

First Term Examination

Note: Q. No. 1 is compulsory. Attempt any two more Questions from the rest.

Q1. (a) Define Ecommerce and its types. (2x5)

ans: Ecommerce, also known as electronic commerce or internet commerce, refers to the buying and selling of goods or services using the internet, and the transfer of money and data to execute these transactions. Ecommerce is often used to refer to the sale of physical products online, but it can also describe any kind of commercial transaction that is facilitated through the internet. Whereas e-business refers to all aspects of operating an online business, ecommerce refers specifically to the transaction of goods and services. The history of ecommerce begins with the first ever online sale: on the August 11, 1994 a man sold a CD by the band Sting to his friend through his website NetMarket, an American retail platform. This is the first example of a consumer purchasing a product from a business through the World Wide Web—or “ecommerce” as we commonly know it today. Since then, ecommerce has evolved to make products easier to discover and purchase through online retailers and marketplaces. Independent freelancers, small businesses, and large corporations have all benefited from ecommerce, which enables them to sell their goods and services at a scale that was not possible with traditional offline retail.

Types of Ecommerce Models: There are four main types of ecommerce models that can describe almost every transaction that takes place between consumers and businesses.

1. Business to Consumer (B2C):

When a business sells a good or service to an individual consumer (e.g. You buy a pair of shoes from an online retailer).

2. Business to Business (B2B):

When a business sells a good or service to another business (e.g. A business sells software-as-a-service for other businesses to use)

3. Consumer to Consumer (C2C):

When a consumer sells a good or service to another consumer (e.g. You sell your old furniture on eBay to another consumer).

4. Consumer to Business (C2B):

When a consumer sells their own products or services to a business or organization (e.g. An influencer offers exposure to their online audience in exchange for a fee, or a photographer licenses their photo for a business to use).

Examples of Ecommerce: Ecommerce can take on a variety of forms involving different transactional relationships between businesses and consumers, as well as different objects being exchanged as part of these transactions.

1. Retail:

The sale of a product by a business directly to a customer without any intermediary.

2. Wholesale:

The sale of products in bulk, often to a retailer that then sells them directly to consumers.

3. Dropshipping:

The sale of a product, which is manufactured and shipped to the consumer by a third party.

4. Crowdfunding:

The collection of money from consumers in advance of a product being available in order to raise the startup capital necessary to bring it to market.

5. Subscription:

The automatic recurring purchase of a product or service on a regular basis until the subscriber chooses to cancel.

6. Physical products:

Any tangible good that requires inventory to be replenished and orders to be physically shipped to customers as sales are made.

7. Digital products:

Downloadable digital goods, templates, and courses, or media that must be purchased for consumption or licensed for use.

8. Services:

A skill or set of skills provided in exchange for compensation. The service provider's time can be purchased for a fee.

(b) What are the principal factors of rapid growth of E-commerce?

- **Localisation of Internet content**
- **Growth of mobile commerce**
- **Growing usage of debit cards for cashless transactions**
- **Growing investment in logistics and warehouses**

(c) Differentiate between Extranet, Internet and Intranet.

Parameter	Internet	Intranet	Extranet
Type of Network	Public	Private	Private/VPN
Size	Large number of connected devices	Limited number of connected devices	Limited number of connected devices over internet
Security	Depends on the device connected to the device	Firewall protected	Firewall separates Internet and Extranet
Policy	Internet Communication Protocols	Organizational Policies	Organizational policies, contractual policies and Internet Policies
Accessibility	Anyone	Authorized people	Authorized people
Information Sharing	Information can be shared across the world	Information can be shared securely within an Organization	Information can be shared between employees and external people
Owner	Not owned by anyone	Owned by a particular Organization	Owned by one or more Organizations
Example	World Wide Web, Email, Chat, Social Media	Internal Operations Network of an Organisation	Network of Collaboration between two Corporations

(d) What is EDI?

EDI stands for Electronic Data Interchange. EDI is an electronic way of transferring business documents in an organization internally, between its various departments or externally with suppliers, customers, or any subsidiaries. In EDI, paper documents are replaced with electronic documents such as word documents, spreadsheets, etc.

EDI Documents

Following are the few important documents used in EDI –

- Invoices
- Purchase orders
- Shipping Requests
- Acknowledgement
- Business Correspondence letters
- Financial information letters

(e) What are applications of Ecommerce?

♣ Online shopping ♣ Online marketing/Online advertising ♣ Pretailing ♣ Group buying ♣ Online banking ♣ E-payment ♣ Digital distribution

Online shopping (sometimes known as e-tail from "electronic retail" or e-shopping) is a form of ecommerce which allows consumers to directly buy goods or services from a seller over the internet using a web browser

Online Marketing Online Advertising, also called online marketing or internet advertising, is a form of marketing and advertising which uses the internet to deliver promotional marketing messages to consumers. advertising agencies who help generate and place the ad copy, an ad server which technologically delivers the ad and tracks statistics, and advertising affiliates who do independent promotional work for the advertiser.

Pretailing Pretail (also referred to as pre-tail, pre-retail, or precommerce) is a sub-category of ecommerce and online retail for introducing new products by first selling online, sometimes in limited quantity, before release, realization, or

commercial availability. • Pretail includes pre-sale commerce, pre-order retailers, incubation marketplaces, and crowdfunding communities

Group Buying Group buying, also known as collective buying, offers products and services at significantly reduced prices on the condition that a minimum number of buyers would make the purchase.

Online Banking • Online Banking (internet banking or e-banking) allows customers of a financial institution to conduct financial transactions on a secure website operated by the institution, which can be a retail or virtual bank, credit union or building society.

E-payment • E-payment or electronic payment is any digital financial payment transaction involving currency transfer between two or more parties

Digital Distribution • Digital distribution (also called content delivery, online distribution, or electronic software distribution) is the delivery or distribution of media content such as audio, video, software and video games.

Q2. (a) What is difference between the brick-and-click and pure online business model? (5)

Brick-and-Click is a business model in which a company operates both an online store (the clicks) and an offline store (the bricks) and integrates the two into a single retail strategy. Integration of online and offline sales portals is the major challenge of successfully running a brick-and-click store. Inventory, in particular, must be kept in sync to prevent overselling or underselling. If a single inventory is drawn from, a non-available item could be accidentally sold, but if separate inventories are used, an available item could needlessly sit in stock. In general, use of a single POS system for both online/offline components of the store is the best solution. It needs to be an automated, real-time system that syncs inventory across all channels if it is to streamline and simplify accounting processes.

A pure play is an investors' term for a publicly traded company that focus its resources on only one line of business. As such, the performance of its stock correlates highly to the performance of its particular industry or sector. But pure plays can be large corporations too. For example, Dunkin' Brands Group, Inc. (DNKN) (which owns the Dunkin' Donuts coffee shops) and Starbucks Corporation (SBUX) represent pretty pure plays in coffee. An investor or trader wanting to get in on rising prices of this caffeinated commodity would probably

target them. In contrast, The J. M. Smucker Company (SJM) would not be a pure play, because—even though it owns major java brands like Folger's and Medaglia D'Oro—it also owns (and perhaps is primarily associated with) jellies, jams, and other comestibles. It's more of a food play than a coffee play.

if a pure play's line of business is favored by growth investors, the company will do well during a bull market, when growth stocks tend to outperform the market. Conversely, during bear markets, when a value investing strategy is historically more profitable, a pure play associated with growth investing will do poorly.

(b) What is Electronic Payment System and how is it useful? (5)

E-commerce sites use electronic payment, where electronic payment refers to paperless monetary transactions. Electronic payment has revolutionized the business processing by reducing the paperwork, transaction costs, and labor cost. Being user friendly and less time-consuming than manual processing, it helps business organization to expand its market reach/expansion. Listed below are some of the modes of electronic payments –

- Credit Card
- Debit Card
- Smart Card
- E-Money
- Electronic Fund Transfer (EFT)

Variety of Choice

Electronic payment systems allow financial institutions, businesses and the government to offer a variety of payment options to their customers. These systems include automated teller machines, debit cards, credit cards, mobile banking and payment of bills through the phone. Traditional business payments systems depends mainly on a limited number of the business outlets situated in different locations. This limits the client coverage, however – through Internet services – systems that rely on e-payment are available to a large number of clients.

Reduced Costs

Businesses save on operational and processing expenses mainly due to reduction in technological costs – for example, the use of the Internet and the acquisition of computers and other machines. Expenditures in paper and postage is cut down along with time spent in executing personal transactions. These reduced costs are often passed down to customers who in turn pay less fees associated with transferring money or making payments. Customers also save on time spent in dealing with personal transactions as in traditional payment systems.

Reliability

The use of e-payments cancels out the use of drafting checks, transmitting cash and invoices for both businesses and customers. This allows for faster execution of transactions – for example, you do not have to wait for the 30 days required in invoicing transactions. Credit cards also allow for customers to partake in transactions without immediate cash.

Security

The traditional payment systems mainly involved clients sending their confidential information via post or physically visiting the transaction site. This presented a number of security risks – for example, your mail may get lost or fall into the wrong hands. Additionally, places where financial transactions take place are targets for criminal attacks. E-payment systems offer encrypted services which protects the clients' private information during transmission and you do not even have to leave your home.

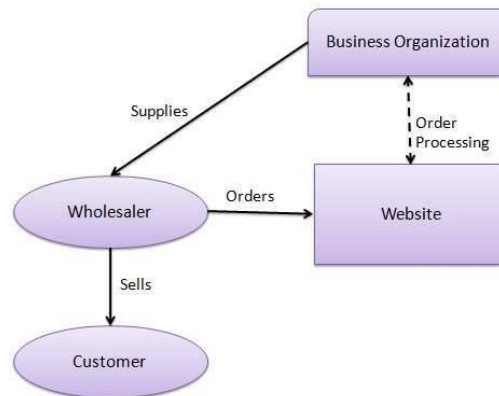
Q3. (a)What is E-commerce business model? Also explain its categories. (5)

Electronic commerce or e-commerce (sometimes written as *eCommerce*) is a [business model](#) that lets firms and individuals conduct business over electronic networks, most notably: the internet. E-commerce business models can generally be categorized into the following categories.

- Business - to - Business (B2B)
- Business - to - Consumer (B2C)
- Consumer - to - Consumer (C2C)
- Consumer - to - Business (C2B)

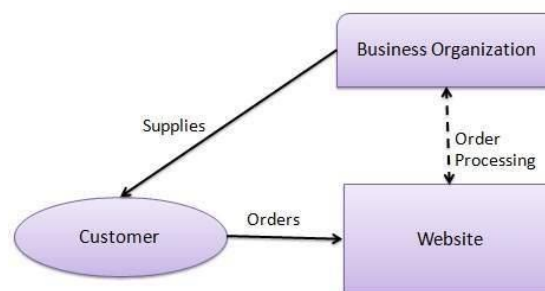
Business - to - Business

A website following the B2B business model 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 endproduct to the final customer who comes to buy the product at one of its retail outlets.



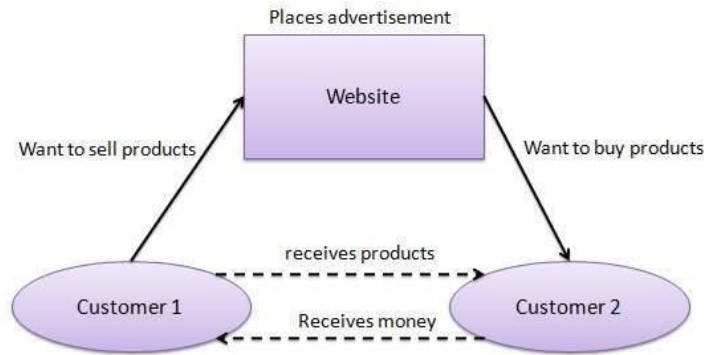
Business - to - Consumer

A website following the B2C business model 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.



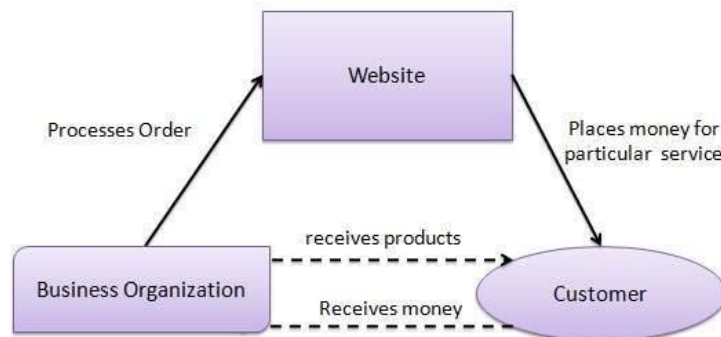
Consumer - to - Consumer

A website following the C2C business model helps consumers 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. Another consumer may opt to buy the product of the first customer by viewing the post/advertisement on the website.



Consumer - to - Business

In this model, a consumer approaches a website showing multiple business organizations for a particular service. The consumer places an estimate of amount he/she wants to spend for a particular service. 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.



(b) Write short note on public and private key encryption methods. (5)

Asymmetric cryptography, also known as public key cryptography, uses public and private keys to encrypt and decrypt data. The keys are simply large numbers that have been paired together but are not identical (asymmetric). One key in the pair can be shared with everyone; it is called the public key. The other key in the pair is kept secret; it is called the private key. Either of the keys can be used to encrypt a message; the opposite key from the one used to encrypt the message is used for decryption.

For asymmetric encryption deliver confidentiality, integrity, authenticity and non-repudiability, users systems need to be certain that a public key is authentic, that it belongs to the person or entity claimed and that it has not been tampered with or replaced by a malicious third party. There is no perfect solution to this public key authentication problem. A public key infrastructure (PKI), where trusted certificate authorities certify ownership of key pairs and certificates, is the most common approach, but encryption products based on the Pretty Good Privacy (PGP) model (including OpenPGP), rely on a decentralized authentication model called a web of trust, which relies on individual endorsements of the link between user and public key.

RSA (Rivest-Shamir-Adleman), the most widely used asymmetric algorithm, is embedded in the SSL/TLS protocol which is used to provide communications security over a computer network. RSA derives its security from the computational difficulty of factoring large integers that are the product of two large prime numbers. Multiplying two large primes is easy, but the difficulty of determining the original numbers from the total -- factoring -- forms the basis of public key cryptography security. The time it takes to factor the product of two sufficiently large primes is considered to be beyond the capabilities of most attackers, excluding nation state actors who may have access to sufficient computing power. RSA keys are typically 1024- or 2048-bits long, but experts believe that 1024-bit keys could be broken in the near future, which is why government and industry are moving to a minimum key length of 2048-bits.

Elliptic Curve Cryptography (ECC) is gaining favor with many security experts as an alternative to RSA for implementing public-key cryptography. ECC is a public key encryption technique based on elliptic curve theory that can create faster, smaller, and more efficient cryptographic keys. ECC generates keys through the properties of the elliptic curve equation. To break ECC, one must compute an elliptic curve discrete logarithm, and it turns out that this is a significantly more difficult problem than factoring. As a result, ECC key sizes can be significantly smaller than those required by RSA yet deliver equivalent security with lower

computing power and battery resource usage making it more suitable for mobile applications than RSA.

Q4. (a)What is meant by digital signature? Is it different from electronic signature?
(5)

Digital signatures are based on asymmetric cryptography and can provide assurances of evidence to origin, identity and status of an electronic document, transaction or message, as well as acknowledging informed consent by the signer. To create a digital signature, signing software (such as an email program) creates a one-way hash of the electronic data to be signed. The user's private key is then used to encrypt the hash, returning a value that is unique to the hashed data. The encrypted hash, along with other information such as the hashing algorithm, forms the digital signature. Any change in the data, even to a single bit, results in a different hash value. This attribute enables others to validate the integrity of the data by using the signer's public key to decrypt the hash. If the decrypted hash matches a second computed hash of the same data, it proves that the data hasn't changed since it was signed. If the two hashes don't match, the data has either been tampered with in some way (indicating a failure of integrity) or the signature was created with a private key that doesn't correspond to the public key presented by the signer (indicating a failure of authentication). A digital signature also makes it difficult for the signing party to deny having signed something (the property of non-repudiation). If a signing party denies a valid digital signature, their private key has either been compromised, or they are being untruthful.

BASIS FOR COMPARISON	DIGITAL SIGNATURE	ELECTRONIC SIGNATURE
Basic	Digital signature can be visualised as an electronic "fingerprint", that is encrypted and identifies the person's identity who actually signed it.	Electronic signature could be any symbol, image, process attached to the message or document signifies the signer's identity and act an consent on it.
Authentication mechanism	Certificate-based digital ID	Verifies signers identity through email, phone PIN, etc.
Used for	Securing a document	Verifying a document
Validation	Performed by trusted certificate authorities or trust service providers	No specific validation process
Security	Highly secure	Vulnerable to tampering

(b) What is EFT? What are the main services of EFT. (5)

Electronic Funds Transfer (EFT) is a system of transferring money from one bank account directly to another without any paper money changing hands. One of the most widely-used EFT programs is direct deposit, through which payroll is deposited straight into an employee's bank account. However, EFT refers to any transfer of funds initiated through an electronic terminal, including credit card, ATM, Fedwire and point-of-sale (POS) transactions. It is used for both credit transfers, such as payroll payments, and for debit transfers, such as mortgage payments.

The ACH Network operates as a batch processing system. Financial institutions accumulate ACH transactions throughout the day, which are handled via batch processing later on. According to NACHA, which creates payment and financial messaging rules and standards, the ACH Network handles 24 billion EFTs each year, accounting for more than \$41 trillion transferred. The ACH Network is one of the largest and most reliable payment systems in the world, according to the association.

To complete an EFT, the receiving party must provide the following information:

- The name of the bank receiving funds
- The type of account receiving funds (e.g., checking or savings)
- The bank's ABA routing number
- The recipient's account number

Services:-

- Direct deposit: Enables businesses to pay employees. During the onboarding process, new employees typically specify the financial institution to receive the direct deposit payments.
- Wire transfers: Used for non-regular payments, such as the down payment on a house.
- Automated Teller Machines (ATMs): Allows cash withdrawals and deposits, fund transfers and checking of account balances at multiple locations, such as branch locations, retail stores, shopping malls and airports.
- Debit cards: Allows users to pay for transactions and have those funds deducted from the account linked to the card.
- Pay-by-phone systems: Allows users to pay bills or transfer money over the phone.
- Online banking: Available via personal computer, tablet or smartphone. Using online banking, users can access accounts to make payments, transfer funds and check balances.

Second Term Examination

Note: Q. No. 1 is compulsory. Attempt any two more Questions from the rest.

Q1. (a) Ecommerce vs. Mcommerce (2x5)

	E-commerce	M-commerce
Definition	Electronic Commerce (or also called E-commerce) refers to the activities of buying and selling products and services with the use of electronic systems such as the internet.	Mobile Commerce (or also called M-commerce) refers to the process of buying and selling products and services with the use of internet/cellular data via wireless handheld devices.
History	1970's	1990's
Devices used	Computers, laptops...	Wireless handheld devices such as cell phones, iPads, tablets...
The use of Internet	Mandatory	Not mandatory(allow the use of offline mode, might not work properly though)
Connectivity	Smaller	Larger owing to the bigger number of mobile users
Mobility	Limited	Less limited because of lighter weight and smaller size leading to easier to carry
Reach	Only at the places where the electricity and the internet are available	Broader due to its portability
Payment gateway	Credit cards	Caller's rate, mobile banking or user's credit card
Usage	Less simple because of a more complicated user interface and more functions	Simple because all functions have been simplified
Platform used	Web stores	Web stores (mobile version/web app), hybrid app, native app
Cost	Less costly for the creation a web store and the use of internet	More costly for the creation of a mobile app and the use of cellular data

(b) Discuss the future of e-procurement.

- e-Procurement will make way for an improved innovation level with prime focus on the best life-cycle value.
- Will be the driving force in supplier-enabled innovation and will be proficient to manage complex supply-chains in real-time.

- Procurement departments will soon be acting as interface managers between internal functions and external partners and will serve to catalyze the business processes.
- Will save time and costs, and will increase transparency and competition – for governments, SMEs and Multi-national corporations.
- Big data analysis will be a major element in Procurement. Big data analytics will prove vital in detection of global suppliers and thus help in breaking down monopolistic markets.
- Will also enable improvement in commodity strategies.

(c) What is the Mcommerce scenario in India?

The exploded adoption of smartphones, mobile internet and apps have given wings to Mcommerce Industry in India. As a result Mcommerce industry in India is expected to capture 80% of the Indian eCommerce market by 2020, reaching a sales figure of \$37.96 billion. Mcommerce growth in India is the outcome of an increased adoption of smartphones and the internet. In a country with a population of 1.3 billion, there are 331 million **smartphone users** as of now. The number of **mobile internet users** in India stood at 371 million as of June 2016 and is **expected** to reach 500 million by 2017. These figures indicate that the riding on the back of mobile eCommerce industry in India has only scratched the surface and still has a huge growth potential.

Factors Affecting M-commerce Growth in India

- **Affordable smartphone:** Low cost mobile internet enabled mobile devices like smartphone or tablets are available through local vendors like micromax, Lava. Consumers are increasingly using these devices to search information and shop online. This is critical element for m-commerce growth.
- **Mobile Apps:** With increasing internet penetration and affordable mobile devices, users are showing interest in mobile app categories. In 2015, 9 billion mobile apps were estimated to be downloaded in India up from 1.56 billion downloads in 2012 growing at CAGR of 79%. Currently 70% of mobile devices are used to access apps [9]. This factor is guiding app market development which is supporting m-commerce in India.
- **Vendors investing in mobile platforms:** With huge investment happening in e-commerce sector new avenues for m-commerce are opening up. Apart from traditional formats of retail, new online business segments are growing up such as real estate, taxi booking, classifieds, healthcare and even grocery. Different companies have already opened their mobile platform such as amazon, flikart, jabong, snapdeal and paytm .
- **Affordable mobile internet:** With falling prices in data plans, growing no of 3G subscribers and advent of 4G services has made internet consumption affordable in present times. Telecom

companies are providing large range of inexpensive data plans, as a result of low mobile data tariff user are encouraged to use mobile internet more.

- Growing Internet population: India stands third behind China and US in terms of internet users at 243 million with 19% internet penetration [8]. This indicates the potential of internet use in India and as this figure increases, potential for growth of m-commerce industry will also increase.
- Business from tier II, III cities: Big brands are not present in tier 2, 3 cities. With the availability of low cost internet enabled mobile devices, youngsters buy their preferred brand online and with increasing penetration of 3G/4G services in tier 2, 3 cities the sales is expected to increase. At present, 30-40% of online transactions happen from these cities [8]. This is important factor contributing to growth of m-commerce growth in India.
- Mobile Payments: After cash on delivery (cod), mobile payments are becoming alternative to cash, credit or debit cards. Customer can use mobile devices to pay for services and transfer money as well. Payment can be made through sms, data connection and therefore increasing scope of m-commerce

(d) Explain the role of emerging LANs and 3G/4G wireless networks.

- Provides accessibility at home, offices, and public places like sports arenas, airports, malls, university campuses, and hospitals
- Can extend the network to most places where people are likely to spend their time
- Need to extend connectivity beyond homes and offices to public places
Solution: Public-area Wireless Networks (PAWNS)
- Data rates (with wide area coverage and significant mobility)=50 to 100 Mbps.
- Wider bandwidth.
- High security.
- Offering any kind of services anytime, anywhere.
- End-to-end quality of service.

(e)What is supply chain management? What are Logistics? Compare.

Supply chain management (SCM) is the broad range of activities required to plan, control and execute a product's flow, from acquiring raw materials and production through distribution to the final customer, in the most streamlined and cost-effective way possible.

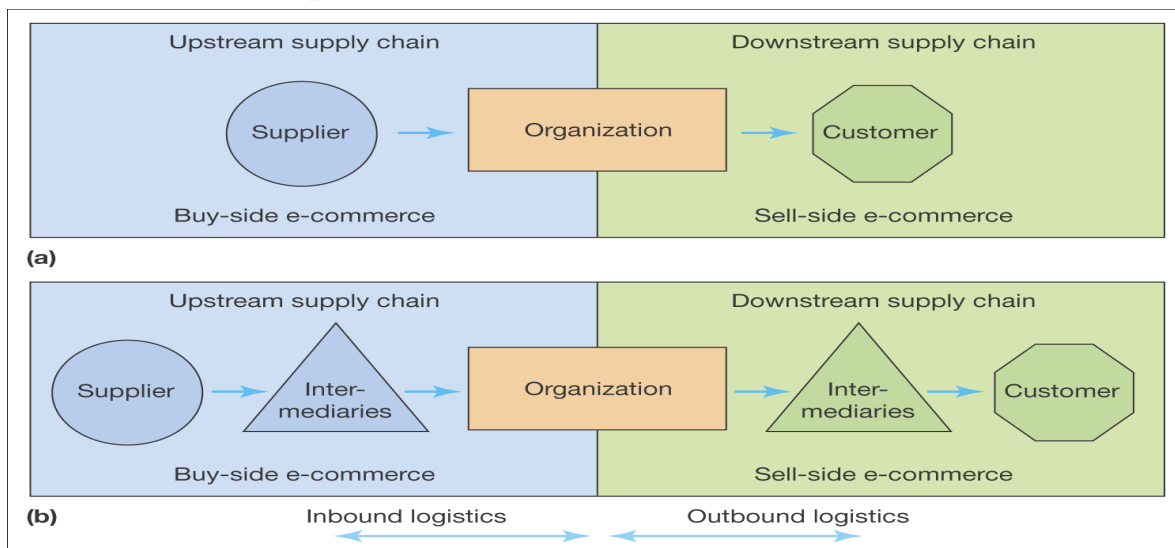
SCM encompasses the integrated planning and execution of processes required to optimize the flow of materials, information and financial capital in the areas that

broadly include demand planning, sourcing, production, inventory management and storage, transportation -- or logistics -- and return for excess or defective products. Both business strategy and specialized software are used in these endeavors to create a competitive advantage.

Supply chain management is an expansive, complex undertaking that relies on each partner -- from suppliers to manufacturers and beyond -- to run well. Because of this, effective supply chain management also requires change management, collaboration and risk management to create alignment and communication between all the entities.

Upstream supply chain Transactions between an organization and its suppliers and intermediaries, equivalent to buy-side e-commerce

Downstream supply chain Transactions between an organization and its customers and intermediaries, equivalent to sell-side e-commerce.



Logistics vs. supply chain management

The terms *supply chain management* and *logistics* are often confused or used synonymously. However, logistics is a component of supply chain management. It focuses on moving a product or material in the most efficient way so it arrives at

the right place at the right time. It manages activities such as packaging, transportation, distribution, warehousing and delivery.

In contrast, SCM involves a more expansive range of activities, such as strategic sourcing of raw materials, procuring the best prices on goods and materials, and coordinating supply chain visibility efforts across the supply chain network of partners, to name just a few.

Logistics is used more broadly to refer to the process of coordinating and moving resources – people, materials, inventory, and equipment – from one location to storage at the desired destination. The term logistics originated in the military, referring to the movement of equipment and supplies to troops in the field. Logistics refers to what happens within one company, including the purchase and delivery of raw materials, packaging, shipment, and transportation of goods to distributors, for example. While supply chain management refers to a larger network of outside organizations that work together to deliver products to customers, including vendors, transportation providers, call centers, warehouse providers, and others. The management of logistics can involve some or all of the following business functions, including:

- Inbound transportation
- Outbound transportation
- Fleet management
- Warehousing
- Materials handling
- Order fulfillment
- Inventory management
- Demand planning

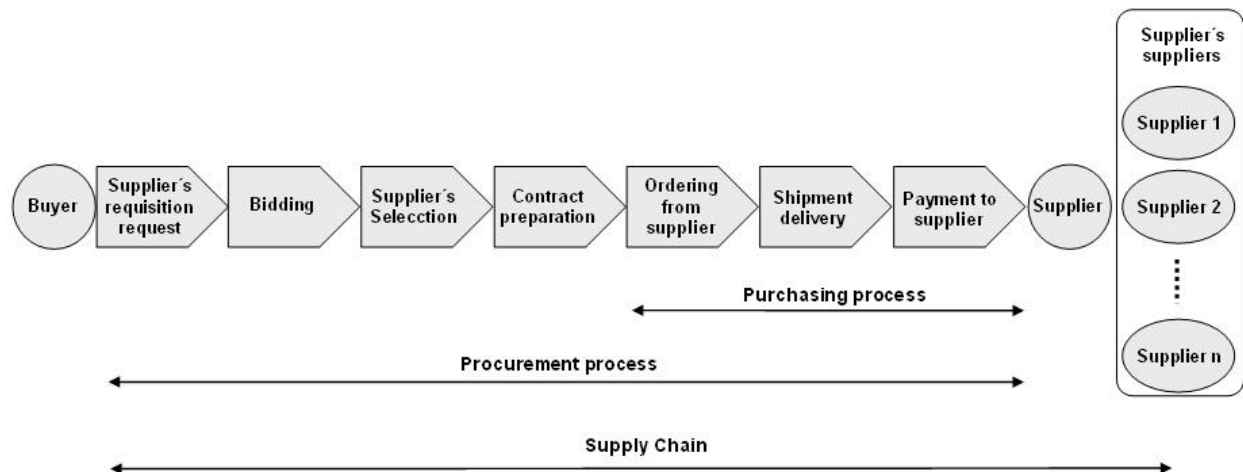
Q2. (a) What is e-procurement? What are its risks and impacts? (5+5)

E-procurement (electronic procurement, sometimes also known as **supplier exchange**) is the business-to-business or business-to-consumer or business-to-government purchase and sale of supplies, work, and services through

the Internet as well as other information and networking systems, such as electronic data interchange and enterprise resource planning. The e-procurement value chain consists of indent management, e-Informing, e-Tendering, e-Auctioning, vendor management, catalogue management, Purchase Order Integration, Order Status, Ship Notice, e-invoicing, e-payment, and contract management:-

1. Indent Management: This process is basically the first step involved in e-tendering. Indent creation or the creation of requisition is undertaken, followed by its evaluation and approval.
2. RFX Creation: RFX is a catch-all term for terms like Request For Proposal (RFP), Request For Information (RFI), Request For Bids (RFB) and Request For Quotes (RFQ). This step involves the creation of RFX and formulation of technical and commercial qualification criteria. The RFX is then published and the prospective bidders are invited.
3. Bid Submission: The interested bidders then register themselves on the e-Procurement portal and submit their bids which would give detailed account of their technical as well as commercial qualifications.
4. Bid Opening and Evaluation: Once the bids are successfully submitted, they are evaluated and the vendors are scrutinized. Thereafter, the shortlisted vendors are invited for e-Auction.
5. e-Auction: The e-Auction is then carried out for procuring the goods or services under consideration. E-Auction too can be of several types depending on the specific requirements.
6. Vendor Selection and Finalization: After the e-Auction, according to the requirement, one or more vendors are finalized and the Purchase Order issued. This step concludes the procurement process.
7. Vendor and Contract Management: This additional module is included to manage and catalog the vendors and to evaluate their services.

In works procurement, administrative approval and technical sanction are obtained in electronic format. In goods procurement, indent generation activity is done online. The end result of the stage is taken as inputs for issuing the NIT. Elements of e-procurement include request for information, request for proposal, request for quotation, RFX (the previous three together), and eRFX (software for managing RFX projects).



Organizational Risks

The cost savings that are gained through e-procurement are a better use of time and resources. This means employees need to be transferred to a different department or location or made redundant. The manager will need to be prepared to explain the benefits of the new system to the company and deal with the resistance caused by the threat of redeployment or redundancies.

There is an additional risk that the originators of the e-procurement become empowered throughout the business. They may purchase their items directly rather than using the purchasing department, which is known as maverick purchasing. This type of purchasing often happens when the items are not necessary or have a high cost.

Failing to Save

The return on investment could end up being lower than expected or forecasted once the e-procurement system has been introduced.

Technology Risks

There are risks that the technology may not be sufficient to cope with the new e-procurement system and companies also find it difficult to know what model they should or could implement into their existing financial systems.

(b)What is e-CRM? Also, explain its applications in business.

Electronic customer relationship management provides an avenue for interactions between a business, its customers and its employees through Web-based

technologies. The process combines software, hardware, processes and management's commitments geared toward supporting enterprise-wide CRM business strategies.

Electronic customer relationship management is motivated by easy Internet access through various platforms and devices such as laptops, mobile devices, desktop PCs and TV sets. It is not software, however, but rather the utilization of Web-based technologies to interact, understand and ensure customer satisfaction.

ECRM is being adopted by companies because it increases customer loyalty and customer retention by improving customer satisfaction, one of the objectives of eCRM. E-loyalty results in long-term profits for online retailers because they incur less costs of recruiting new customers, plus they have an increase in customer retention. A typical E-CRM strategy involves collecting customer information, transaction history and product information, click stream and contents information. It then analyzes the customer characteristics to give a transactional analysis consisting of the customer's profile and transactional history, and an activity analysis consisting of exploratory activities showing the customer's navigation, shopping cart, shopping pattern and more.

CRM	eCRM
Contact with customer made through the retail store, phone, and fax.	All of the traditional methods are used in addition to Internet, email, wireless, and PDA technologies
Implements the use of ERP systems, emphasis is on the back-end.	Geared more toward front end, which interacts with the back-end through use of ERP systems, data warehouses, and data marts
The client must download various applications to view the web-enabled applications. They would have to be rewritten for different platform.	Does not have these requirements because the client uses the browser.
Views differ based on the audience, and personalized views are not available. Individual personalization requires program changes.	– Personalized individual views based on purchase history and preferences. Individual has ability to customize view.

System (created for internal use) designed based on job function and products. Web applications designed for a single department or business unit.	System (created for external use) designed based on customer needs. Web application designed for enterprise-wide use.
More time involved in implementation and maintenance is more expensive because the system exists at different locations and on various servers.	Reduction in time and cost. Implementation and maintenance can take place at one location and on one server.

Key applications of E-CRM –

- Information integration application λ An incomplete view of customers reduces their loyalty and trust λ Consolidating customer data and information from different sources λ To keep up with every customer's interaction
- Customer analysis application λ Measures, predicts, and interprets customer behaviors λ Predictive models to identify the customers most likely to perform a particular activity λ Online analytical processing, data mining and statistics
- Real-time decision application λ To coordinate and synchronize communications across disparate customer λ An effective real-time decision application promotes information exchange between the company and every customer
- Personalized messaging application λ Building customer profiles and enables customized product and service offerings based on the information integration application

Q3. (a)What are the measures for improving performance of e-business systems?(5+5)

1. Clear, well-defined goal of eCommerce website: The eCommerce website should have a clear, well-defined goal which explicitly serves business goals and the needs of potential customers. The website should ensure that it showcases its unique value

proposition by giving the right information at the right time. Unique value proposition will actually include design, messages, media, content, services and overall experience.

2. Understand your customer: To convert site visitors to customers which is the main goal of conversion rate optimization, it's very necessary to understand your customers and their behavior. The website should be tailored keeping in mind the target customer and the quantitative data such as Google analytics, sales trends as well as the qualitative data from customer.

3. Easy navigation: In order to attain a high conversion rate, it is very necessary that the website should have an easy navigation. This becomes an important factor that how many click-through it takes for a customer to purchase from your site. The longer the process will be, the more the chances will be of visitors leaving without checking out or opting-in to receive any information from you. It has become very necessary that the website should be mobile responsive as well as nowadays most of the people access web through mobile.

4. Analyze data and make decisions for site optimization: Based on the results of Google Analytics and other visitors tracking software, try to find out the reason behind the switching of visitors from your site to competitors website. Based on these findings, make tweaks, try out A/B testing and find out the method which is more successful in converting visitors to customers.

5. Strong online presence by SEO: It takes time to rank your website higher in google search results. Therefore, it becomes mandatory that pages should have accurate titles, proper meta tags and appropriate keywords.

6. Use high-quality product images: The goal of the eCommerce website should be to give customers an experience, as real as possible which makes them feel as if they are buying products from physical store. Therefore, use high-quality images.

7. Use high-quality product description: Along with high-quality product images, product description also plays an important role. The product description mentioned on the website should provide a solution to your customer's pain points.

8. Improve Categorization: The more organized your online store will be, the lesser the chances of bouncing back by your customers. Organized online store provides an easy search to the customers and keeps them in flow.

9. Plan out multiple marketing strategies: Relying on a single marketing strategy of Paid ads might put you in a trap. There might be chances that utilizing only one strategy might not work or you may lose out large potential customer base and conversions. Therefore, it's advisable to diversify your marketing strategies like PPC, paid ads with organic search optimization, Social Media Marketing, Email Campaigns etc.

10. Relationship building through Social Media Presence: The best way to showcase your brand is through social media platforms. Sharing content and company announcements on social media sites allows you to engage with your customers. It also allows your customers to spread electronically in the form of posts, comments, reviews and feedbacks.

(b) What are the challenges of m-commerce?

- **Mobile App or Responsive Website:** To address the need of their customers businesses are often faced with the dilemma of choosing between a mobile app and a responsive site (a separate mobile site is no longer an option being considered). Both have their own merits and demerits. While app might be a good way to start, building a mobile app is far more expensive than building a responsive website. In addition, studies have shown that 67% of mobile users are more likely to visit a responsive website and make purchases than on a mobile app. Many organizations choose either of the two; we recommend, if you can, building a responsive website first and then a mobile app.
- **Security:** Users are paranoid about their data when it comes to the virtual world. They are ever so worried when it comes to wireless connections. The main reason why mobile commerce is still not as prevalent as conventional eCommerce is the lack of security, especially when it comes to mobile payments. With options like virtual wallets, this risk is mitigated to some extent.
- **Screen Size:** Although it might sound absurd, many users find the small screen of a mobile device hindering. This can be a challenge when it comes to providing a user-friendly service. In addition, maintaining consistency across various channels like mobile responsive website, mobile app and official website can be a challenge. In addition to this, the content that is on the website

also needs to be crisp. With smaller screens, the images and content should effectively convey the message across and must draw the customer to buy any item.

- **Future-Proof:** While you plan to build a responsive website for mobile devices, make sure you build it in line with your future expansions plans. In addition, make it easy for the website to be modified in newer platforms like smart TV's, smart watches, game consoles, etc.
- **Connectivity and Hosting:** Another major challenge in mobile commerce is speed and reliability. According to a survey and study, an average person spends only a few seconds on a new website before making a judgment. If your website is not properly hosted, your site will not only be slow but also the chances of a transaction going wrong are high, resulting in irritated and unhappy customers and unpleasant customer support calls.
- **Marketing:** Mobile commerce needs a different set of marketing strategies. This can be a challenge as many companies follow a strict marketing calendar and most of them do not consider mobile phones. Marketing in mobile commerce can mean everything. Whatever your campaign, it reaches your consumers no matter where they are. This can be either a challenge or a great success strategy when done right.

Q4. (a)What are the services/applications of m-commerce . (5+5)

Mobile ticketing: Mobile Ticketing is the process where the customers can order, pay for, obtain and validate tickets from any location and at any time using Mobile phones . Tickets can be booked and cancelled on the mobile device with the help of simple application

Content purchase and delivery: Mobile content purchase and delivery mainly consists of the sale of ring-tones, wallpapers, and games for mobile phones. } The convergence of mobile phones, portable audio players, and video players into a single device is increasing the purchase and delivery of full-length music tracks and video

Information services : A wide variety of information services can be delivered to mobile phone users in much the same way as it is delivered to PCs. These services include: } News } Stock quotes } Sports scores } Traffic reporting

Mobile banking: Banks and other financial institutions use mobile Commerce to allow their customers to access account information and make transactions,

such as purchasing stocks, remitting money, receive notifications, transfer money to other banks.

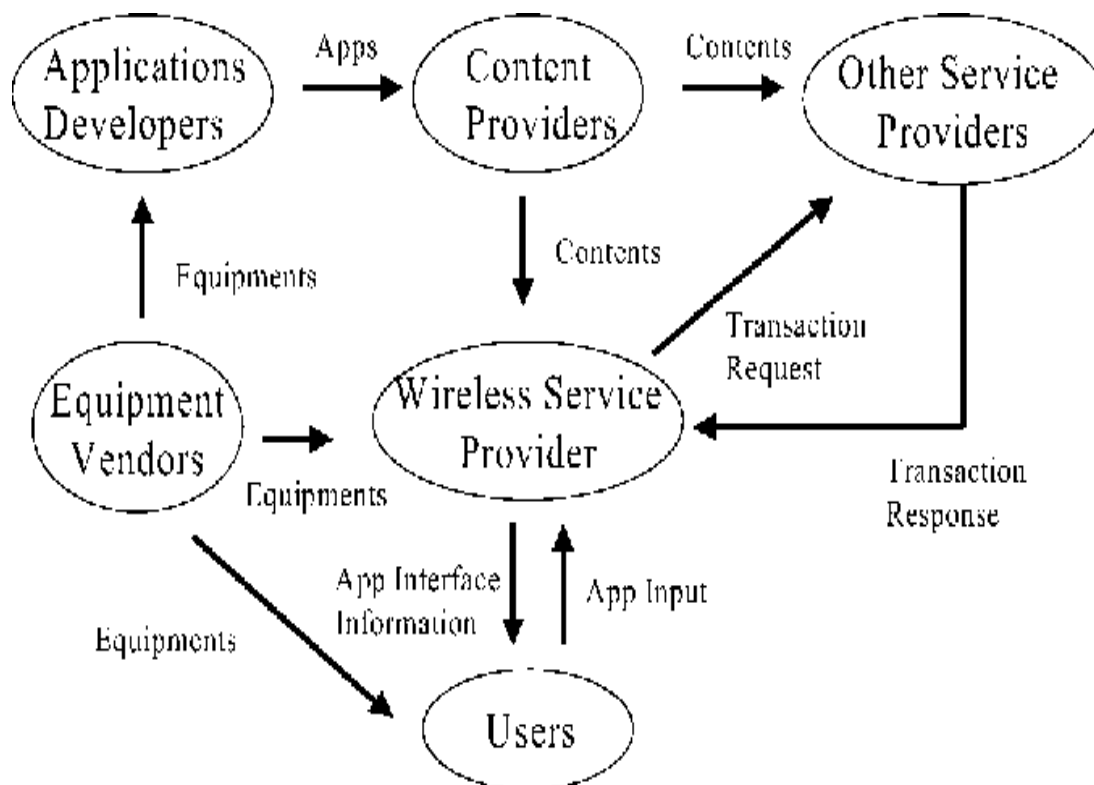
Mobile Browsing : 1. Mini-statements and checking of account history 2.

Checking the balance 3. Recent transactions 4. PIN provision, Change of PIN and reminder over the Internet 5. Cash-in, cash-out transactions on an ATM

Location-based services : The location of the mobile phone user is an important piece of information used during Mobile Commerce or M-Commerce transactions. } Knowing the location of the user allows for location- based services such as: 1. Local discount offers 2. Tracking and monitoring of people

Mobile marketing and advertising:. Corporations are now using M-Commerce to expand everything from services to marketing and advertisement

(b) Explain m-commerce life cycle.



- ♣ Content provider can build its service using applications from multiple application developers and also can aggregate content from other content providers and can supply the aggregated content to a network operator or service provider.
- ♣ Service providers can also act as content aggregators, but are unlikely to act as either an application or content provider due to their focus on the network and service aspects of m-commerce.
- ♣ Wireless carriers can play a very active and important role in the mobile commerce applications and services due to the fact that mobile user is going through their network to perform all mobile commerce transactions.
- ♣ Mobile user is likely to prefer a common bill for voice, data and mobile commerce services.

Q5(a)What is B2B MarketPlace.

Business-to-Business (B2B) exchanges are electronic marketplaces in the Internet where suppliers and buyers interact to conduct transactions. B2B marketplaces can be defined as a World Wide Web site where goods and services can be bought from a wide range of suppliers.¹⁾

Online exchanges vary according to the size and number of companies using them and the type of commodity traded. There are successful exchanges in markets as diverse as energy, textiles and logistics. Online exchanges allow participants to trade straightforwardly with a wide variety of buyers and sellers. Two of the biggest factors driving the growth of exchanges are that large businesses can use them to reduce stock holdings while small businesses can bid collectively to earn volume discounts or to jointly deliver a large contract.

1. Marketplaces based around a specific industry sectors are called vertical marketplaces. Petroleum industry is an example. Those help buyers source goods and services that are largely specific to industries.
2. The type of marketplace which is formed around a wider supply market that cuts across several industries is called horizontal marketplace. Examples include the marketplaces for maintenance, repair and operating (MRO) goods such as safety and office supplies. The value of the horizontal marketplaces is that they efficiently match the needs of the one with the offerings of the other.

example of this segment is marketplace [Alibaba](#), which allows entrepreneurs to buy in bulk. On the online marketplace, there are more than 40 categories of goods presented (electronics, equipment, etc.) Any entrepreneur can order wholesale.

Trading models for B2B exchanges

1. Catalogue aggregators – must be neutral, independent sites that are operated by a third party if they are to bring many competing sellers together to earn buyers trust in the information on the site.
2. Post and browse (one-on-one negotiation) – just like a private members room, a post and browse function creates a virtual community, a group of people interested in buying or selling a particular product that make a connection through a web based bulletin board.
3. Auction markets – the ability of multiple buyers and sellers to collectively set price for a wide range of people and services represents a radical departure from the older, fixed price model in industrial age. Buyers and sellers driven auctions will become popular because of the scale, reach, interactive and real time attributes afforded by the internet.
4. Continuous auto execution systems – work only for the same standardized products with high liquidity