** These typewriters are suitable for typing matters in variable font sizes depending upon the content size.These machines have a variety of sizes and designs for the typed matter and are suitable for reports that need to vary the emphasis on words and any other content.

f) ***Automatic typewriter:*** These typewriters also run on power and can automatically type content from a previously punched matter. These are helpful in reducing time of producing typed matter and also minimising the level of tiredness of the typists. Depending on the need of non-standard matters like names and addresses, it may be added manually in between the automatic process.

- **DUPLICATOR:** Duplicators or Duplicating machines are office devices that help in preparing circulars, price lists, notices etc. from a master copy in huge numbers as compared to the limited capacity of a typewriter. When several copies of a matter is required and which cannot be catered through a typewriter, the duplicator enables the same in a very short span of time. There are different types of duplicating machines. Some of them have been discussed as follows:

a) ***Gelatine Duplicator:*** One of the oldest duplicating machines is the Gelatine Duplicator which contains a gelatine tray. The master copy is pressed upon this gelatine tray, which is followed by pressing of the copying papers one after another with a dampened roller to take a copy. The master copy must be prepared with a special ink meant for use in case of Gelatine Duplicators. Though this is a comparatively cheaper alternative, the number of copies is very limited.

b) ***Mimeograph or Stencil Duplicator:*** It is one of the most popular duplicators in business offices that make use of stencils. The stencil may be cut by a typewriter or by hand with a stylus pencil. This mimeograph allows the usage of correcting fluid for making corrections. Another major benefit of this machine is that it enables the duplication in thousands with the help of the rolling drum.

c) ***Spirit Duplicator:*** Also known as a hectograph, the spirit duplicator is used to reproduce drawings, handwritten and typewritten matter in a

variety of colours. The method is a simple one where a master copy is prepared on art paper through a hectograph carbon paper. This master sheet is then fit to the duplicator drum and copy papers are fed accordingly into the device. The rotating drum creates an impression on the copy paper with the aid of a spirit under a dampened pad, which dries very quickly leaving behind the image on the paper. It is an economical method that enables the reproduction in several colour formats.

d) ***Photographic Duplicator:*** This is used in case an exact copy of any document is required. This device generally adopts either the contact process or the camera process. It is concerned with taking photographs of the document first and as the produced copyis developed soon after drying, it becomes ready for use.

e) ***Typeset Duplicator:*** This duplicator can be operated either manually or with a motor and takes place with the help of an inked ribbon. Around the outside of a drum, individual pieces of type for each letter are set up and it can produce more than a thousand copies per hour. This is an expensive device and takes time to set up.

- **ACCOUNTING MACHINES:** The accounting machines are an integral part of modern offices, mostly because they provide convenience in terms of handling the increasing accounting work pressure. These machines are a combination of both typewriters and calculators. So they not only give printed records of figures or accounting details, but also do the actual calculating task. Accounting operations like ledger posting, journal records, cash receipts, invoice records, payments, etc. can be easily carried out with the accounting device. These devices promise accuracy and speed in addition to analysis of various types of figures for different organisational objectives. Some of the common accounting machines include the calculating machine, adding listing machine, book-keeping machines etc. However, the cost of these machines and their repair charges are high and power failure cases tend to bring their operation to a temporary standstill.

- **ADDRESSING MACHINES:** These machines are used in case of large organisations that need to despatch a large number of bills, circulars, price lists etc. to thousands of addresses. Writing the addresses on the cover for each recipient is practically impossible and irrational, especially in regard to time and error cases. Hence these addressing machines with embossed or stencilled metal plates bearing the details of addresses enable their printing on each envelope within remarkable time, speed and accuracy. The addressing machines are economic and can be easily operated without much training. But it is crucial to keep the metal plates with the addresses up to date.

- **CALCULATOR:** Calculators are devices that help in calculations and minimise the tedious nature of the job. Calculators are popular office devices owing to their capacity of making calculations ranging from mere addition and subtraction to multiplication, division and percentage calculation also. They further make higher order calculations easier in case of discounts and modern calculators also facilitate statistical and trigonometric calculations as well. Calculators minimise errors and bring in accuracy in addition to cutting down the time involved in making major calculations.

- **FRANKING MACHINES:** This machine is used in the despatch work, and is licensed by the postal office. An advance payment is made to the post office for an agreed total of postage. The purchasing company has to be registered with the post office and on payment of the necessary amount, the franking machine is issued. It relieves the workers from staying back at work very late much after office hours for the purpose of postage stamp work. The franking machine with its meter can print on cards and letters fed into it the amount of stamps as read by it on the basis of the advance payment that is made. Once the amount is exhausted, the machine locks itself till the next advance is made. The franking machine is advantageous since it saves time and in case of

wrongly franked envelopes, the amount can be refunded from the post office.

- **WEIGHTING AND FOLDING MACHINE:** These devices are used for the purpose of handling letters before they are despatched to the requisite addresses. In case of huge number of letters to be placed in envelopes, it becomes tedious and time consuming to do this job manually. So these machines enable the weighing of the letters so as to determine the necessary postage requirement and folding of letters in one or two or three parallel folds with additional cross folds at a greater speed.

- **DICTAPHONE:** The Dictaphones are used to record dictation by the business which is then sent to the typist for further typing. Any number of letters or reports is dictated into the mouthpiece attached to the device. And this gets impressed on a cylinder or a disc which is placed on another device and the typist uses the attached earphone of this machine to type the matter. In case he misses any word, the machine may be stopped and brought to the desired part to type the missed content or word. Once it is done, the messages may be erased with the help of an eraser known as the 'shaver' thereby enabling the repeated use of the cylinder for dictation. Thus the Dictaphone with three parts; the recorder, the transcribe machine and the shaver is a very useful device for modern offices since it can record several dictations at any time at a very high speed. Moreover, the speed of the machine can be adjusted according to the typist's speed and it eliminates the errors of shorthand also.
- **CASH REGISTER:** This appliance is basically used for recording and checking cash receipts in firms where many payments are received. Theamount paid by the customers is shown on the dial and it is also printed on a sheet. Some of the cash registers also issue receipts to customers and state updated total of the receipts. The basic advantage of this device is that it simplifies the jobs of the cashier and brings in more ease and accuracy of cash records. It also ensures effective control over cash receipts and helps in the auditing process as well.

- **COIN SORTER:** The coin sorter device helps in sorting the coins of different denominations in a systematic manner. These devices are used by banks and other such stores and organisations with a view to relieve the cashier from the hassle of finding, arranging or sorting of the coins. The device consists of several trays with holes for keeping coins of different denominations and sizes. These trays are placed one over another and when a large number of coins are to sorted, all coins are placed on the uppermost tray. These trays are then shaken with the help of a mechanical device or by hand, and the coins on the basis of their size get sorted into each tray. The coin sorter saves time and reduces the complicacies of sorting coins, thereby making it easily available as per needs.
- **TIME RECORDER:** The Time Recorders are actually big clock like devices meant for recording the entry and exit of workers in factories. The worker on entering the work premises has to insert his card in the machine slot and turn an lever, which then prints the time and date of entry of the worker on the card. The same process is repeated when the worker is about to exit the work place. This ultimately helps in proper recording of the time of work and the presence of the workers. It further helps in accurate calculation of wages of the workers based on these records and also ensures punctuality of the workers.
- **PHOTOCOPIER:** Popularly known as the Xerox machine, this device is helpful in getting exact photographic copies of original documents containing sketches, diagrams, graphs and pictures apart from the written content. It generally takes about 6 seconds or less than that time to reproduce a copy. The photocopier is useful for reproducing the original in its finest details, both in colour or black and white, and avoids human errors.

- **TELEPHONE:** The telephone is an important device for modern offices. In fact, it is a significant invention for the purpose of oral communication. The telephone facilitates speedy exchange of information both within

and outside the organisation. Basically the Telephone communication can be either internal or external. When the communication is facilitated within the same office or building, it is considered as internal communication. On the other hand, when the communication needs to be conducted by a person from one office in a city with another individual in another location, it is known as external telephone connection. Telephone enables quick sharing of information and orders or instructions across offices.

- **FACSIMILE:** Popularly known as the FAX machine, the facsimile has grown to be an important office device especially for maintaining office communications. This machine helps in instant transfer of documents and matter, whether it is handwritten or typed, and also allows the transfer of charts or diagrams and pictures. Both incoming and outgoing of messages are possible through the FAX machines across the globe. The basic advantage of a FAX machine is that it enables speedy transfer of messages and high quality and originality can be maintained in case of images.
- **COMPUTER:** The computers are a modern office device that carries out the functions of collecting and storing data from several sources at a same time. It further carries out the processing of the data collected or inserted into it to reproduce systematic and crucial information in a simplified manner and easy to understand manner. Computers can store huge data and can make the same available in no time at all. The computer is advantageous for modern offices since it helps in saving of labour cost and brings in more accuracy to the work. Further it reduces monotony of the staff. However, the installation charges may be too high and it also threatens the displacement of employees thereby resulting in strained personnel relations.
- **SCANNER:** This is a modern office device that optically scans almost anything and converts it into a digital image. The commonly used ones include the flatbed scanner that has a glass window for placing the document or the object for scanning. Apart rom this there is the hand

held scanner moved by the hand over the object or matter to be scanned. These scanners are essential in modern offices to reproduce matter and content in a very short span of seconds. Several types of scanners are available in the market depending upon the use and functions.

- **PRINTER:** The printer is an electronic output device that takes input from the data stored in a computer or any other device and prints it in paper. The printer is essential for modern offices since it enables quick and easy printing of any stored data, whether it is in text format or images as well. Basically there are two types of printers, namely the inkjet printer and the laser printer. Depending upon the use or needs of the organisation, the printer is chosen for converting soft copy materials in a computer or other devices into hard copy formats. Preparation of reports or any other statistics through a computer and readying permanent records is well facilitated by a printer.
- **LETTER OPENER:**The letter opener machine with its revolving knife edge slices a very thin part from one edge of the envelope of a letter. It is useful in case of huge mails that are received and when manually opening them turns out to be time consuming. Care needs to be taken to shake the contents of the envelope to the other side so that the use of the letter opener does not cut of the important contents. Opening of letter through this device is a task of just few minutes in comparison to doing it manually.
- **TIME AND DATE STAMPS:** Used in small business concerns, this type of machines affix stamps on postcards and envelopes etc. rolls or strips of stamps are purchased from the post office which is then fed into the machine. The machine also contains a part for water that is used to moisten the stamps automatically and affix the stamp on the envelope. Some machines also have a meter attached which shows the record of total stamps used. The prime advantage of this machine is that stamping can be done quickly and the cost of postage can also be easily determined.



CHECK YOUR PROGRESS

Q1: Write any three uses of labour saving appliances.

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Q2: What is a scanner ?

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Q3: Define photocopier

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11.5 LET US SUM UP

- Office automation process through the use of diverse machines and equipment brings forth several benefits for the organisation, over and above the advantage of saving time and labour.
- **Uses of labour saving appliances:**
  1) Increase productivity
  2) Increase efficiency
  3) Increase accuracy
  4) Reduce operating costs
  5) Better control
  6) Breaks monotony
- **Abuses of labour saving appliances:**
  1) Breaks employee morale
  2) Increase costs
  3) Adaptation difficulty
  4) Increase in need for skilled employees
  5) Enthusiasm killer
  6) Threat of obsolescence

- The commonly used appliances are : Typewriter,Duplicator,Typewriter, Accounting Machines, Addressing Machines, Calculator, Franking Machines, weighting and folding machine,Dictaphone, cash register, Time Recorder, Photocopier, Telephone, Facsimile, Computer, Scanner, Printer, Letter Opener and Time and date Stamps.



11.6 FURTHER READING

1) Balachandran (2009); *Office Management;* Tata McGraw-Hill Education, India.
2) Bhatia, Dr. R. C. (2005); *Principles of Office Management*; Lotus Press; India.
3) Bhatnagar, S. K. (2011); *Office Management*; Frank Brothers; India.



11.7 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No. 1: Uses of labour saving appliances: 1) Increase productivity 2) Increase efficiency 3) Increase accuracy

Ans to Q No. 2: Scanner is a modern office device that optically scans almost anything and converts it into a digital image.

Ans to Q No. 3: Photocopier is popularly known as the Xerox machine, this device is helpful in getting exact photographic copies of original documents containing sketches, diagrams, graphs and pictures apart from the written content.



11.8 MODEL QUESTIONS

Q 1 : Discuss the the uses of labour saving appliances
Q 2 : Discuss the the abuses of labour saving appliances
Q 3 : Explain the commonly used appliances in an organization
Q 4 : Write short notes on:
a. Addressing Machines
b. Calculator
c. Weighting and folding machine
d Cash Register

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