

Internal Assessment Test 2 – October 2019

Question Paper

Sub:	Information Management System				Sub Code:	15IS753	Branch:	ISE		
Date:	15/10/2019	Duration:	90 min's	Max Marks:	50	Sem / Sec:	VII - B		OBE	
<u>Answer any FIVE FULL Questions</u>								MARKS	CO	RBT
1	Explain in detail about the Transactional Processing System.						[10]	CO1	L2	
2	Illustrate the Human Resource System and explain the functionalities in detail?						[10]	CO1	L3	
3	What is ERP? Why it is needed to be in Business? Estimate the cost for ERP?						[10]	CO2	L2	
4	Explain in detail about the objectives of SCM.						[10]	CO2	L2	
5	What is CRM? Explain the three phases of CRM in detail?						[10]	CO2	L2	
6	State the functionalities of SCM? List out the SCM functions with outcomes?						[10]	CO2	L1	
7	Explain a case study dealing with the failures of ERP system.						[10]	CO2	L2	
8	With the help of a neat figure, explain the E-commerce Scope.						[10]	CO3	L2	

Solution

1. Explain in detail about the Transactional Processing System.

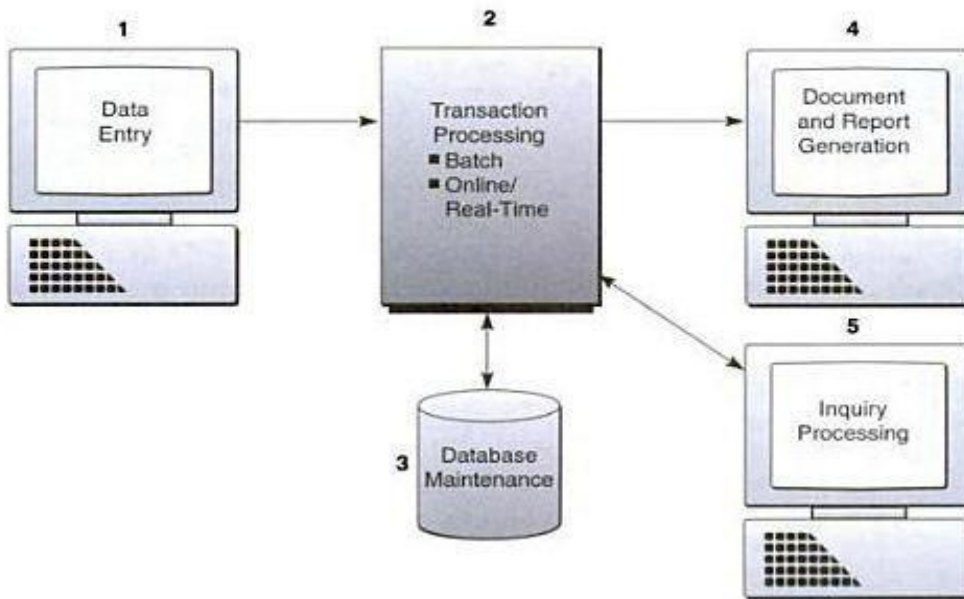
Transaction processing systems (TPS) are cross-functional information systems that process data resulting from the occurrence of business transactions.

Transactions are events that occur as part of doing business, such as sales, purchases, deposits, withdrawals, refunds, and payments. Data about the customer, product, salesperson, and store and so on, must be captured and processed. This in turn causes additional transactions, such as credit checks, customer billing, inventory changes, and increases in accounts retrievable balances, which generate even more data. Therefore, TPS play a vital role in supporting the operation of an e-business enterprise.

Online transaction processing systems plays a strategic role in e-commerce. Many firms are using the Internet, extranets and other networks that tie them electronically to their customers or suppliers for online transaction processing (OLTP). They provide superior service to customers and other trading partners. This capability adds value to their products and services, and thus gives them an important way to differentiate themselves from their competitors.

The transaction processing cycle

FIGURE 7.5 The transaction processing cycle. Note that transaction processing systems use a five-stage cycle of data entry, transaction processing, database maintenance, document and report generation, and inquiry processing activities.



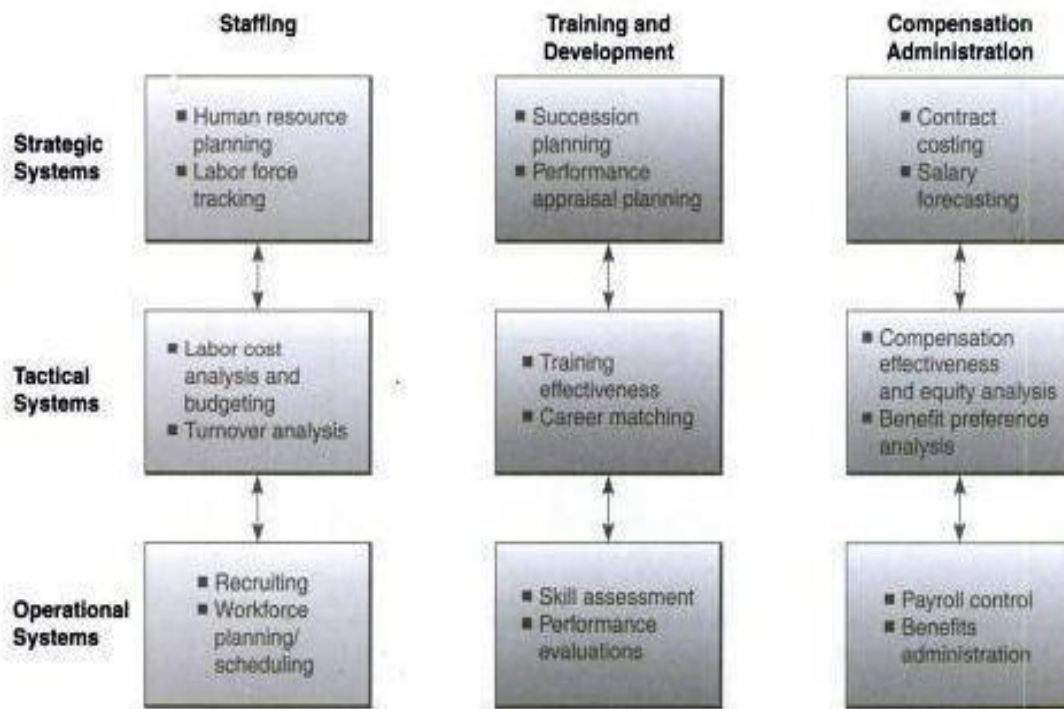
- **Data Entry.** The first step of the transaction processing cycle is the capture of business data. This is done by scanning of bar codes and credit card readers or e-commerce website on the Internet. The proper recording and editing of data so they are quickly and correctly captured for processing is one of the major design challenges of information systems.
- **Transaction Processing.** TPS process data in two basic ways:
 - **Batch Processing:** transaction data are accumulated over a period of time and processed periodically.
 - **Real Time Processing: (online processing)** data are processed immediately after a transaction occurs. They depend on the capabilities of *fault tolerant* computer systems that can continue to operate even if parts of the system fail.
- **Database Maintenance.** It is done by TPS so that they are always correct and up-to-date. For ex: maintaining proper account balances of credit card holders. Database maintenance ensures that these and other changes are reflected in the data records stored in the company's databases.
- **Document and Report Generation.** TPS produce a variety of documents like purchase orders, paycheques, sales receipts, invoices and customer statements. It also produces reports such as a payroll register, or edits reports that describe errors detected during processing.
- **Inquiry Processing.** Many TPS allow you to use the internet, intranets, extranets and web browsers or database management query languages to make inquiries and receive responses concerning the results of transaction processing activity. Responses are displayed in a variety of pre-specified formats or screens.

2. Illustrate the Human Resource System and explain the functionalities in detail?

The Human Resource Management (HRM) function involves the recruitment, placement, evaluation, compensation, and development of the employees of an organisation. The goal of HRM is the effective and efficient use of the human resources of a company. Thus, **human resource information systems** are designed to support: Planning to meet the personnel needs of the business. Development of employees to their full potential. Control of all personnel policies and programs. Originally, businesses used computer-based information systems to Produce paycheques and payroll reports Maintain personnel records

- a. Analyze the use of personnel in business operations Many firms have also developed HRIS that also support
- b. Recruitment, selection and hiring
- c. Job placement
- d. Performance appraisals
- e. Employee benefits analysis
Training and development

FIGURE 7.12 Human resource information systems support the strategic, tactical, and operational use of the human resources of an organization.



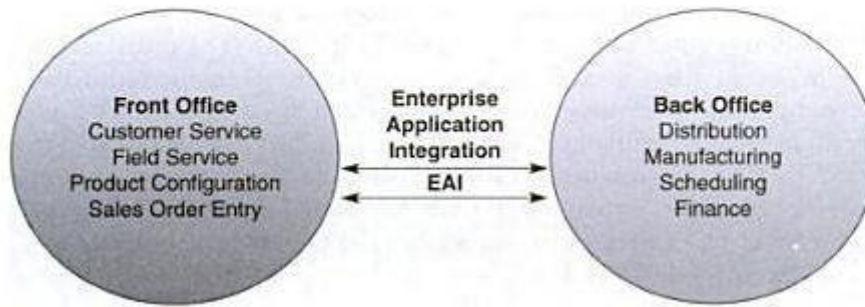
HRM and the Internet – companies are also using commercial recruiting services and databases on the WWW, posting messages in selected Internet newsgroups and communicating with job applicants via e-mail. The Internet has a wealth of information and contacts for both employers and job hunters such as monster.com, hotjobs.com. These websites are full of reports, statistics, and other useful HRM information, such as job reports by industry, or listings of the top recruiting markets by industry and profession.

HRM and Corporate Intranets – Intranets allow the HRM department to provide around-the-clock services to their customers: the employees. It can collect information online from employees for input to their HRM files, and they can enable managers and other employees to perform HRM tasks. It can serve as a superior training tool. Employees can easily download instructions and processes to get the information or education they need. Thus, the intranet eliminates the need to loan out and track training videos.

3.What is ERP? Why it is needed to be in Business? Estimate the cost for ERP?

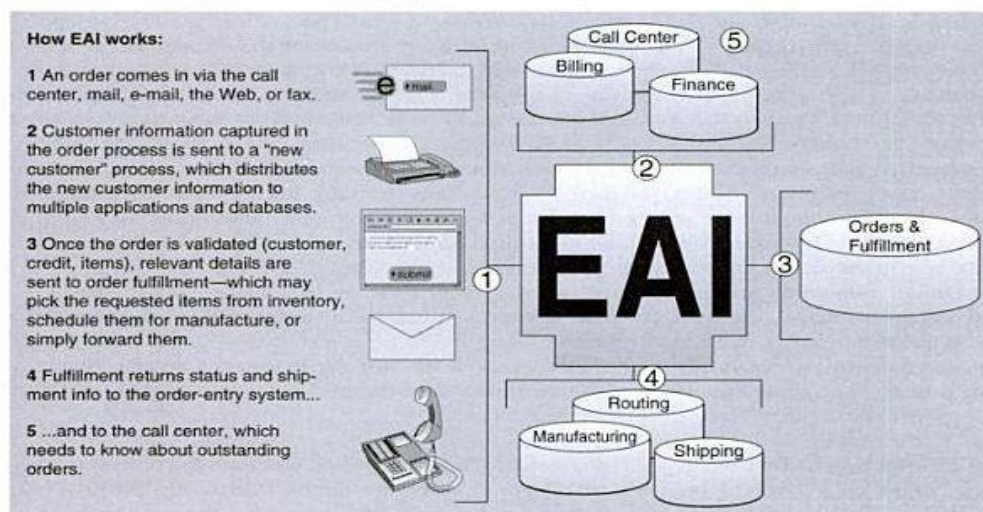
Enterprise application integration (EAI) software is being used by many companies to connect their major e-business applications. EAI software enables users to model the business processes involved in the interactions that should occur between business applications. EAI also provides **middleware** that performs data conversion and coordination, application communication and messaging services, and access to the application interfaces involved. Thus, EAI software can integrate a variety of enterprise application clusters by letting them exchange data according to rules derived from the business process models developed by users.

FIGURE 7.3 Enterprise application integration software interconnects front-office and back-office applications.



Integration is a vital capability that provides real business value to a business enterprise that must respond quickly and effectively to business events and customer demands. EAI also streamlines sales order processing so products and services can be delivered faster.

FIGURE 7.4 An example of a new customer order process showing how EAI middleware connects several business information systems within a company.



4.Explain in detail about the objectives of SCM.

SCM helps a company get the right products to the right place at the right time, in the proper quantity and at an acceptable cost. The goal of SCM is to efficiently manage this process by forecasting demand; controlling inventory; enhancing the network of business relationships of a company has with customers, suppliers, distributors and others; and receiving feedback on the status of every link in the supply chain.

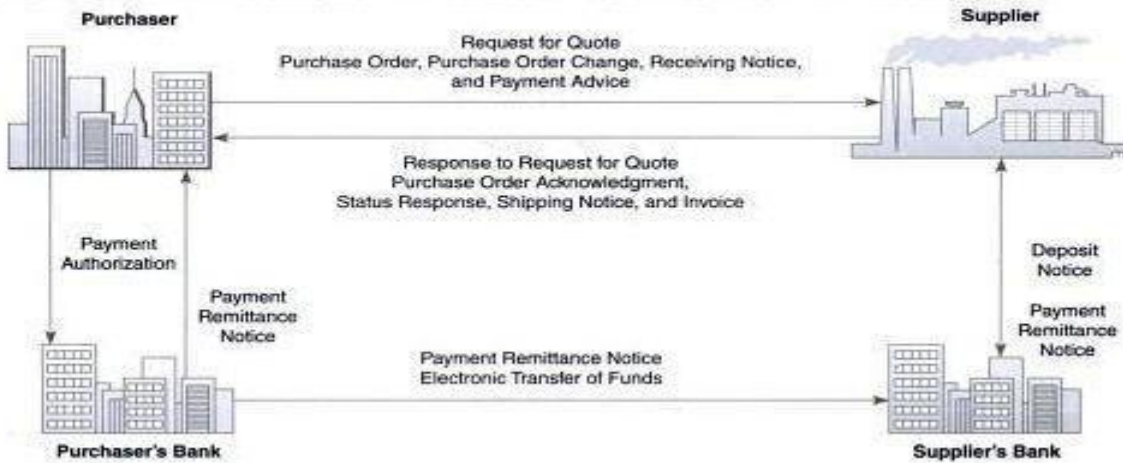
What is SCM ?

Supply chain management is a cross-functional interenterprise system that uses information technology to help support and manage the links between some of a company’s key business processes and those of its suppliers, customers and business partners. The goal of SCM is to create a fast, efficient and low-cost network of business relationships, or **supply chain**, to get a company’s products from concept to market. A supply chain is also called as a **value chain** since each supply chain process should add value to the products or services a company produces.

the basic business processes in the **supply chain life cycle**. It also emphasizes how many companies today are reengineering their supply chain processes, aided by Internet technologies and supply chain management software. The objective is to significantly reduce costs, increase efficiency and improve their supply chain cycle times.

Electronic Data Interchange

FIGURE 8.12 A typical example of electronic data interchange activities, an important form of business-to-business electronic commerce. EDI over the Internet is a major B2B e-commerce application.



Electronic Data Interchange (EDI) was one of the earliest uses of information technology for SCM.

EDI involves the electronic exchange of business transaction documents over the Internet and other networks between supply chain trading partners.

Data representing a variety of business transaction documents (purchase orders, invoices) are automatically exchanged between computers using standard document message formats without paper documents or human intervention.

EDI automatically tracks inventory changes; triggers orders, invoices, and other documents related to transactions; and schedules and confirm delivery and payment.

By digitally integrating the supply chain, EDI streamlines processes, saves time, and increases accuracy.

The Role of SCM

FIGURE 8.13 The objectives and outcomes of supply chain management are accomplished for a business with the help of interenterprise SCM information systems.

SCM Objectives		SCM Outcomes
<p>What? Establish objectives, policies, and operating footprint</p>	Strategic	<ul style="list-style-type: none"> • Objectives • Supply policies (service levels) • Network design
<p>How much? Deploy resources to match supply to demand</p>	Tactical	<ul style="list-style-type: none"> • Demand forecast • Production, procurement, logistics plan • Inventory targets
<p>When? Where? Schedule, monitor, control, and adjust production</p>	Operational	<ul style="list-style-type: none"> • Work center scheduling • Order/inventory tracking
<p>Do Build and transport</p>	Execution	<ul style="list-style-type: none"> • Order cycle • Material movement

The top 3 levels of figure 8.13 show the strategic, tactical and operational objectives and outcomes of SCM planning, which are then accomplished by the business partners in a supply chain at the execution level of SCM. The role of IT in SCM is to support these objectives with interenterprise information systems that produce many of the outcomes a business needs to effectively manage its supply chain.

Benefits and Challenges of SCM

Benefits

- SCM systems can provide them with key business benefits such as faster, more accurate order processing, reductions in inventory levels, quicker times to market, lower transaction and material costs, and strategic relationships with their suppliers.
- They are aimed at helping a company achieve agility and responsiveness in meeting the demands of their customers and the needs of their business partners.

5. What is CRM? Explain the three phases of CRM in detail?

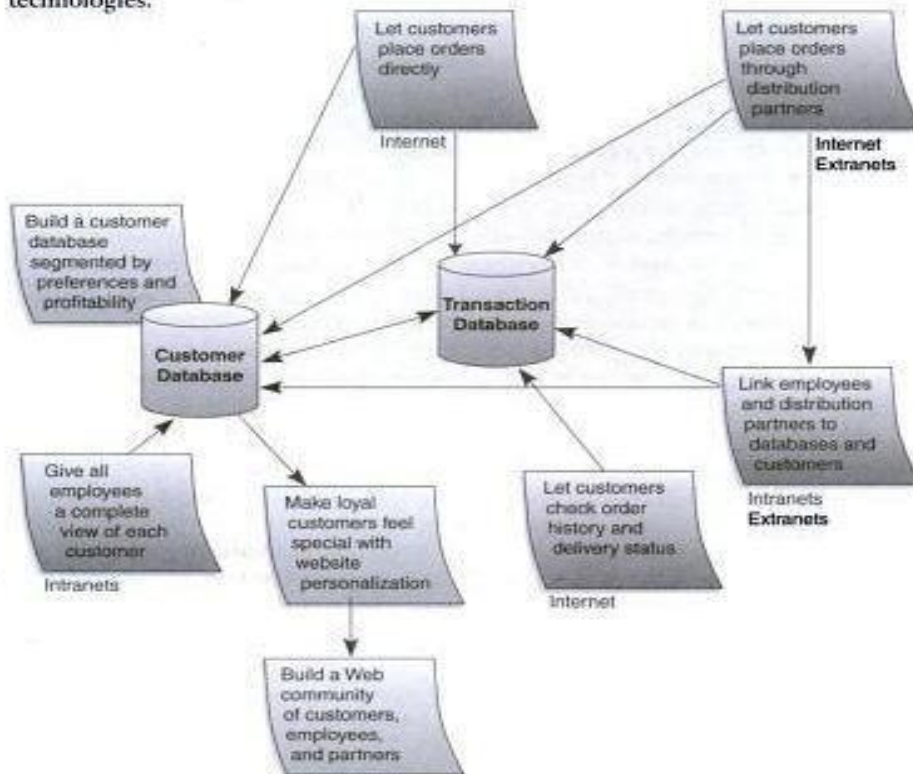
For many companies, the chief business value of becoming a **customer-focused business** lies in its ability to help them keep customers loyal, anticipate their future needs, respond to customer concerns, and provide top quality customer service.

Internet technologies can make customers the focal point of customer relationship management (CRM) and other e-business applications. CRM systems and Internet, intranet, and extranet websites create new channels for interactive communications within a company, with customers, and with the suppliers, business partners, and others in the external environment. This enables continual interaction with customers by most business functions and encourages cross-functional collaboration with customers in product development, marketing, delivery, service, and technical support.

Typically, customers use Internet to ask questions, lodge complaints, evaluate products, request support, and make and track their purchases.

Figure 2.5 illustrates the interrelationships in a customer-focused business.

FIGURE 2.5 How a customer-focused business builds customer value and loyalty using Internet technologies.



6. State the functionalities of SCM? List out the SCM functions with outcomes?

SCM software tools are immature, incomplete and hard to implement by many companies.

FIGURE 8.15

Achieving the goals and objectives of supply chain management is a major challenge for many companies today.

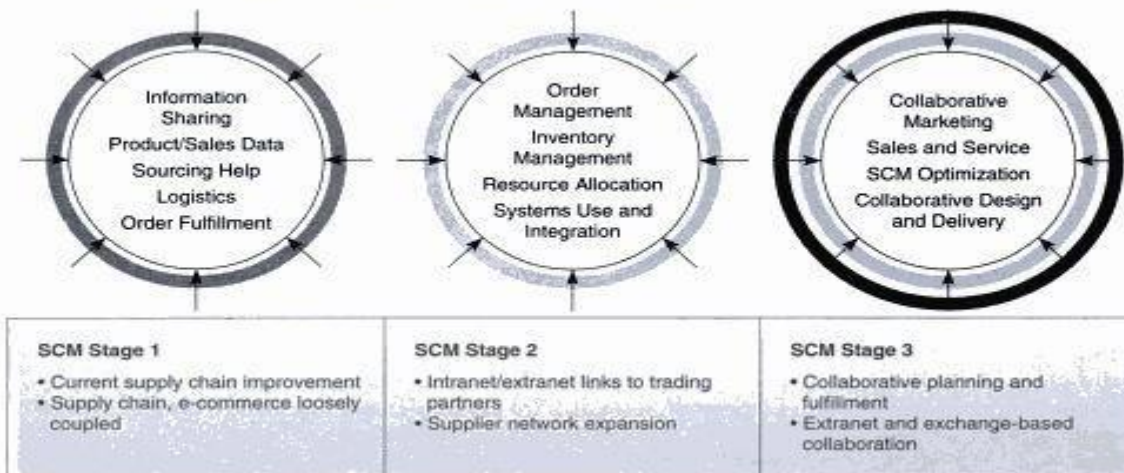


Objectives of Supply Chain Management

INFORMATION MANAGEMENT SYSTEMS NOTES

Trends in SCM

FIGURE 8.16 Stages in the use of supply chain management.



Stage 1

A company concentrates on making improvements to its internal supply chain processes and its external processes and relationships with suppliers and customers. Its e-commerce website provides access to online catalogs and useful information.

Stage 2

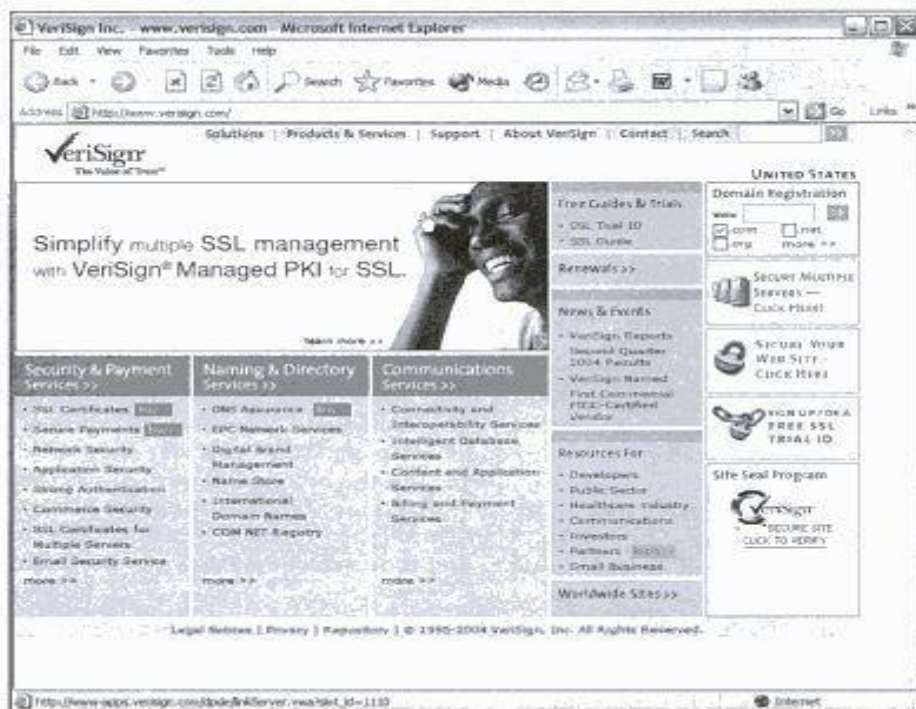
A company accomplishes substantial supply chain management applications by using selected SCM software programs internally, as well as externally via intranet and extranet links among suppliers, distributors, customers, and other trading partners. Companies' tries to expand its network to increase its operational efficiency and effectiveness.

Stage 3

A company begins to develop and implement cutting-edge collaborative supply chain management applications using advance SCM software, full-service extranet links and private and public e-commerce exchanges. Companies strive to optimise the development and management of their supply chains in order to meet their strategic customer value and business value goals.

7. Explain a case study dealing with the failures of ERP system.

FIGURE 9.8 VeriSign provides electronic payment, security, and many other e-commerce services.



8. With the help of a neat figure, explain the E-commerce Scope.

e-commerce is changing how companies do business both internally and externally with their customers, suppliers, and other business partners. How companies apply e-commerce to their businesses is also subject to change as their managers confront a variety of e-commerce alternatives. The applications of e-commerce by many companies have gone through several major stages as e-commerce matures in the business world.

B2C e-commerce is moving from simple Web storefronts to interactive marketing capabilities that provide a personalised shopping experience for customers, and then toward a totally integrated Web store that supports a variety of customer shopping experiences.

B2C e-commerce is also moving toward a self-service model where customers configure and customize the products and services they wish to buy, aided by configuration software and online customer support.

B2B e-commerce participants moved quickly from self-service on the Web to configuration and customization capabilities and extranets connecting trading partners.

As B2C e-commerce moves toward full-service and wide-selection retail Web portals, B2B is also trending toward the use of e-commerce portals that provide catalog, exchange, and auction markets for business customers within or across industries.

Both trends are enabled by e-business capabilities like CRM and SCM.
