**SET – I**

**Q. No 1. What are the Characteristics and Types of information?**

**Characteristics**

**Types**

To perform various functions and processes effectively, an enterprise collects data related to its target market, customers, and competitors. This data helps an enterprise to make crucial business decisions. Data is a representation of facts, observations, assumptions, and occurrences related to the people, processes, and functions of an enterprise. Data can be collected in the form of text, numbers, audio, video, and images.

However, data seems to be useless until it is processed to extract the desired results. When data is processed and converted into a form that has a specific meaning, it becomes information. For example, when a market researcher asks people to complete questionnaires about a product or a service, the collected questionnaires are data. When this data is processed and analysed to prepare a market report, the resulting report is information. So, we can say that information is a well-processed form of data that has a specific meaning and purpose. Information helps an enterprise in decision making. Thus, it is important for an enterprise to have accurate and timely information.

**Characteristics =>**

Information is integral to effective decision making in an enterprise. Therefore, it is important for an enterprise to have the right information, in the right form, and at the right time, to make correct decisions.

The following are the characteristics of information:

* **Accuracy**

Implies that information should be correct and based on facts. Inaccurate information not only turns useless, but also leads to ineffective decision making.

* **Relevance**

Refers to one of the most important characteristics of information. The information can only be useful if it is relevant to the respective domains of decision making. For example, an enterprise wants to formulate effective marketing strategies. In this case, the collected information should be related to current market trends and needs and preferences of customers.

* **Timeliness**

Implies that information should be available when it is needed. For example, We are the marketing manager of an enterprise. We have to select an appropriate promotional tool. In such a case, if We get information related to consumer behaviour after the completion of the decision-making process, the information is useless. So, we should note that the value of the information is inversely proportional to time.

* **Completeness**

Refers to the characteristic of the information being fully interpretable. If the information does not make complete sense, it may not help in decision making.

**Types =>**

Decision making takes place at all the levels of an enterprise (top level, middle level, and bottom level). So, managers at different levels require different types of information to make business decisions.

Based on these levels, information is categorized in the following three types:

* **Strategic Information**

Refers to the information that is used by the top management of an enterprise to establish an overall business strategy. Strategic information can be related to the profitability of each division of an enterprise, level of competition in the market, and investments made by the enterprise.

* **Tactical Information**

Refers to the information that helps middle-level managers in the allocation of resources. Tactical information can be related to business productivity, profit and cash flow forecasts, and prices of

different products.

* **Operational Information**

Provides support to the bottom-level managers of an enterprise in carrying out day-to-day operational tasks. For example, a production manager may want information related to the quality control checks that are being carried out in the manufacturing process.

**Q. No 2. Explain nature, need and role of Management Information System.**

**Nature**

**Need**

**Role**

Management is a process of planning, organizing, directing, and controlling organizational resources. MIS is a computer-based system that supports managers to perform various management functions, such as planning, organizing, directing, and controlling. According to Davis and Olson, “MIS is an integrated user-machine system designed for providing information to support operational control, management control and decision-making functions in an organization. ISs make use of resources such as hardware, software, men, procedures as well as suppliers.”

MIS collects data from various internal and external resources, processes it, and provides meaningful information. To process this data, MIS applies certain technical and analytical measures. The information given by MIS helps managers to make informed business decisions, which, in turn, improves the organization’s performance.

In short MIS is an information system that enables managers to perform various managerial functions, such as planning, organizing, directing and controlling, by providing updated information. On the other hand, ERP is a system that integrates the information obtained from different information systems (such as BPR, MIS, DSS, and EIS) for business decision making.

**Nature =>**

MIS is an interdisciplinary approach that encompasses people, procedures, software, databases, and devices to provide useful information to managers for business decision making.

Nature of MIS as follows:

* **System Approach:**

Refers to an approach in which an organization is considered to be a set of interrelated sub-systems. MIS coordinates and integrates the different sub-systems of an organization by providing the required information.

* **Technical Concept:**

Implies that MIS makes use of a number of technologies for data collection, data processing, and data dissemination.

* **Interdisciplinary Concept:**

Implies that MIS encompasses various disciplines, such as accounts, marketing, sales, production, operations research, and computer science, and provides integrated information.

**Need =>**

Below the list of various purpose of MIS:

1. Provides useful and timely information to managers.
2. Provides a basis for logical decision making.
3. Disseminates integrated information among the different departments of the organization.
4. Ascertains a rational basis for business planning.
5. Improves operational control in the organization.
6. Provides access to information to all the employees of the organization.

**Role =>**

The main aim of MIS is to help managers in making complex business decisions easily and efficiently. Besides.

MIS helps an organization in the following ways:

* **Deal with business complexities:**

The business environment is changing constantly with continuous advancement in technology. These changes have increased the complexity of different business functions. For example, to gain hold in the market, most organizations have branches in different parts of the world. In such a case, it is difficult for organizations to have control on operations performed at all the branches. To deal with such complexity, MIS provides integrated information to all the branches.

* **Survive in stiff competition:**

MIS helps an organization to remain competitive by providing accurate and updated information related to current market trends. This information helps managers to make various strategic decisions effectively.

* **Perform managerial functions effectively:**

In the present business era, the role of managers in an organization cannot be limited to some specified functions. Nowadays, managers are responsible for effective business planning, decision making, and forecasting. MIS helps managers to perform their functions effectively and quickly. For example, MIS helps managers in comparing the sales of the last five years with the sales of the current year by representing sales data in a graphical or tabular form.

* **Adapt to changes:**

MIS helps an organization to respond quickly to changes in the market. For example, nowadays, customers prefer to avail services through the Internet. With the help of MIS, an organization can provide an online service facility to its customers.

**Q. No 3. Explain briefly about Material Requirement Planning (MRP)**

**Material Requirement Planning**

**Material requirement Planning =>**

In the 1960s, most organizations implemented software packages for controlling and managing their inventory. However, these organizations were not completely satisfied with these software packages. As a result, in the 1970s, a new system called MRP was invented.

MRP is a production planning and inventory-control system that helps an organization in managing its manufacturing processes effectively. Moreover, it enables an organization to keep track of the due date of order, the date when the order is scheduled to arrive, and the date when the order is actually received. The following are the main objectives of an MRP system:

* Ensuring the availability of raw materials for producing products
* Making products available for customers
* Reducing the inventory level
* Planning and scheduling activities related to purchasing, manufacturing, and product delivery

**The following are some key benefits of an MRP system ->**

* **Maintaining an Adequate Level of Inventory**

An MRP system helps a manufacturing organization prepare a production schedule. This schedule

enables the organization to determine an appropriate level of inventory in order to meet production requirements, thereby, reducing the inventory cost of the organization.

* **Maintaining an Economic Ordering of Lot Size**

An MRP system helps an organization determine the exact lot size required for producing products. In addition, it enables the organization to determine production requirements, carrying costs, quantity price breaks, and transportation costs. This, ultimately, helps the organization in selecting the most cost-effective order.

* **Planning and Scheduling Purchasing Activities**

If the demand for a product increases, an organization needs to determine the type and amount

of inventory required to meet this demand. This can be easily done by using an MRP system.

* **Planning Production Activities**

An MRP system helps an organization in preparing a production plan by determining an adequate amount of input to be employed for producing products. In addition, it enables the organization

to modify its production plan by providing information related to the shortage of inventory during the production process.

* **Making Efficient Allocation of Resources**

An MRP system helps an organization determine the number of resources, such as men and material, required for producing products. This further helps the organization allocate its resources effectively for its manufacturing process.

To provide the above benefits, an MRP system requires three types of inputs, namely, Master Production Schedule (MPS), Bill of Material (BOM), and Inventory Records (IR).

The system processes these inputs and provides the following output:

* Planned order quantities
* Planned order release dates
* Planned order due dates

**SET - II**

**Q. No 1. Explain features, benefits and limitations of inventory management system**

**Features**

**Benefits**

**Limitations**

Inventory management is all about supervising the inflow and outflow of the inventory of an organization. Effective inventory management is integral to successful business operations. This is because, excessive amount of inventory may incur high cost for an organization, while inadequate

inventory hampers the production process of the organization. Inventory management is a complex process and involves a number of activities. Therefore, in order to manage their inventory efficiently, most organizations use an ERP system with an inventory management module.

The inventory management module controls the overall inventory management process of an organization. The module helps an organization to track the movement of inventory. The inventory management module is fully integrated with the other modules of an ERP system, thereby, providing real-time inventory information to all business areas.

**Features =>**

Following are some important features of the ERP inventory management system:

* It is an organization-wide system that improves the overall efficiency of an organization.
* It involves quality-check parameters to identify the desired quality level of materials.
* It performs continuous inventory analysis, thereby, maintaining the optimum stock level.
* It performs extensive inventory monitoring by taking into account the rate of inventory consumption.
* It automatically updates the status of stock on-hand, reserved stock, ordered stock, defective and rejected stock, etc.
* It makes use of bar codes while managing inventory, thereby, facilitating easier inventory tracking.

**Benefits =>**

The main advantage of the ERP inventory management system is that it integrates all the departments and branches of an organization located in different parts of the world. Apart from this, following are some of the other benefits of the ERP inventory management system:

* It enables an organization to consistently track the level of inventory available, thereby, planning the stock to be purchased.
* It helps in tracking the movement of materials in an organization.
* It facilitates effective communication within and outside the organization.
* It provides details of all the activities involved in the inventory management process of an organization.
* It provides reliable information related to the current inventory level, the amount of inventory required, etc.

**Limitations =>**

Some of the main limitations of the ERP inventory management system are as follows:

* It cannot be fully customized according to the different requirements of an organization.
* It requires high cost, time, and effort, of an organization.
* It requires past data and proper user training for its installation, which makes it a complex task.
* It is less effective for information sharing, unless users are willing to share information.

**Q. No 2. Write short notes on the following:**

**a. Sub-modules of CRM**

**b. Features of Human Resource Management(HRM) module**

**a. Explaining the 3 sub-modules of CRM**

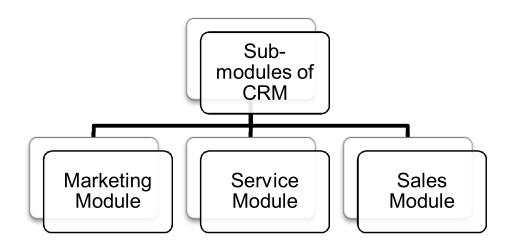
**b. Listing at least 4 features of HRM module**

Customer Relationship Management (CRM) is a tool that helps an organization to strengthen relationships with its customers. It enables an organization to identify the needs and expectations of customers and fulfil them, thereby, achieving higher customer satisfaction. In other words, CRM can be defined as a business strategy that focuses on customer satisfaction and retention.

The ERP system with CRM functionality provides information related to customers such as their name, contact history, needs and preferences, and repeat purchases. This information enables an organization to provide a quick response to customer queries and make sound business decisions.

The CRM system works in association with its different sub-modules. These sub-modules are:

1. Marketing module
2. Service module
3. Sales module



**Explaining the 3 sub-modules of CRM =>**

* **Marketing module:**

The marketing module of a CRM system helps an organization in:

* Executing marketing-related activities
* Making long-term marketing plans
* Conducting marketing campaigns through different communication modes
* Targeting potential customers and retaining the existing ones
* Identifying sales-related opportunities
* **Service module:**

The service module of a CRM system helps an organization in:

* Improving customer service
* Processing service orders
* Managing service contracts
* Complying with service-level agreements
* **Sales module:**

The sales module of a CRM system enables an organization to:

* Manage and execute the pre-sales activities
* Capture sales opportunities
* Enhance customer interaction
* Support data processing
* Centralize the relevant sales data at a single location

**Listing at least 4 features of HRM module =>**

The human resource management module is an integrated solution designed to improve the efficiency of human resource operations by reducing time-consuming administrative tasks and deploying self-service applications. In addition, the module automatically updates an employee database and facilitates online employee communication. The module not only helps an organization to maintain employee data but also allows employees to update their personal information as and when required.

Some of the important features of the human resource management module of an ERP system are as follows:

* It is able to define the job roles and responsibilities of employees.
* It helps in recruiting the right employees with the right skills and competencies.
* It simplifies the activities involved in the employee selection and placement process of an organization.
* It is capable of shortlisting eligible applicants from the pool of applications based on pre-specified selection criteria.
* It can update the details of a number of employees at a single point of time.
* It continuously tracks the performance of employees, thereby allowing an organization to conduct performance appraisals and determine training needs accordingly.

**Q. No 3. Who is an ERP consultant? Describe different types of ERP consultants, and the role of ERP consultant.**

**ERP consultant**

**Types of ERP consultants**

**Role of ERP consultant**

**ERP consultant =>**

Experts who can deal with issues, which may take place during an ERP implementation are known as business consultants or simply consultants. These consultants possess sound knowledge of system development. Moreover, they have expertise in the administration, management, and control of ERP implementation projects.

Consultants provide comprehensive support to an organization, right from the phase of package evaluation till employee training. These consultants perform multiples roles, such as project manager, team leader, and vendor service representatives, when they are hired by organizations. Generally, trained consultants are technically proficient and flexible in working with different computer applications. Moreover, these consultants have sound knowledge of software and the prevailing market conditions. They also have relationship building, communication, and problem-solving, skills. However, hiring a trained consultant is not possible for every organization, as they charge a huge amount of money.

Following are the major functions performed by consultants in an ERP implementation:

* Maintaining the documents used during the ERP implementation project
* Examining the existing market conditions and business processes of an organization
* Performing time study and gap analysis during the implementation process
* Customizing the system and reviewing its operations

**Types of ERP consultants =>**

ERP consultants usually provide three types of consultation services, namely, managerial consultation, application consultation, and technical consultation. Based on this categorization, consultants are also grouped into three main categories, which are:

* **Management Consultants:**

These consultants primarily focus on managerial functions (planning, organizing, directing, and controlling) related to ERP implementation. For example, organizing the resources and planning the flow of data. They also direct an organization throughout the ERP implementation process and the system usage.

* **Application Consultants:**

These consultants mainly focus on configuring the system as per the requirements of an organization. In addition, they are also responsible for instructing the organization about the functioning of the system through demonstrations. This helps the organization in performing its business functions with the help of the newly installed system.

* **Technical Consultants:**

These consultants primarily concentrate on resolving technical issues that may rise during an ERP implementation. These technical issues can be related to database conversion, source code modification, communication protocols, operating system management, and programme integration. These issues are usually identified by management and application consultants during an ERP implementation. Therefore, technical consultants need to work in close integration with the management and the application consultants.

**Role of ERP consultant =>**

Following are some of the Roles and responsibilities of ERP consultants:

* Perform an extensive research in order to determine the functionality of the system, thereby, meeting the needs of organizations.
* Supervise training programme in order to ensure that the training objectives are met properly.
* Supervising the entire ERP implementation process
* Formulating a plan of actions and ensuring that all the tasks are performed in the planned way
* Ensuring the participation of all the members associated with the ERP implementation project
* Adding value to the ERP implementation project through their expertise and knowledge
* Saving additional costs, resources, and time of the organization
* Providing application support so that the organization can derive the desired benefits of the ERP system
* Customizing the ERP package through thorough analysis
* Making the organization understand the pros and cons of their present legacy system