

Let us learn

- E-Commerce – concept, advantages, disadvantages and types.
- E-Commerce Trade cycle.
- Various Payment modes.
- Common forms of E-Commerce.
- Electronic Data Interchange.
- E-Governance-concept, advantages and types.
- Various security measures.

2.1 Introduction

E-Commerce stands for Electronic Commerce. Before moving to the concept of E-Commerce, let's first, understand what is commerce?

Commerce is an important part of a business. In simple words, commerce is nothing but buying and selling of goods. That means when we buy a product or service from others or sell a product or

service to others then it is called as commerce.

One of the most popular activity on the Web is shopping. E-Commerce became possible in 1991 when the Internet was opened to commercial use. Since that date thousands of businesses have taken up residence at websites. History of e-commerce is a history of a new, virtual world which is evolving according to the customer advantage.

2.2 Definition of E-Commerce

“E-Commerce can be broadly defined as the process of buying and selling of goods or services using an electronic medium such as Internet.”

E-commerce is also referred as a paperless exchange of business information using EDI, E-mail, Electronic fund transfer etc.



Difference between Traditional Commerce and E-Commerce :

Traditional Commerce	E-commerce
Traditional commerce focuses on the exchange of products and services through personal interactions so it is manual.	E-commerce trading activities are online via the internet and can be considered automatic.
Traditional commerce is limited to business hours, mostly during the day.	E-commerce is 24X7, it can be done anytime day and night.
As far as consumer interactions are concerned, traditional commerce provides face to face interaction.	E-commerce can be termed as screen to face interaction.
Traditional commerce is limited to a particular geographical location.	E-commerce is global and has no physical limitation.
Modes of payment in traditional commerce include cash, cheques and credit cards.	In E-commerce modes of payments are bank transfer, credit card, e-wallet, mobile payment and many more.
Goods and delivery of services is instant with traditional commerce.	In E-commerce delivery of goods or services takes some time.
Traditional Commerce's scope is local.	E-commerce's scope is global.

Advantages of E-Commerce :

- **Global scope :** E-commerce provides the sellers with a global reach. Now sellers and buyers can meet in the virtual world, without barrier of place (geography).
- **Electronic transaction :** E-commerce reduces the paper work and significantly lower the transaction cost. E-Commerce enables the use of credit cards, debit cards, smart cards, electronic fund transfer via bank's website and other modes of electronic payment.
- **Cost Saving :** E-commerce application provides users with more options to compare and select the cheaper and better option. It helps in reducing the cost of searching a product. E-commerce has enabled rural areas to access services and products, which are otherwise not available to them.
- **Anytime shopping :** One other great advantage is the convenience. A customer can shop 24×7. The website is functional at all times, it does not have working hours like a shop.
- **No intermediaries :** Electronic commerce also allows the customer and the business to be in touch directly, without any intermediaries. This allows for quick communication and transactions.
- **Public services :** E-commerce helps the government to deliver public

services such as healthcare, education, social services at a reduced cost and in an improved manner.

Disadvantages of E-Commerce :

- **Setup Cost :** The setup of the hardware and the software, the training cost of employees, the constant maintenance and upkeep are all quite expensive.
- **Physical presence :** This lack of a personal touch can be a disadvantage for many types of services and products like interior designing or the jewellery business.
- **Security :** Security is another area of concern. Credit card theft, identity theft etc. remain big concerns with the customers.
- **Goods Delivery :** There may arrive some problem with fulfilment of order. Even after the order is placed there can be problems with shipping, delivery, mix-ups etc. This leaves the customers unhappy and dissatisfied.

Types of E-Commerce :

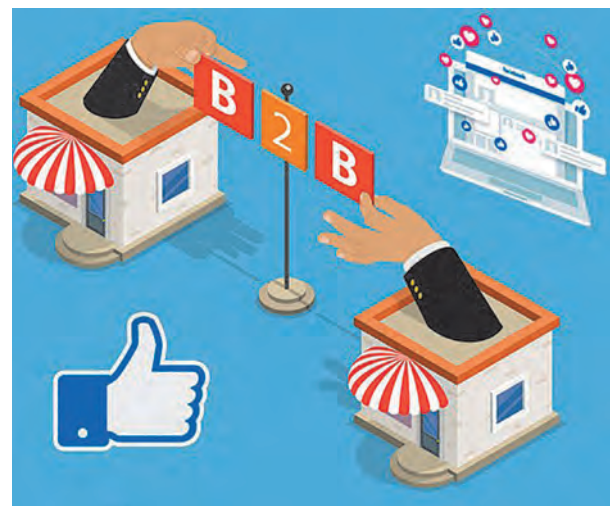
The most common participants in e-Commerce are business, administration, government and consumer. The primary e-Commerce types are as follows:

- **Business - to - Consumer (B2C) :** In B2C model, business sells its products directly to a customer. A customer can view the products shown on the website. The customer can choose a product and order the same. The website will then send a

notification to the business organization via email and the organization will dispatch the product/goods to the customer. These B2C businesses are online retailers. Example : Amazon, Flipkart etc.

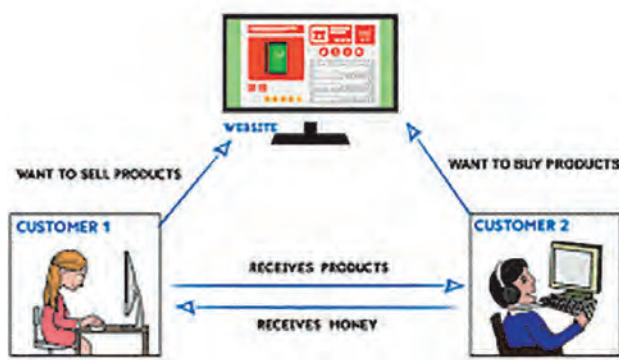


- **Business - to - Business (B2B) :** In B2B model, business sells its products to an intermediate buyer who then sells the product to the final customer. As an example, a wholesaler places an order from a company's website and after receiving the consignment, sells the product to the final customer who comes to buy the product at one of its retail outlets. Example : Tata communications (network provider).



- **Consumer - to - Consumer (C2C) :** In C2C model, consumer helps

consumer to sell their assets like residential property, cars, motorcycles etc., or rent a room by publishing their information on the website. Website may or may not charge the consumer for its services. Example OLX, Quikr, online auction.



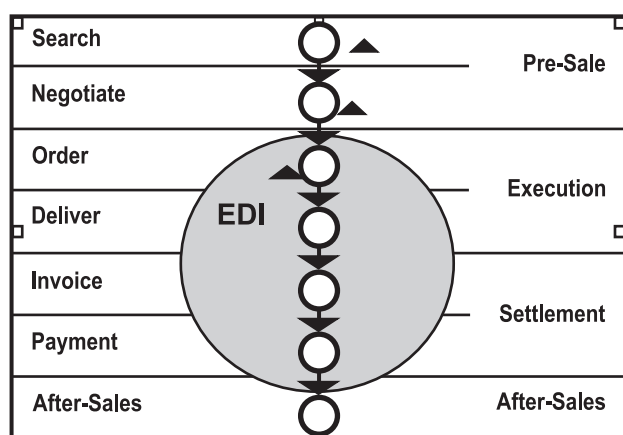
- **Consumer - to - Business (C2B) :** In this model, consumers have products or services of value that can be consumed by businesses. For example, the comparison of interest rates of personal loan/car loan provided by various banks via websites. A business organization who fulfills the consumer's requirement within the specified budget, approaches the customer and provides its services. For e.g. - A blog can be written by an author for a business to improve sale of products, ebay.



2.3 E-Commerce Trade Cycle

A trade cycle is the series of exchanges, between a customer and supplier that take place when a commercial exchange is executed. A general trade cycle consists of following phases:

- **Pre-Sales :** It consist of two steps like Search and Negotiate. Customer search for required website for product to be purchased. In Negotiate step customer find a supplier who offers good quality product at cheaper price and then customer agrees the terms forwarded by supplier.
- **Execution :** This phase consist of Order and Delivery. Customer sends an order for the selected product and after processing the order, customer receives delivery of the product.
- **Settlement :** This phase consist of Invoice (if any) and Payment. Invoice means customer will receive a bill for purchased product and after confirmation of received product, customer will pay for the same.
- **After-Sales :** This phase consists of warranty and After Sale Services. In warranty period, customer will get all maintenance services for free or at minimum cost. After sale services means customer will do complaints (if any) about the performance of product and get maintenance service from the supplier.



Trade Cycle

2.4 Modes of Payment



- 1. Credit Cards :** Credit cards are the most common way for customers to pay online. Merchants can reach out to an international market with credit cards, by integrating a payment gateway into their business.
- 2. Mobile Payments :** Mobile payments offer a quick solution for customers to purchase on e-commerce websites. Mobile payments are also commonly used on donation portals, browser games and social media networks. Customer can pay by scanning a barcode on an app on mobile. Examples are apps like BHIM, UPI, Paytm, Google Pay, Paypal,..etc.
- 3. Bank Transfers :** Bank transfer is used when money is sent from one bank account to another. Transferring

money from bank account is usually fast and safer than withdrawing and paying in cash because every transaction will be authenticated by checking customer's banking credentials. Example : NEFT, IMPS etc.

- 4. E-wallets :** E-wallet is a type of electronic card which is used for transactions made online through a computer or a smartphone. E-wallet is a type of pre-paid account in which a user can store money for any future online transaction. An E-wallet is protected with a password. Examples are State Bank Buddy, Paytm Wallets...



Do it yourself

Find out some more payment modes used in E-Commerce.

2.5 Forms of E-Commerce

Some common forms of E-Commerce are as follows.

- M-commerce (Mobile commerce) :** M-Commerce is the buying and selling of goods and services through wireless handheld devices such as smartphones and tablets. As a form of e-commerce, m-commerce enables users to access online shopping platforms without needing to use a desktop computer. Some of application of M-Commerce are mobile banking, ticket booking, E-bill payment, online auctions, stock market trading.



- Social Commerce :** Social commerce is a form of electronic commerce that involves social media, online media that supports social interaction. It enable shoppers to get advice from trusted individuals, find goods and services and then purchase them. The social networks that spread this advice have been found to increase the customer's trust in one retailer over another. Social commerce is the use of networking websites such as Facebook, Instagram and Twitter as vehicles to promote and sell products and services. The success of a social commerce campaign is measured by the degree to which consumers interact with the company's marketing through retweets, likes and shares.



2.6 E-Commerce Technology

Electronic commerce draws on

technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems and automated data collection systems. Let's see one of the common E-commerce technology i.e EDI.

Electronic Data Interchange (EDI) :

EDI is the electronic interchange of business information using a standardized format; a process which allows one company to send information to another company electronically rather than on paper. Business entities conducting business electronically are called trading partners. Many business documents can be exchanged using EDI, two most common documents are purchase orders and invoices. It is computer-to-computer interchange of strictly formatted documents via telecommunications or physically transported on electronic storage media.



2.7 E-Governance

It signifies the implementation of information technology in the government processes and functions so as to cause simple, moral, accountable and transparent governance. The basic purpose of e-governance is to simplify

processes for all, i.e. government, citizens, businesses etc. at National, State and local levels. Hence, E-governance delivers SMART government. (S- Simple, M-Moral, A-Accessible, R-Responsive, T-Transparent Government)

Advantages of E-governance :

- Reduced corruption
- High transparency
- Increased convenience
- Direct participation of constituents
- Reduction in overall cost.
- Expanded reach of government

Types of E-Governance :

E-Governance is of 4 types depending on the specific types of services.



1. Government-to-Citizen (G2C)

The Government-to-citizen refers to the government services which enable citizens to get access to wide variety of public services. Most of the government services fall under G2C. It helps the ordinary people to reduce the time and cost to conduct a transaction. A citizen can have

access to the services anytime from anywhere. Furthermore, Many services like license renewals and paying tax are essential in G2C. It also focuses on geographic land barriers.

2. Government-to-Business (G2B)

The Government to business is the exchange of services between Government and Business organizations. G2B provides access to relevant forms needed to comply. The G2B also consists of many services exchanged between business sectors and government. It aims at eliminating paper work, saving time, cost and establish transparency in the business environment, while interacting with government.

3. Government-to-Government (G2G)

The Government-to-Government refers to the interaction between different government departments, organizations and agencies. In G2G, government agencies can share the same database using online communication. The government departments can work together. In conclusion, G2G services can be at the local level or the international level. Likewise, it provides safe and secure inter-relationship between domestic or foreign government.

4. Government-to-Employee (G2E)

The Government-to-Employee is the internal part of G2G sector. Furthermore, G2E aims to bring employees together and improvise

knowledge sharing. Similarly, G2E provides online facilities to the employees like applying for leave, reviewing salary payment record and checking the balance of holiday. The G2E sector provides human resource training and development. So, G2E is also the relationship between employees, government institutions and their management.

Some effective examples of successful implementation of E-Governance projects are e-Mitra project (Rajasthan), e-Seva project (Andhra Pradesh), CET (Common Entrance Test) .



Do you know?

Digital India is a campaign launched by the Government of India in order to make Government's services available to citizens electronically. Digital India was launched by the Prime Minister of India Narendra Modi on 1 July 2015 with an objective of connecting rural areas with high-speed Internet networks and improving digital literacy.

Some of the facilities provided through this initiative are Bharat net, digital locker, e-education, e-health, e-sign, e-shopping and national scholarship portal.

UMANG (Unified Mobile Application for New-age Governance) Mobile App: It is a Government's all-in-one single unified secure multi-platform, multi-lingual, multi-service freeware mobile app for accessing over 1,200 central and state government services through smart phones, feature phones, tablets

and desktops. It includes services like AADHAAR card, DigiLocker, Bharat Bill Payment System, PAN, EPFO services, PMKVY services, AICTE, CBSE. It also provides utilities like bills payments, education, job search, tax, business, health, agriculture, travel, Indian railway tickets bookings, birth certificates, e-District, e-Panchayat, police clearance, passport, other utility services from private companies and much more.

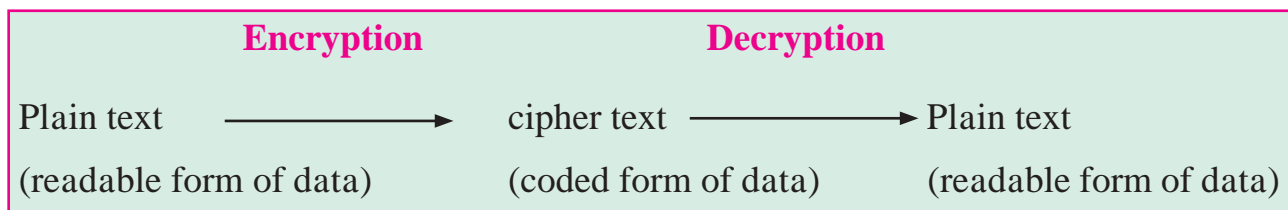
2.8 Security Measures in E-Commerce

E-Commerce security refers to the principles which guide safe electronic transactions, allowing the buying and selling of goods and services through the Internet.

A) Encryption : Encryption is widely used on the internet to protect user information being sent between a browser and a server. This includes passwords, payment information and other personal information that should be considered private. The process consists of two processes as encryption and decryption. Encryption converts Plain text (readable form of data) into Cipher Text (coded form of data) means non-readable form of data. Decryption is exactly opposite process of encryption. It converts Cipher text into Plain text.

Encryption is of two types-

1. Symmetric
(Private-Key Encryption)
2. Asymmetric
(Public-Key Encryption)



B) Digital Signature : A digital signature is also known as an electronic signature. A digital signature guarantees the authenticity of an electronic document or message in digital communication and uses encryption technique (asymmetric cryptography) to provide proof of original and unmodified documentation. Digital signatures are used in e-commerce, software distribution, financial transactions. This is the direct transfer of information between two partners.

C) Digital Certificate : A Digital Certificate is an electronic "password" that allows a person, organization to exchange data securely over the Internet using the public key infrastructure (PKI). Digital Certificate is also known as a public key certificate or identity certificate. In this information is transferred between two authorized partners who have digital certificates issued by some supreme authority.



Do it yourself

Visit Maharashtra Government website, view various Government Resolutions (GR) and observe the digital signature of various authorities.

Summary

- Buying and selling of goods or services on internet is called as E-Commerce.
- Common types of E-Commerce are B2C, B2B, C2C and C2B.
- When any business transaction takes place, it completes one trade cycle. Trade cycle consist of phases like presale, execution, settlement and after sale etc.
- In E-Commerce commonly used payment modes are credit card, mobile payment, bank transfer, e-wallet etc.
- Some common forms of E-Commerce are M-Commerce, social commerce.
- Electronic Data Interchange (EDI) is one of the most important technology for paperless exchange of information.
- E-Governance is the implementation of information technology in the government processes and functions.
- Types of E-Governance are G2C, G2B, G2G and G2E.
- In E-Commerce confidential information can be protected by using encryption, digital signature and digital certificate.

Exercise

Q.1 Fill in the blanks.

1. E-Commerce's scope is
2. Search and Negotiate are the parts of phase of trade cycle.
3. The..... phase consist of Order and Delivery.
4. E-wallet is a type of account in which a user can store his/her money for any future online transaction.
5. EDI is exchange of information.

6. The type of e-governance refers to the government services which enable citizens to get access to wide variety of public services.
7. The e-governance which provides safe and secure inter-relationship between domestic or foreign government is

Q.2 State True/False.

1. C2C type of E-commerce deals with Business and Customer.
2. The lack of a personal touch can be a disadvantage for many types of services and products in E-commerce.

3. Checking the balance of holiday is an example of G2C.
4. E-commerce provides more options to compare and select the cheaper and better options.
5. M-commerce can be used through desktop computer.

Q.3 Multiple Choice Question.
(1 correct answer)

1. Invoice and payment are included inphase of trade cycle.
a) Presale b) execution
c) settlement d) After sale
2. License renewal is an example of e-governance.
a) G2C b) G2B
c) G2G d) G2E

Q.4 Multiple Choice Question.
(2 correct answer)

1. Encryption consist of two processes.....and
a) encryption b) signature
c) decryption d) digitization
e) security
2. Social commerce is a subset of electronic commerce that involves social media like &
a) Facebook b) Instagram
c) gmail d) whatsapp
e) software

Q.5 1) Match the following.

A	B
1. M-commerce	a) Coded form of data
2. Cipher Text	b) B2B
3. EDI	c) E-bill payment
4. Wholesaler-to Retailer	d) Paperless exchange of information
5. License renewal services	e) G2G
6. Online facility to employees like leave	f) G2C
7. Government agencies share same database	g) G2E

Q.6 Answer in brief.

1. Explain phases of trade cycle.
2. Explain M-Commerce.
3. Describe process of encryption.
4. What is E-governance.
5. List out advantages of E-commerce.
6. Which are the different types of e-governance?
7. State two examples of G2E services.
8. Write any four advantages of e-governance.

