

BCS-062

E-COMMERCE

June 2014

1.

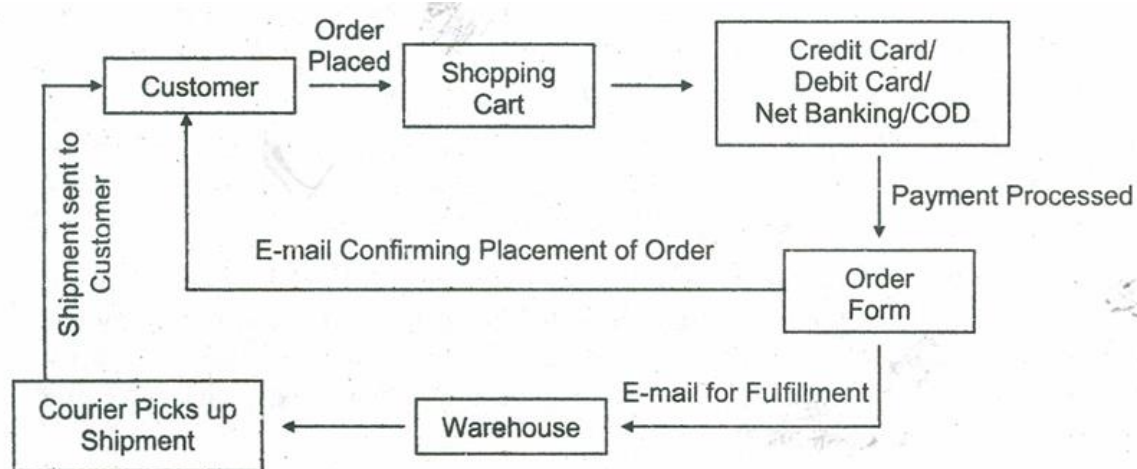
(a) Define the term E-Commerce. Explain its work flow. 10

Ans:

E-commerce stands for electronic commerce. E-commerce refers to the buying and selling of goods and services online using the internet. E-commerce includes not only buying and selling goods over Internet, but also various business' processes within individual organizations that support the goal. E-commerce is conducted using desktop or laptop computers. Its reachability is comparatively low than the m-commerce as it is not so good in portability. Several methods have evolved to pay your dealers such as Credit Cards, Debit Cards, PayPal account, Direct Online Money Transfer etc. Examples of E-commerce includes Amazon, Flipkart, Quikr, Olx websites.

E-commerce work flow:

The customer searches the online store for a product and compare a few different models with prices. The bonus is that the customer can also go to other online product review sites, and discussion forums. Once the customer likes a product after all research, s/he can order for it online. The customer selects items and adds them to their virtual shopping cart. E-commerce has also made it easy to pay. Several methods have evolved to pay your dealers such as Credit Cards, Debit Cards, PayPal account, Direct Online Money Transfer etc. Once the payment is processed and order form is created and an email confirming placement of order is sent to the customer. The warehouse is sent an email the package for shipping. An email is sent to the warehouse to fulfill the order of customer. The shipping company is notified, and a shipping label is generated. The courier company picks up the shipment from the warehouse. The package is shipped to the customer via the chosen shipping method. The package is shipped to the customer via the chosen shipping method which reaches the doorstep of the customers within few days.



E-commerce work-flow

(b) Define the term M-Commerce. What are the key drivers for M-Commerce ? Also, explain its attributes. 10

Ans:

M-commerce:

M-commerce stands for Mobile Commerce. M-commerce is all about doing commerce transactions through mobile devices. Explosion and popularity of mobile devices provide huge opportunities for business enterprises and consumers to sell and purchase on-the-go using mobile devices such as PDA, smart phones and other hand-held devices. M-commerce is making the commerce anywhere anytime concept a reality using a host of technologies. M-commerce involves performing financial or commerce transactions over wireless and mobile devices which involve exchange of goods, services and information between end consumers and merchants.

M-commerce allows consumers to make purchases, conduct transactions and access services using mobile applications or websites optimized for mobile devices. This form of commerce leverages mobile technology to enhance the shopping experience.

Drivers for M-commerce:

The following are the key drivers of m-commerce

- Popularity of mobile devices: Hand held devices are quickly overtaking the traditional desktops and laptops and are becoming the primary channel for access.

As more people own smartphones, the potential customer base for m-commerce continues to grow.

- Wireless bandwidth advancements: Mobile devices can now leverage enhanced bandwidths offered by 3G (Third generation), 4G networks in addition to Wi-Fi and Wi-Max technologies and 5G. It provides faster and more reliable connections. This enhanced connectivity enables smoother browsing and shopping experiences on mobile devices.
- Location based services: M-commerce also offers unique ability to get the offers and promotions based on the current location of the subscriber.
- Convenience and afford ability of mobile devices.
- Changing consumer behavior: As consumers increasingly prefer the convenience of shopping from their mobile devices, businesses are adapting to this change.

Some of the attributes of m-commerce are:

- Portability: M-commerce allows users to access shopping platforms through their mobile devices such as smartphones and tablets. The consumers can shop from virtually anywhere at any time.
- Convenience: Mobile devices enable access from anywhere and any time.
- Personalization: Possible to personalize the experience based on user identification and preference as well as location. Flashing relevant advertisements and recommendations are examples.
- Context-aware localization: Using GPS (Global Positioning System) , and triangulation techniques it is possible to identify the location of the user and push relevant promotions and offers. Directory services are an example.
- User-friendly interfaces: M-commerce applications are typically designed with user-friendly interfaces tailored for smaller screens. This design focuses on easy navigation, making it simple for users to find and purchase products.
- Real-time interaction: M-commerce platforms facilitate real-time interactions between businesses and consumers. Features like feedback and chat support help customer engagement.
- Ubiquity: Transaction service access from anywhere in real-time. Weather and stock updates are examples.

2.

(a) Explain any five strategies to increase visibility to your e-commerce website. 5

Ans: The following are some of the strategies to increase e-visibility of your e-commerce website:

Easy URL: The website URL must be simple and catchy so that it can be easily remembered. At the same time, the name should be sensible so that it can be guessed and easily remembered by users.

Advertising: Even while word-of-mouth marketing is more effective than ever, traditional forms of promotion through media like TV, newspapers, etc. They contribute significantly to greater visibility.

Search engine optimization : To boost the visibility of an e-commerce business, focus on optimizing search engine visibility. It is a method of forcing a website to appear in the search engine results. The likelihood that more customers will visit your website increases with its search engine ranking.

Social Media Marketing: Using social media platforms can significantly boost your visibility. It helps user/followers and other potential customers to know about your site and business.

Increasing traffic: It is essential for your site to regularly post on social networking sites. It is paramount to create and maintain your brand positioning to survive. It is essential to remember that anything out of sight of customer will be out of his/her mind. This can be improved by taking the following measures:

- (i) Uploading contents like special offers, news, pictures, phrases, any eye catering information for the regular followers.
 - (ii) Knowledge about competitions, doing research and checking what the competitors are uploading, their offers and number of posts they are doing.
- (b) How did your shopping experience change with the advent of e-commerce ? Explain with an example. 5

Ans: The shopping experience has been profoundly altered with the advent of e-commerce, which offers unmatched ease, a greater range of products, and individualized interactions—all while posing new difficulties including security issues. Online stores are open 24/7, allowing to shop whatever and whenever they want when compared to retail stores with limited operating hours. Customers can access goods and services from anywhere in the world because to e-commerce, which eliminates geographical restrictions. Online shopping can save time by removing the need to travel to and from physical stores and enabling speedy pricing comparisons.

Furthermore, e-commerce platforms often personalize the shopping experience through recommendations, tailored offers, and easy reordering of frequently purchased items.

Additionally, one can read detailed product descriptions, reviews from previous customers, compare prices from other sellers, and even see if the book is available for pickup at a nearby shop.

It provides access to a vast array of products and brands from around the world. This allows consumers to discover unique items and niche products previously unavailable locally.

3.

(a) Explain the security concerns in e-commerce. 5

Ans:

Security concerns in e-commerce can be studied from three perspectives. E-commerce can be secured if the entire commerce chain is secured. That is, the client computer, the messages travelling on the communication channel and associated servers.

Security Concerns of the Client : Client security means privacy of the client and integrity of his computer.

Some of the major concerns of the client are:

Active Content: Active content is a major area of concern in client security. Active content is the program embedded transparently in web pages which can cause actions to occur. For example, display moving graphics, download and play audio etc. It is used in e-commerce in the form of Java applets, ActiveX controls etc. It creates security risk because malicious programs hidden inside webpage can reveal and destroy the confidential and sensitive information in the form of cookies. These cookies remember user names, passwords, etc. on the client computers.

Virus, Worms and Trojan Horses: Another security issue that arises to client and his computer are the viruses, worms and Trojan horses which can damage the systems. These viruses can delete stored data or manipulate actual data. Malicious software can damage the system and is a major threat.

Virus is a piece of software that is designed to replicate itself by copying itself into other programs stored in a computer which can cause the program to operate incorrectly or corrupt the Computer's memory.

Worm is software that is capable of reproducing itself. It can also spread from one computer to the next over a network.

Trojan horse is a program that appears to have a useful function but contains a hidden function which is harmful.

Masquerading : Another security concern of client is masquerading. Masquerading occurs when one person uses the identity of another to gain access to a computer. This may be done in person or remotely.

Security Concerns of the Communication Channel: Another major concern in any e-commerce application is the security of the communication channel. That is, the security of the message when it passes through the Internet. The data/message being transferred through the network must be secured from any unauthorized disclosure and alterations. Any theft of sensitive or personal information may become a significant danger. Replaying old messages, tapping of communications, unauthorized changes to messages, misuse of remote maintenance accesses are the dangers to the communication channel.

Security' Concerns of Server : Another major concern in any e-commerce application is the security of the web server, commerce server and databases. Database contains valuable and sensitive information. Any loss or manipulation of stored data can create irreparable damages. The server is required to be protected from break-ins, site vandalism, and denial of service attacks. The more complex software becomes, the higher is the probability that errors exist in the codes.

(b) Define the term "EDI". Explain its architecture with the help of a diagram. 5

Ans:

EDI stands for Electronic Data Interchange (EDI). EDI is a structured, machine-readable document used in business exchanges. Using EDIs in corporate operations would automate the process and cut down on transaction time overall. Some of the examples of EDI include purchase orders, sales orders, invoices, bills etc. EDIs are pre-dominantly used in B2B scenario.

The main characteristics of EDI include the following:

- offers a defined and organized style for commercial transactions, including bills, sales orders, and purchase orders.
- allows for automatic electronic data interchange,
- Most business transactions are automated
- Significantly lowering manual errors in business processes and transactions

The four main layers of EDI architecture are:

- Application Layer

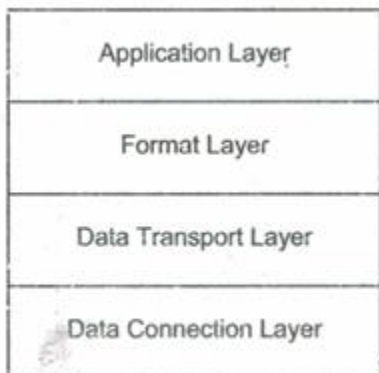
- Format Layer
- Data Transport Layer
- Data Connection Layer

Application layer: This layer consists of business applications which use the EDI. The business logic is implemented in this layer. The applications can be internal enterprise systems and other B2B systems. These applications primary duty is to convert the company's electronic internal documents into the standard format that the EDI system supports. So, these applications act as converters in application Layer.

Format Layer: This layer processes the documents in EDI formats. Two popular industry wide EDI standard formats are ANSI X12 and EDIFACT (Electronics Data Interchange for Administration, Commerce and Transport).

Data Transport Layer: This layer is responsible for automatically transferring the EDI. Even though, email is a widely used method of exchanging data. Other modes of transportation include FTP, HTTP, and HTTPS Dad X.435.

Data Connection Layer: This layer consists of enterprise network infrastructure which is used to transport data. This includes dial-up/modem based connections, Internet, point-to-point communication etc. Other popular format for network infrastructure includes employing of a Value Added Network (VAN) which provides an EDI account and store-and-forward mailbox for subscribers.



EDI layered architecture

4.

(a) Explain the procedure for Online Auction. What are advantages and disadvantages of Online auctions ? 5

Ans: In an online auction, the seller sells the product or service to the person who bids the highest price, These auctions facilitate online sale and purchase between the sellers and buyers in different locations or geographical areas.

Following are the steps in an online auction:

Step 1: Seller registers a particular item of auction at the online auction website. The seller provides the following:

- images of the item
- description of the item
- a minimum bid
- a specific duration of the auction
- payment and shipping terms as well as other terms and conditions

Step 2: Bidders registered at that online auction website get opportunity to search and browse all active auctions.

Step 3: Bidders start bidding at the auction in which they are interested.

Step 4: At the time set, the bidding process ends.

Step 5: The buyer pays the price and the seller dispatches the item.

Advantages of online auction:

- Convenience and Accessibility: Online auctions allow buyers to bid from anywhere with an internet connection, eliminating the need to travel to a physical location.
- Online auctions connect sellers with a broader audience, potentially including buyers from around the world.
- May get goods cheaply.

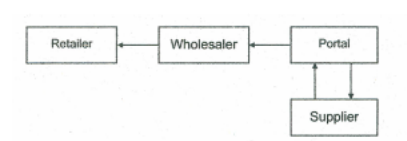
Disadvantages of online auction:

- There are chances of the product being a stolen or pirated one .
- Sellers will not always accept all forms of payment.
- There is always a risk of item not being of the value for which it is bought.
- Buyers must rely on descriptions and photos, which might not be fully accurate. Sellers might misrepresent items, use fake photos, or exaggerate descriptions.
- Items may not be sent after payment, or they may be of lower quality than advertised.

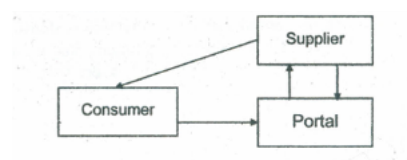
(b) Explain any two models of e-commerce.

Ans:

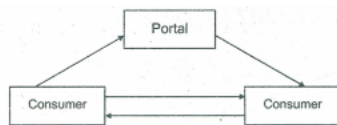
B2B: In B2B e-commerce model, the transactions are between businesses. An example of such transaction is between wholesaler and retailer. Examples of B2B portals include <http://www.infobanc.com>, <http://www.ask4plastic.co.in>, <http://www.matexnet.com>, <http://www.pcbindia.com>.



B2C: In B2C e-commerce model, the transactions are between businesses and consumers. An example of such transaction is between Indian Railways and Passenger. Examples of B2C portals include <http://www.irctc.co.in>, <http://www.amazon.com>, and <http://www.tatasky.com>.



C2C: In C2C e-commerce model, the transactions are between consumers and consumers. An example of such transaction is between sellers and buyers of shares. In C2C model, organizations may be present as intermediaries. Examples of C2C portals include <http://www.olx.in>, and <http://www.quickr.com>.



5.

(a) What is a Cyber Crime ? What are different categories of Cyber Crimes ? 5

Ans: Cyber crimes are referred to any act of causing financial, emotional or psychological distress to any other party with the use of computer or cyber medium. It includes hacking, spams, pornography, etc. Cybercrime refers to criminal activities carried out using computers and the internet. Cybercrime can target individuals, organizations, or even governments, causing significant financial losses and disrupting critical services.

Cyber crimes can be classified on the following basis:

- Against Person
- Against Property
- Against Government/Corporate Entities
- Against Society at Large

Against Person

- Harassment via e-mails: Repeatedly sending abusive messages via email.
- Cyber stalking: Use of Internet to stalk someone like online harassment and online abuse.
- Email spoofing: Emailing messages with a forged sender address.
- Publishing/transmitting of obscene material.
- Cyber defamation: causing injury to the reputation of a person with the help of Internet by floating/publicizing negative messages.

- Cheating and fraud: Any deliberate deception for unfair or unlawful gain online is fraud. Examples are no delivery of paid products purchased online, misrepresentation of a product advertised for sale, and fraudulent promises for investment in securities.

Against Property :

- Unauthorized control/access of Computer system.
- Intellectual property crimes: Patent violations, copyright infringement, trademark violations, etc.
- Transmitting virus.

Against Government/Corporate Entities

- Possession of information in an unauthorized manner.
- Cyber terrorism: Use of Internet for terror activities.
- Distribution of pirated software.

Against Society at Large:

- Pornography.
- Polluting the youth through indecent exposure
- Financial crimes.
- Forgery- Manipulations in mark sheets, currency notes etc with the use of information technology.
- Sale of illegal articles like narcotics, weapons, etc.
- Online gambling

(b) Explain the benefits of e-commerce to organizations, customers and society at large.

Ans:

The following are the benefits of E-commerce to organizations:

- allows businesses to quickly and affordably acquire goods and services from other businesses.
- It may be less expensive to operate an online store than to keep a physical one. It decreases (by as much as 90 percent) the cost of creating, processing, distributing, storing, and retrieving information by digitizing the process. Also saves on rent, utilities and staff costs.

- Reduces telecommunication costs as Internet tools are used.
- It enables companies to run around the clock, giving clients the freedom to shop whenever it suits them.
- aids in the competition between small and large firms.
- reduces or does away with marketing distribution channels, lowering product costs and increasing vendor revenues.

The following are the benefits of e-commerce to customers:

- gives customers the ability to quickly compare products and services online at a lower cost.
- allows clients to shop or transact from anywhere at any time, day or night. It allows customers to shop from the comfort of their homes, eliminating the need to travel to physical stores.
- Consumers can make well-informed purchasing selections by reading other buyers' feedback and ratings.
- Makes it possible for people to work and study at home.
- Can save time compared to visiting multiple stores to find specific items.
- provides them with more options than they might find otherwise.

The following are the benefits of E-commerce to society at large:

- makes it possible for people to work from home and travel less, which boosts productivity.
- By opening new markets and employment opportunities, it promotes economic growth.
- raises people's standard of living by enabling the sale of goods at reduced prices.
- gives people in rural and underdeveloped nations access to goods and services that would otherwise be impossible to purchase. This offers chances to improve medical treatment or to learn and obtain college degrees.
- Facilitates delivery of public services, such as government entitlements, reducing the cost of distribution and chance of fraud, and increasing the quality of social services, health care, and education.