

# **B.C.A SEMESTER - IV**

## **(B.C.A -403)**

### **ELECTRONIC COMMERCE**

### **(E-COMMERCE)**

**(NEW SYLLABUS MATERIAL )**

**INSB BCA & PGDCA**  
**COLLEGE, IDAR**

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## HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN

## B.C.A. Semester – IV

## BCA-403 : Electronic Commerce (E-Commerce)

Teaching Scheme (Per week)		Teaching Scheme (Per semester)		Examination Scheme					
				INT		EXT		TOTAL	
Th. (hours)	Pr. (hours)	Total Hours	Credit	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)
4	–	40	4	30	--	70	--	100	--

<b>Unit – I</b>	<b>[17 Marks]</b>
Introduction to E – Commerce, Pure Vs Partial E-Commerce, History and Development (Evolution) of E-Commerce , Difference between traditional commerce and e-commerce, Advantages and Limitations, E – Commerce – Indian Scenario/E- commerce in India, Various Technologies of E-Commerce, Future of E-Commerce	
<b>Unit – II</b>	<b>[18 Marks]</b>
Types of E-commerce and Electronic Data Inter-change (EDI), Driving Forces of E-Commerce, <b>Introduction Various Model of E-Commerce : B2C, B2B, C2B, C2C, B2G and G2C, Electronic Data Inter-change (EDI) – Concept, Meaning &amp; Definition, Features and Benefits. Network Security(Only Concepts):</b> Firewalls, IP security, Virtual Private Networks ,HTTPS, SSL, SETP	
<b>Unit – III</b>	<b>[17 Marks]</b>
E – Payments and Security: A brief overview of the following: Credit card ,Debit card, Smart Card (Electronic Credit Card),EFT ,E-wallet, e-check and e-cash, Payment Gateway ,Security in cyberspace – Kinds of threats and crimes, Credit Card Frauds and Internet security using VPN and firewalls.	
<b>Unit – IV</b>	<b>[18 Marks]</b>
<b>Technology In E – Commerce:</b> Networking – Concept, Meaning and Features, Classification of Networks: LAN, WAN, Internet, Intranet and Extranet (Concept, Meaning and Benefits), Virtual Private Networks (VPNs) – Overview, <b>Recent Trends In E – Commerce:</b> M-commerce – Introduction, growth and future, advantages and limitations , Introduction and management of e-enterprises, Ethical issues in e-commerce.	

**Text & Reference Books:**

1. Web Commerce Technology Hand Book by: Daniel Minoli, Emma Minoli
2. Internet and Web designing by Rajesh Maheta, Ronak patel, Rajendra patel and Shyam Chavda (Nirav Prakashan), 1<sup>st</sup> Edition
3. E-commerce by Bhadrash Patel, Bharat Publication
4. E – Commerce by Manta Bhushay, Firewall Media
5. Cryptography & Network Security by Atul Kahate (Tata McGraw Hill)

# *Unit 1:* [17 Marks]

## *Topics:*

- ✓ INTRODUCTION TO E-COMMERCE
- ✓ PURE VS PARTIAL E-COMMERCE
- ✓ HISTORY AND DEVELOPMENT (EVOLUTION) OF E-COMMERCE
- ✓ DIFFERENCE BETWEEN TRADITIONAL COMMERCE AND E-COMMERCE
- ✓ ADVANTAGES AND LIMITATIONS
- ✓ E-COMMERCE-INDIAN SCENARIO/E-COMMERCE IN INDIA
- ✓ VARIOUS TECHNOLOGIES OF E-COMMERCE
- ✓ FUTURE OF E-COMMERCE

## Topic-1 : INTRODUCTION TO E-COMMERCE

- E-Commerce stands for Electronic commerce
- **E-commerce (electronic commerce)** is the activity of electronically buying or selling of products on online services or over the Internet.
- 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.
- E-Commerce is buying and selling of goods and services over the internet.
- The main goal of E-Commerce is to reduce transaction cost and improve various business processes.
- E-Commerce enables new forms and ways of business. It includes commercial activities involving Email, an online information service, a bulletin board system, electronic data interchange System etc.
- Companies set up the web sites provide the information of the product and service offered by customer and customer can buy and make the transaction through the credit cards and other bank and financial service.
- It provides global market with no geographic boundaries and access to millions of people to the business people.

### E-Commerce Example:

- (1) Online shopping
- (2) Electronic payment
- (3) Online Auctions
- (4) Internet Banking
- (5) Online Ticketing
- (6) An individual purchases a book on the Internet.
- (7) A government employee reserves a hotel room over the Internet.
- (8) A business calls a toll free number and orders a computer using the seller's interactive telephone system.
- (9) A business buys office supplies on-line or through an electronic auction.
- (10) An individual withdraws funds from an automatic teller machine (ATM).

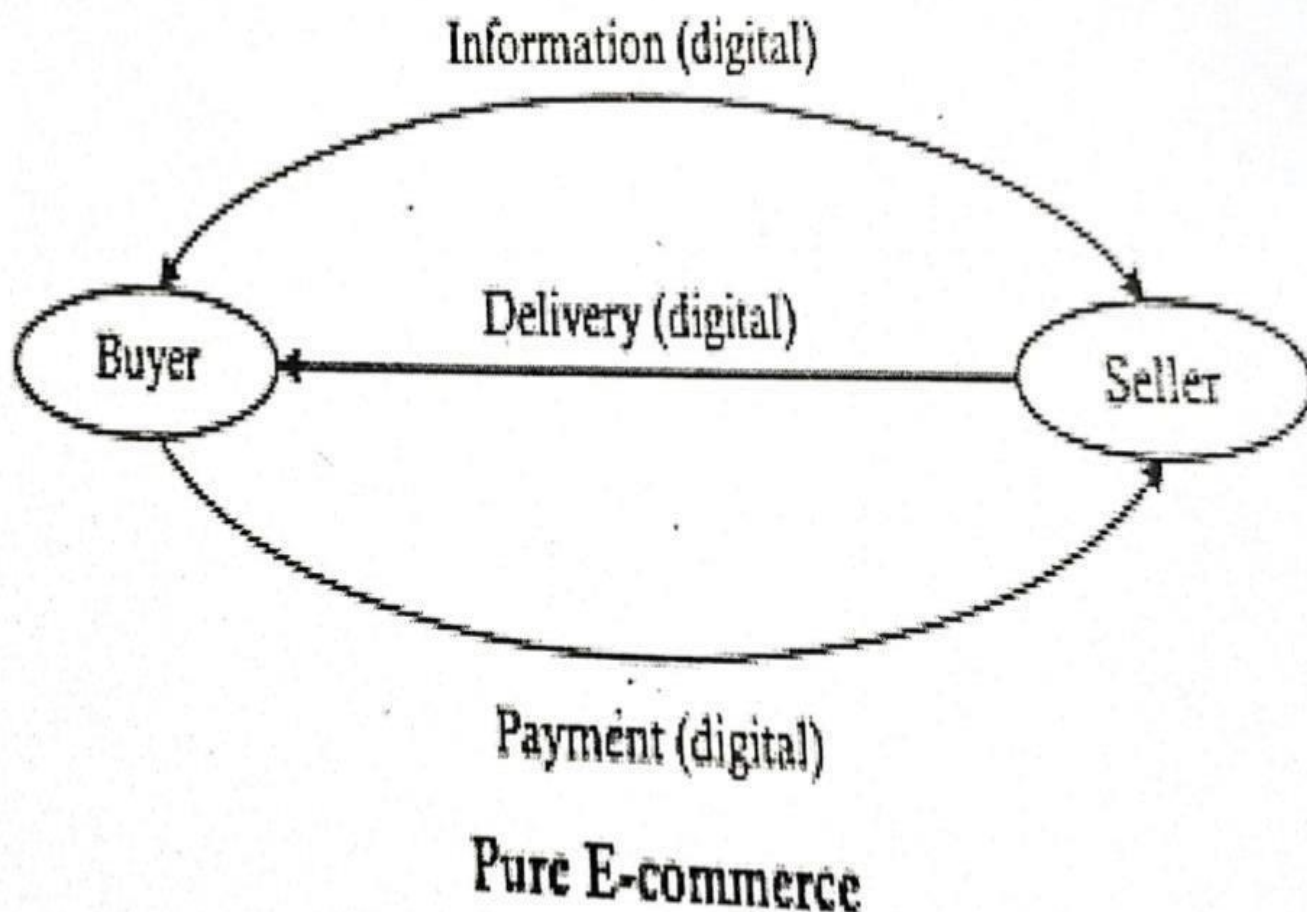
## Topic-2 : What is Pure Vs. Partial E-commerce ?

### → Pure E-commerce

- It refers to a situation where a business transacts its business activities purely online.
- The goods or services sold do not have any physical presence.
- Pure E-Commerce concerns business whose transactions are largely carried out on the Internet.
- For Example, your favorite commercial web site, publishes music written by members of the public. You can feel the music, listen to it online, then pay for it using your credit card and download it for yourself - All done on the Internet so this is pure ecommerce.

**Example:**

→ Take a business that sales software for ex. You just pay and Download or one that sales music files online.

**Figure :****Partial E-commerce**

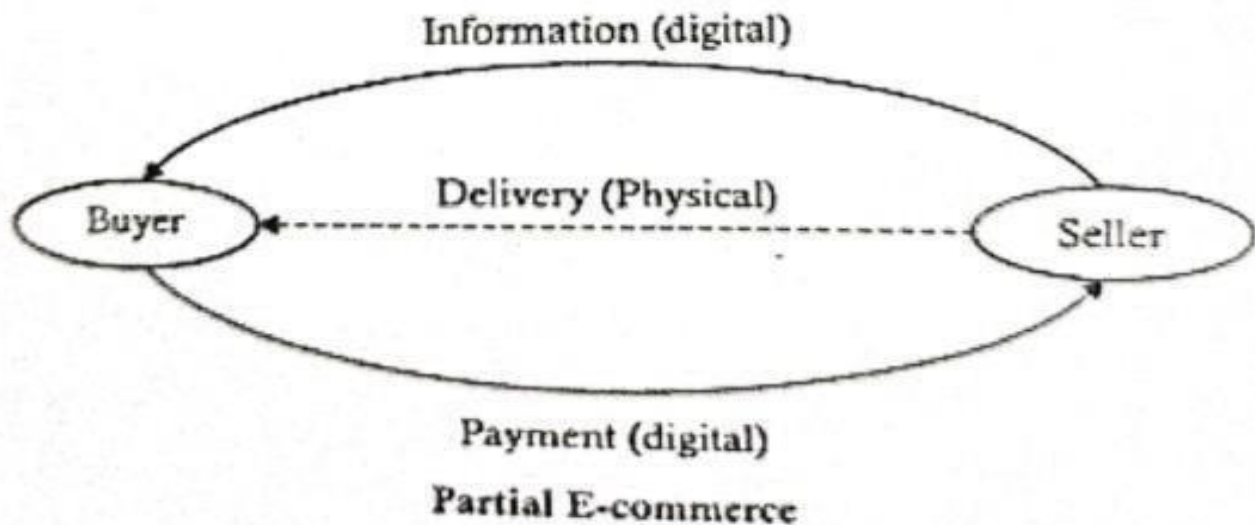
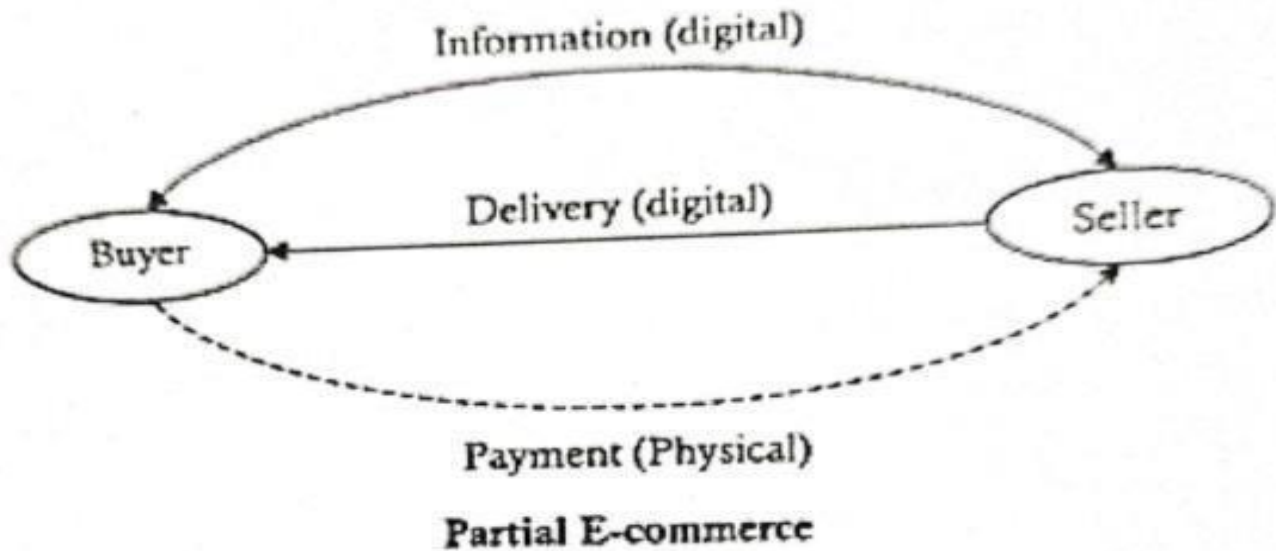
→ On the other hand refers to a slightly opposite situation where a business has an online presence. But still has a physical location for the goods and services it sales .

→ Partial E-Commerce on the other hand concerns business in which a large part of the transaction takes place in the **off-line** real world. Amazon, for instance, will sell you books online, but these must be stored in large warehouses and physically delivered through the post that is partial ecommerce.

**Example:**

Amazon.

**Figure :**



### **Topic-3 : Explain History and Development (Evolution) of E-commerce in detail.**

- E-commerce is a form of doing business that is performed online or over the internet.
- In other words, when you buy or sell something online or via an electronic medium, it is referred to as electronic commerce, popularly known as eCommerce.
- Here is the timeline of the history of eCommerce and its evolution:

**1969:** CompuServe, the first significant eCommerce company is established by Dr John R. Goltz and Jeffrey Wilkins by utilizing a dial-up connection. This is the first time eCommerce was introduced.

**1979:** Michael Aldrich invented electronic shopping (he is also considered as founder or inventor of eCommerce). This was done by connecting a transaction-processing computer with a modified TV through a telephone connection. This was done for transmission of secure data.

**1982:** The continued growth of technology, particularly in electronics led to the launch of the first eCommerce platforms by Boston Computer Exchange.

**1992:** The 90s took the online business to the next level by introducing Book Stacks Unlimited as an online bookstore by Charles M. Stack. It was one of the first online shopping site created at that time.

**1994:** Web browser tool introduced by Netscape Navigator by Marc Andreessen and Jim Clark. It was used on the Windows platform.

**1995:** The year marked the iconic development in the history of eCommerce as Amazon and eBay were launched. Amazon was started by Jeff Bezos, while Pierre Omidyar launched eBay.

**1998:** PayPal launched the first eCommerce payment system as a tool to make money transfers.

**1999:** Alibaba started its online shopping platform in 1999 with more than \$25 million as capital. Gradually it turned out to be an eCommerce giant.

**2000:** Google launched the first online advertising tool named Google AdWords as a way to help retailers to utilize the pay-per-click (PPC) context.

### **2005 to 2009**

The four years saw the development of eCommerce in the following ways:

**2005:** Amazon Prime membership was launched by Amazon to help customers get free two-day shipping at an annual fee.

Etsy was launched in 2005 to enable small and medium scale retailers to sell goods online. In 2009, Jack Dorsey and Jim McKelvey started.

**2005:** Square, Inc as an app-based service is launched.

**2005:** Eddie Machaalani and Mitchell Harper launched BigCommerce as an online storefront platform.

The years experienced massive development in the sphere of eCommerce, such as:

**2011:** Google launches its online wallet payment app

**2011:** One of the earliest moves by Facebook to launch sponsored stories for advertisements

**2014:** Apple launched Apple Pay, an online payment application

**2014:** Jet.com was launched in 2014 as an online shopping portal.

**2017:** Instagram introduces shoppable tags- enabling people to sell directly from the social media platform.

**2017 to present**

- Major reforms that have taken place in the eCommerce industry between these years are-
- Large retailers are pushed to sell online.
- Small businesses have seen a rise, with local sellers now operating from social media platforms.
- Operational costs have lowered down in the B2B sector.
- Parcel delivery costs have seen a significant rise with growing eCommerce industry.
- Several eCommerce marketplaces have emerged enabling more sellers to sell online.
- Logistics has evolved with the introduction of automation tools and artificial intelligence.
- Social media has become a tool to increase sales and market brand.
- The buying habits of customers have significantly changed.

**Topic-4 : Explain difference between traditional commerce and E-commerce .**

- The difference between them is given below:

<b>Traditional Commerce</b>	<b>E-commerce</b>
(1) Traditional commerce is based around face-to-face interaction. → The customer has a chance to ask question and the sales staff can work with them to ensure a satisfactory transaction.	(1) E-commerce doesn't offer the benefit of face-to-face interaction unless live chats are implemented between the business and the consumer is usually screen-to-face.
(2) It is not easy to expand business, since business organization will have to suffer a lot of expenses to expand the business.	(2) In e-commerce, it is easy to expand the size of market from regional to international.
(3) Traditional business is open only for a limited time. Thus, it has time limitation.	(3) E-business is possible round the clock i.e. 24 x 7 service is possible. Thus, it has no time limitation .
(4) Communications of business depends upon individual skills.	(4) In E-commerce or Electronic Market, there is no human intervention.
(5) There is manual processing of business transactions in traditional commerce. Thus, clerical errors may occur.	(5) There is an automated processing of business transactions in e-commerce. Clerical errors are minimized.
(6) Unavailability of a uniform platform as traditional commerce depends heavily on personal communication.	(6) E-commerce website provides user a platform where all information is available at one place.
(7) In traditional commerce, you are restricted to people who actually come to your shop.	(7) With e-commerce, you can do business with anybody living on a country you are able and willing to send mail to.
(8) A traditional commerce store has capability limits. Stocks are also limited.	(8) An online store has no capability limits, and you can have as many clients as your stock can serve.



(9) In a traditional store, the customer will be able to touch and check the items, to make sure they are suitable, and even try them on, which reduces the number of returned items or complaints.	(9) In an e-commerce store, significantly higher rate of returns are expected, as many will just order and try the items at home, and won't hesitate to return them if they don't find the items suitable.
(10) In traditional commerce, it is possible to physically inspect the goods before purchase.	(10) In e-commerce, physical inspection of goods before purchased not possible.
(11) It takes a lot of time to complete a transaction in the traditional commerce.	(11) It saves a lot of time for both the consumers and the business firm.
(12) No uniform platform for information sharing as it depends heavily on personal communication.	(12) E-commerce provides a universal platform to support commercial / business activities across the globe.

### **Topic-5 : What are the advantages and limitations of E-commerce .**

#### **⇒ Advantages :**

##### **(1) No Geographic Limitations :**

- No limitations of distance is there.
- E-commerce has converted world into a global village.
- Buyers and sellers meet via internet.
- If you have a physical store, you are limited by the geographical area that you can service. With an ecommerce website, the whole world is your playground.

##### **(2) Eliminate Travel Time and Cost :**

- It is not unusual for customers to travel long distances to reach their preferred physical store.
- Ecommerce allows them to visit the same store virtually, with a few mouse clicks.

##### **(3) Remain open all the time :**

- Ecommerce is a 24 \* 7 business . there is no opening and closing time for the stores.
- Ecommerce websites can run all the time. From the merchant's point of view, this increases the number of orders they receive. From the customer's point of view, an "always open" store is more convenient.

##### **(4) Huge Variety :**

- Customers can easily select products from different providers without moving around physically.

##### **(5) Least Capital required :**

- High initial cost is not required . business can be started with least amount of capital.

##### **(6) Provide Comparison shopping :**

- Ecommerce facilitates comparison shopping.

→ There are several online services that allow customers to browse multiple ecommerce merchants and find the best prices.

**(7) Locate the Product Quicker :**

- Ecommerce facilitates comparison shopping. On an e-commerce website, customers can click through intuitive navigation or use a search box to narrow down their product search immediately.
- Some websites remember customer preferences and shopping lists to facilitate repeat purchase.

⇒ **Disadvantages :**

**(1) Habituate :**

- No doubt that e-shopping is getting popular day by day but still there are people who prefer store to store shopping because they are habituate of doing so.

**(2) Security :**

- The biggest drawback of e-commerce is the issue of security. When making an online purchase, you have to provide at least your credit card information and mailing address.
- In many cases, ecommerce websites are able to collecting other information about your online behavior and preferences. This could lead to credit card fraud, or worse, identity theft.
- E-commerce sites , payments gateways are liable to attack from hackers and thus , customers identity at threat.

**(3) Quality :**

- Quality of product is not assured when making an online purchase.

**(4) Lack of privacy**

- Many websites do not have high encryption for secure online transaction or to protect online identity. Some websites illegally collect statistics on consumers without their permission.
- Lack of privacy discourages people to use internet for conducting commercial transactions.

**(5) Product suitability**

- People have to rely on electronic images to purchase products Sometimes, when the products are delivered, the product may not match with electronic images.
- Finally, it may not suit the needs of the buyers. The lack of 'touch and feel' prevent people from online shopping.

**(6) High Labour cost**

- Highly talented and technically qualified workforce are required to develop and manage the websites of the organization.
- Since internet provides a lot of job opportunities, business organizations have to suffer a lot of expenses to maintain a talented pool of employees.

**(7) Fear**

- People fear to operate in a paperless and faceless electronic world.
- Some of the business organizations do not have physical existence, People do not know with whom they are conducting commercial transactions.
- This aspect makes people to choose physical stores for purchases.

**(8) Tax issue**

- Sales tax is another bigger issue when the buyer and seller are situated in different locations.
  - Computation of sales tax creates problems when the buyer and seller are in different states.
- Another factor is that physical stores will lose business if web purchases are free from tax.

**Topic-6 : Explain E-commerce Indian scenario/E-commerce in india.**

- E-commerce in India has its own set of unique challenges. E-commerce in most mature markets such as the USA works because of certain efficiencies in payment and delivery mechanisms which are missing or underdeveloped in India.

**(1) Indian customers return much of the products they purchase online.**

- Ecommerce in India has many first time buyers of products. This means that they have not yet made up their mind about what to look for from ecommerce websites.
- As a result, buyers sometimes come down to hard sell. But by the time the product is delivered, they return the products.
- Though customer returns products is a global problem, it is all the more ordinary in a country like India, where much of the growth comes from new buyers.

**(2) Cash on delivery is the preferred payment mode.**

- Less than 2% of Indian customers own credit cards and 90% of all retail transactions are conducted in cash.
- As a result most e-commerce sites are forced to offer a Cash-on-Delivery (COD) option. Eight out of ten online transactions are conducted on a COD basis.
- However, as per one estimate 45% of all COD orders are rejected at the point of delivery by the customer.
- The problem is indicated by the fact that most e-retailers also offer free delivery of products to get and keep customers.

**(3) Payment gateways have a high failure rate.**

- As if the preference for cash on delivery was not bad enough, Indian payment gateways have an unusually high failure rate by global standards.
- Ecommerce companies using Indian payment gateways are losing out on business, as several customers do not reattempt payment after a transaction fails.

**(4) Internet connection is low.**

- Internet connection in India is still a small part of what you would find in several countries.

- The quality of connectivity is poor in several regions. But both these problems are fast disappearing.
- The day is not far when connectivity issues would not feature in a list of challenges to ecommerce in India.

**(5) Few customers not have smartphones.**

- Though the total number of mobile phone users in India is very high, a significant majority still use feature phones, not smartphones.
- So, this customer group is unable to make ecommerce purchases online.

**(6) Postal addresses are not make consistent .**

- If you place an online order in India, you will quite likely get a call from the company to ask you about your exact location.
- Clearly your address is not enough. This is because there is little consistency in the way postal addresses are written. Last mile issues add to ecommerce managing problems.

**Topic-7 : Explain various technologies of E-commerce.**

The various technologies used for E-commerce are given below:

**(1) Mobile Commerce**

- Mobile commerce, also called m-commerce , includes any transaction completed using a mobile device.
- It is an advancement of ecommerce, enabling people to buy and sell goods or services from almost anywhere, simply using a mobile phone or tablet device.
- But mobile commerce is more than just a simple evolution of ecommerce. There are different types of mobile commerce. Mobile shopping, Mobile banking, Mobile payments.

**(2) Electronic Funds transfer**

- It is a very popular electronic payment method to transfer money from one bank account to another bank account. Accounts can be in the same bank or different banks. Fund transfer can be done using ATM (Automated Teller Machine) or using a computer.

**(3) Supply chain management**

- Supply Chain Management (SCM) is a range of activities needed to plan, coordinate, schedule and control the production, and deliveries of products to customers.
- SCM is the base of eCommerce and is a very key component in its growth.

**(4) Internet Marketing**

- Internet marketing is the process of promoting a business or brand and its products or services over the internet.
- Internet marketing a broad term that includes a range of marketing strategies - including content, email, search, media, and more.

**(5) Online transaction Processing**

- online transaction processing is a class of software programs capable of supporting transaction-oriented applications on the Internet.

→ Many online transaction processing including online banking, online shopping and even in-store shopping .

### **(6) Electronic data interchange(EDI)**

→ Electronic Data Interchange (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 with paper.

→ Business entities conducting business electronically are called trading partners.

### **(7) Inventory Management systems**

→ An ecommerce inventory management system tells you where every product is and alerts you to when products are low in stock.

→ An inventory management system also provides deep visibility into multiple warehouses, making it easier to manage warehouses near or far from each other .

### **(8) Automated data collection systems.**

→ Automated Data Collection System is a system in which a set of equipment Including hardware and software for recognizing, reading and recording desired information using one of the automatic identification techniques.

## **Topic-8 : Explain future of E-commerce.**

→ In the banking there is good future for E-commerce. Through one of the best mentioned the online banking sector holds the potential to be an e-commerce leader in India.

- As of now only ICICI bank ,Times Bank , Citibank have gone online seriously. Reasons low credit card , account ability in the so make the easy transaction.
- Over 2500 bank have a presence on the web but only the 500 are offering account service.
- A result study conducted that the cost of an average transaction on the internet could be as low as its cost.
- also internet banking helps banks reduce branch load , attract the power of visual computing.
- The biggest challenge before the Indian banking industry is that of changing their mindset in the turn with internet.
- E-commerce offer many advantage to the banking sector and its consumer to provide the all the benefit and reduce the load of them.
- In the current scenario the e-commerce has the bright future because on the internet the consumer gets all the detail of all services and good and they better way can able to analyses.
- The internet with the use of the E-commerce many organization performed their work in well manner and able to reach the each consume and client.