

**CHAPTER VII**  
**COMPUTER APPLICATIONS IN MATERIALS**  
**MANAGEMENT**

**INTRODUCTION :**

In modern management, Time plays a great role. Right decision at right time is the need of hour. All the decisions are based upon the past data or information and as such with the change in technology and other developments, it is necessary that the decision be based on the latest information, for which a sound data processing system is called for.

The materials manager who wishes to utilize a computer in the operation of his department does not have to understand its electronic intricacies. He should, however, know generally what a computer can do, what it cannot do and how his departmental procedures must be designated so as to be compatible with computer operation.

Effective use of a computer offers a manager several significant advantages.

- i) Computing ability to process huge volumes of data rapidly.
- ii) Freeing the personnel from routine clerical work and repetitive tasks.
- iii) Enable departmental personnel to do more creative work.
- iv) Immediate availability of much more complete data for use in decision making.

The materials management activities which can be performed by computerized system are the same in all cases. They are

- H Posting of inventory records.
- H Computation of economic order quantities.
- H Preparation of purchase requisitions.
- H Preparation of purchase orders.
- H Distribution of accounting charges.
- H Automatic preparation of follow-up memos.
- H Posting of delivery and quality records, by part and by vendor.
- H Preparation of numerous operating reports for management.
- H Auditing of invoices and preparation of cheque for payment of invoice.

**INTEGRATED MANAGEMENT INFORMATION SYSTEM :**

The system using computers can generate various types of information / reports depending on the requirements. Following list gives a list of few reports used in materials department. The list is only illustrative and not exhaustive.

- 1) Long-term production schedule.
- 2) Short-term schedule.
- 3) Materials manual.
- 4) Requirement of non-stock items from user departments.
- 5) Information regarding lead time, supply position (shortages), price trends, anticipated price changes, etc.
- 6) Production Schedule handed over to production department.
- 7) Materials requisition from the production to stores.
- 8) Materials supplied from stores to production.
- 9) To and fro information between stores and inspection.
- 10) Information regarding receipts from the stores.
- 11) Date regarding issues from stores.
- 12) Due dates of supply from purchase department.
- 13) Information to purchase department for follow up of supplies.
- 14) Purchase requisition to purchase department.
- 15) Purchase order.
- 16) Materials from suppliers to stores.
- 17) Previous year's consumption data.

### **OPERATIONAL AND EXCEPTIONAL REPORTS :**

The following operational / exceptional can be obtained from the computer. Here again the list is not exhaustive.

- 1) Bill of materials
- 2) Price forecasts
- 3) Purchase budget
- 4) ABC Analysis
- 5) Inventory levels
- 6) Items below safety stock levels
- 7) Movement analysis
- 8) Materials accounting and summary of issues
- 9) Stock verification
- 10) Vendor rating
- 11) Sector-wise and material category-wise purchase list
- 12) Outstanding payments

It is possible to get the following exceptional reports for managerial purpose.

- 1) Items for which consumption is more than the norms
- 2) Items for which there is a supply shortage and anticipated price increase
- 3) Items with stock level above maximum norms
- 4) Obsolete items

Computerization can be of great help to meet the following objectives of materials management.

- 1) Accurate and speedy remittance of information to customers and suppliers, bills, statements, reminders, etc.
- 2) Information for management for control purposes e.g. stock levels, inventory position, customers acceptance etc., etc.,
- 3) Improvement of customer relations, vendor and employee relations, by timely accurate and relevant information and thro' vendor analysis etc.
- 4) Reduction of inventories to free the working capital.
- 5) To increase profits at the same time giving better service by optimum scheduling, forecasting and optimizing utilization of traffic facilities, warehouses, machines, etc.
- 6) To increase the productivity of materials and facilities.