SHEKHAWATI INSTITUTE OF TECHNOLOGY, SIKAR (RAJASTAHN)

Master of Computer Application (IV SEM)

I Midterm Exam 2018 (IV SEM MCA)

Subject Code & Name: MCA-405 & E-Commerce

M.M:20 Time:1:30 Hour

Q.1 What do you mean by E-commerce? Explain Its Architecture in detail.
Q.2 Write advantages and Disadvantages of E-commerce.
Q.3 Differentiate between Traditional commerce and E-commerce.
Q.4 Explain types of E-commerce in detail.
Q.5 Define Brokerage model in detail.
Q.6 Explain applications of E-commerce.
Q.7 Explain about Value chain model.

ANSWERS:

Q.1 -

E-commerce (electronic commerce or EC) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either as business-to-business, business-to-consumer, consumer-to-consumer or consumer-to-business. The terms e-commerce and e-business are often used interchangeably. The term e-tail is also sometimes used in reference to transactional processes for online shopping.

E-commerce Architecture:

E-commerce is based on the client-server architecture.

A client can be an application, which uses a Graphical User Interface (GUI) that sends request to a server for certain services.

The server is the provider of the services requested by the client.

In E-commerce, a client refers to a customer who requests for certain services and the server refers to the business application through which the services are provided.

The business application that provides services is deployed on a Web' server.

The E - Commerce Web server is a computer program that provides services to "other computer programs and serves requested Hyper Text Mark-up Language (HTML) pages or files.

In client-server architecture, a machine can be both a client as well as a server.

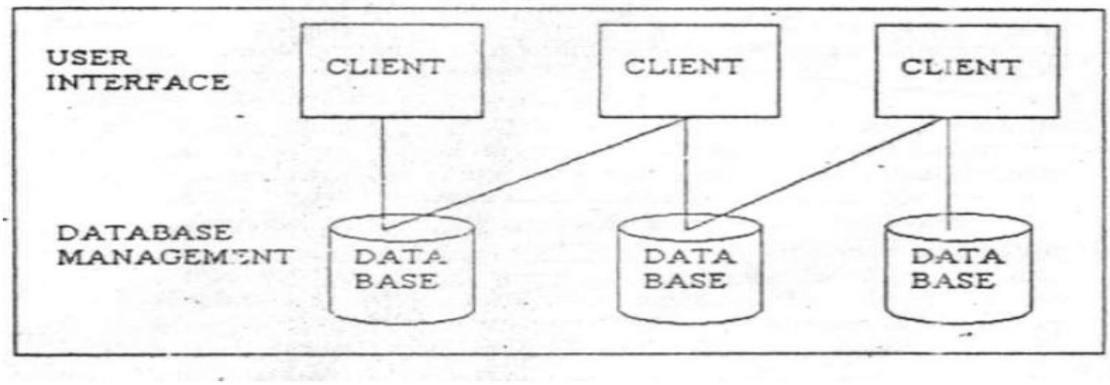
There are two types of client server architecture that E-commerce follows: two-tier and three-tier.

E- Commerce System Architecture: Two-tier architecture:

In two-tier client-server architecture the user interface runs on the client and the database is stored on the server. The business application logic can either run on the client or the server. The user application logic can either run on the client or the server. It allows the client processes to run separately from the server processes on different computers.

The client processes provide an interface for the customer that gather and present the data on the computer of the customer. This part of the application is known as presentation layer. The server processes provide an interface with the data store of the business.

This part of the application is known as data layer. The business logic, which validates data, monitors security and permissions and performs other business rules, can be kept either on the client or the server. The following Figure shows the e commerce system two-tier architecture diagram.



E- Commerce System Architecture: Three-tier architecture:

The three-tier architecture emerged in the 1990s to overcome the limitations of the two-tier architecture. In three-tier architecture, the user interface and the business application logic, also known as business rules and data storage and access, are developed and maintained as independent modules.

The three-tier architecture includes three tiers: top tier, middle tier and third tier.

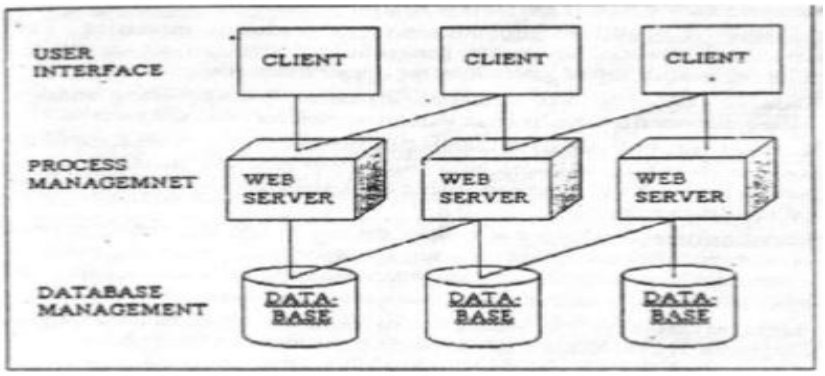
The top tier includes a user interface where user services such as session, text input, and dialog and display management reside.

The middle tier provides process management services such as process development, process monitoring and process resourcing that are shared by the multiple applications.

The third tier provides database management functionality. The data management component ensures that the data is consistent throughout the distributed environment, the

centralized process logic in this architecture, which makes administration easier by localizing the system functionality, is placed on the middle tier.

The following Figure shows the outline of the e commerce system Three - tier architecture diagram.



The client server architecture advantages:

The client-server architecture provides standardized, abstract interfaces to establish communication between multiple modules. When these modules are combined, they become an integrated business application. Each module is a shareable and reusable object that can be included in another business application.

In the client-server architecture, the functions of a business application are isolated within the smaller business application objects and so application logic can be modified easily.

In "the client-server architecture, each business application object works with its own encapsulated data structures that correspond to a specific database. When business application objects communicate, they send the data parameters as specified in the abstract interface rather than the entire database records.

This reduces the network traffic. In the client-server architecture, a programmer can develop presentation components without knowing the business application logic.

This architecture also helps a database analyst in accessing the data from the database without being concerned how the data is presented to an end user.

Q.2 –

Advantages and Disadvantages of Ecommerce

The invention of faster internet connectivity and powerful online tools has resulted in a new commerce arena – Ecommerce. Ecommerce offered many advantages to companies and customers but it also caused many problems.

Advantages of Ecommerce

- Faster buying/selling procedure, as well as easy to find products.

- Buying/selling 24/7.
- More reach to customers, there is no theoretical geographic limitations.
- Low operational costs and better quality of services.
- No need of physical company set-ups.
- Easy to start and manage a business.
- Customers can easily select products from different providers without moving around physically.

Disadvantages of Ecommerce

- Any one, good or bad, can easily start a business. And there are many bad sites which eat up customers' money.
- There is no guarantee of product quality.
- Mechanical failures can cause unpredictable effects on the total processes.
- As there is minimum chance of direct customer to company interactions, customer loyalty is always on a check.
- There are many hackers who look for opportunities, and thus an ecommerce site, service, payment gateways, all are always prone to attack.

Q.3 –

Difference Between Traditional Commerce and e-Commerce

Many people, still prefer traditional commerce over e-Commerce, due to their dogma that the latter is not safe, however, this is just a myth. Both modes have their pros and cons, so we have simplified you the difference between traditional commerce and e-Commerce.

Comparison Chart

Basis for Comparison	**Traditional Commerce**	**e-Commerce**
Meaning	Traditional commerce is a branch of business which focuses on the exchange of products and services, and includes all those activities which encourages exchange, in some way or the other.	e-Commerce means carryng out commercial transactions or exchange of information, electronically on the internet.
Processing of Transactions	Manual	Automatic
Accessibility	Limited Time	24×7×365
Physical inspection	Goods can be inspected physically before purchase.	Goods cannot be inspected physically before purchase.
Customer interaction	Face-to-face	Screen-to-face

Basis for Comparison	Traditional Commerce	e-Commerce
Scope of business	Limited to particular area.	Worldwide reach
Information exchange	No uniform platform for exchange of information.	Provides a uniform platform for information exchange.
Resource focus	Supply side	Demand side
Business Relationship	Linear	End-to-end
Marketing	One way marketing	One-to-one marketing
Payment	Cash, cheque, credit card, etc.	Credit card, fund transfer etc.
Delivery of goods	Instantly	Takes time

Q.4 –

Types of e-commerce

Generally speaking, when we think of e-commerce, we think of an online commercial transaction between a supplier and a client. However, and although this idea is right, we can be more specific and actually divide e-commerce into six major types, all with different characteristics.

There are 6 basic types of e-commerce:

1. Business-to-Business (B2B)
2. Business-to-Consumer (B2C)
3. Consumer-to-Consumer (C2C)
4. Consumer-to-Business (C2B).
5. Business-to-Administration (B2A)
6. Consumer-to-Administration (C2A)

1. Business-to-Business (B2B)

Business-to-Business (B2B) e-commerce encompasses all electronic transactions of goods or services conducted between companies. Producers and traditional commerce wholesalers typically operate with this type of electronic commerce.

2. Business-to-Consumer (B2C)

The Business-to-Consumer type of e-commerce is distinguished by the establishment of electronic business relationships between businesses and final consumers. It corresponds to the retail section of e-commerce, where traditional retail trade normally operates.

These types of relationships can be easier and more dynamic, but also more sporadic or discontinued. This type of commerce has developed greatly, due to the advent of the web,

and there are already many virtual stores and malls on the Internet, which sell all kinds of consumer goods, such as computers, software, books, shoes, cars, food, financial products, digital publications, etc.
When compared to buying retail in traditional commerce, the consumer usually has more information available in terms of informative content and there is also a widespread idea that you'll be buying cheaper, without jeopardizing an equally personalized customer service, as well as ensuring quick processing and delivery of your order.

3. Consumer-to-Consumer (C2C)
Consumer-to-Consumer (C2C) type e-commerce encompasses all electronic transactions of goods or services conducted between consumers. Generally, these transactions are conducted through a third party, which provides the online platform where the transactions are actually carried out.

4. Consumer-to-Business (C2B)
In C2B there is a complete reversal of the traditional sense of exchanging goods. This type of e-commerce is very common in crowd sourcing based projects. A large number of individuals make their services or products available for purchase for companies seeking precisely these types of services or products.
Examples of such practices are the sites where designers present several proposals for a company logo and where only one of them is selected and effectively purchased. Another platform that is very common in this type of commerce are the markets that sell royalty-free photographs, images, media and design elements, such as iStockphoto.

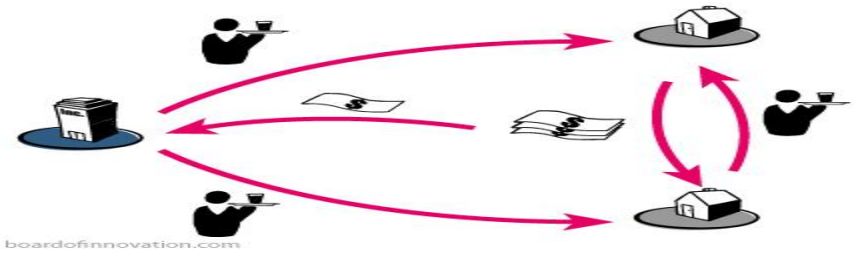
5. Business-to-Administration (B2A)
This part of e-commerce encompasses all transactions conducted online between companies and public administration. This is an area that involves a large amount and a variety of services, particularly in areas such as fiscal, social security, employment, legal documents and registers, etc. These types of services have increased considerably in recent years with investments made in e-government.

6. Consumer-to-Administration (C2A)
The Consumer-to-Administration model encompasses all electronic transactions conducted between individuals and public administration.

Q.5 –
Brokerage Model:

Brokers are market-makers: they bring buyers and sellers together and facilitate transactions. Brokers play a frequent role in business-to-business (B2B), business-to-

consumer (B2C), or consumer-to-consumer (C2C) markets. Usually a broker charges a fee or commission for each transaction it enables. The formula for fees can vary.



Brokerage models include:

Marketplace Exchange -- offers a full range of services covering the transaction process, from market assessment to negotiation and fulfillment. Exchanges operate independently or are backed by an industry consortium. [**Orbitz**, **ChemConnect**]

Buy/Sell Fulfillment -- takes customer orders to buy or sell a product or service, including terms like price and delivery. [CarsDirect, Respond.com]

Demand Collection System -- the patented "name-your-price" model pioneered by Priceline.com. Prospective buyer makes a final (binding) bid for a specified good or service, and the broker arranges fulfillment. [**Priceline.com**]

Auction Broker -- conducts auctions for sellers (individuals or merchants). Broker charges the seller a listing fee and commission scaled with the value of the transaction. Auctions vary widely in terms of the offering and bidding rules. [**eBay**]

Transaction Broker -- provides a third-party payment mechanism for buyers and sellers to settle a transaction. [**PayPal**, Escrow.com]

Distributor -- is a catalog operation that connects a large number of product manufacturers with volume and retail buyers. Broker facilitates business transactions between franchised distributors and their trading partners.

Search Agent -- a software agent or "robot" used to search-out the price and availability for a good or service specified by the buyer, or to locate hard to find information.

Virtual Marketplace -- or virtual mall, a hosting service for online merchants that charges setup, monthly listing, and/or transaction fees. May also provide automated transaction and relationship marketing services. [zShops and Merchant Services at **Amazon.com**]

Q.6 –

Applications of E-commerce:

eCommerce development and its applications is an unavoidable sector in the present day today life. Given below are the most common eCommerce applications.

Retail & wholesale

There are numerous applications for retail as well as wholesale in case of ecommerce. Here comes e-retailing or may be called as online retailing. This refers to the selling of goods and

other services through electronic stores from business to consumers. These are designed and equipped using shopping cart model and electronic catalog.

Marketing

Using web and ecommerce, data collection about the following are possible

1. Preferences
2. Behaviour
3. Needs
4. Buying patterns

The marketing activities like price fixing, product feature and its enhancement, negotiation, and the relationship with the customer can be made using these.

Finance

eCommerce is being used by the financial companies to a large extent. By the name finance we know that there will be customers and transactions. The customers can check the balance in their savings account, as well as their loan account. There are features like transferring of money from and to their own accounts, paying of bills online and also e-banking. Online stock trading is also another feature of ecommerce.

Manufacturing

eCommerce is included and used in the chain operations (supply) of a company. There are companies that form electronic exchange. This is by providing buying and selling items together, trading market information and the information of runback office like inventory control. This is a way that speeds up the flow of finished goods and the raw materials among the business community members.

Auctions

eCommerce customer to customer is direct selling of goods among customers. It includes electronic auctions that involve bidding system. Bidding allows prospective buyers to bid an item. In Airline Company they give bidding opportunity for customers to quote the price for a seat on specific route, date and time.

Entertainment

eCommerce application is widely used in entertainment area also for video cataloging, multiplayer games, interactive ads and for online discussion.

Education

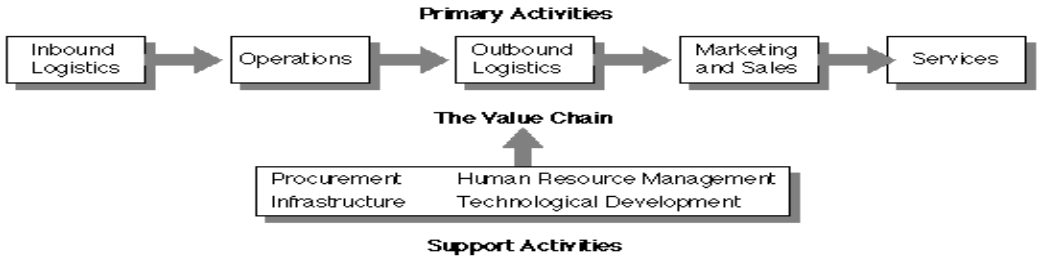
In educational training also ecommerce has major role for interactive education, video conferencing, online class and for connecting different educational training centers.

Q.7–

Value chain:

A value chain is the full range of activities – including design, production, marketing and distribution – businesses conduct to bring a product or service from conception to delivery. For companies that produce goods, the value chain starts with the raw materials used to

make their products, and consists of everything added before the product is sold to consumers.



The idea of the value chain is based on the process view of organizations, the idea of seeing a manufacturing (or service) organization as a system, made up of subsystems each with inputs, transformation processes and outputs. Inputs, transformation processes, and outputs involve the acquisition and consumption of resources - money, labor, materials, equipment, buildings, land, administration and management. How value chain activities are carried out determines costs and affects profits.

Most organizations engage in hundreds, even thousands, of activities in the process of converting inputs to outputs. These activities can be classified generally as either primary or support activities that all businesses must undertake in some form.
According to Porter (1985), the primary activities are:

1. **Inbound Logistics** - involve relationships with suppliers and include all the activities required to receive, store, and disseminate inputs.
2. **Operations** - are all the activities required to transform inputs into outputs (products and services).
3. **Outbound Logistics** - include all the activities required to collect, store, and distribute the output.
4. **Marketing and Sales** - activities inform buyers about products and services, induce buyers to purchase them, and facilitate their purchase.
5. **Service** - includes all the activities required to keep the product or service working effectively for the buyer after it is sold and delivered.

Secondary activities are:

1. **Procurement** - is the acquisition of inputs, or resources, for the firm.
2. **Human Resource management** - consists of all activities involved in recruiting, hiring, training, developing, compensating and (if necessary) dismissing or laying off personnel.
3. **Technological Development** - pertains to the equipment, hardware, software, procedures and technical knowledge brought to bear in the firm's transformation of inputs into outputs.

4. **Infrastructure** - serves the company's needs and ties its various parts together, it consists of functions or departments such as accounting, legal, finance, planning, public affairs, government relations, quality assurance and general management.