BCS-062

E-COMMERCE

December 2014

1.

(a) Explain transplanted real world business models and native Internet business models. 10

Ans: Transplanted Real-World Business Models : Business activities which occur naturally in real-world and have been transplanted onto the Internet.

The following are some of the business models that fall into the above mentioned category:

- Mail-Order Model: A web site shop front is employed to sell physical goods which are then posted or delivered (Amazon.com).
- Advertising Based Model: Where advertising revenues support the operation of a free service (Yahoo.com)
- Subscription Model: Users subscribe for access to a database of digital products; well suited for combination with digital delivery (informationweek.com)
- Free Trial Model: Software is available for free download or distributed on CD-ROM but will only work for a limited period or will not be fully, functional until a fee is paid.
- Direct Marketing Model: The use of e-mail based direct marketing (often ends up as spam).
- Real Estate Model: Sell web space, domain names and e-mail addresses.
- B2B: Businesses transact between corporate entities via the Internet, including financial, research, legal and employment services.
- Incentive Scheme Models: Opportunities to win prizes or to secure "free" or inexpensive goods or services are used to entice people to accept advertising or to provide personal information.

  Native Internet Business Models: Business activities that have evolved in the Internet environment and are native to it.

  The following are some of the business models that fall into above mentioned category:

  - Library Model: The web site that offers free information.
  - Freeware Model: It provides free software (basic versions may be free) or . open source software.

- Information Barter Model: Some sort of exchange of information over the Internet between individuals and organizations.
- Website Hosting and Other Internet Services: Hosting web servers, e-mail as well as URL and e-mail re-direction services.
- Digital Delivery Model: Takes place when digital products are purchased.
- Digital Products Model: Images, movies, animation, audio, text, certificates and software will be available as products.
- Access Provision Model: Provides access to Internet from enterprises called Internet Service Providers (ISPs).

(b) What is meant by Online trading ? How is it performed ? What are its advantages and disadvantages ? 10

Ans: It is a platform that allows individuals and institutions to buy and sell financial securities, such as stocks, bonds, commodities and currencies, through the internet. The investor / trader gets updated information online. It leads to the decrease in the practice of an investor of looking at the share price in the morning newspaper. The transaction is dealt at a price at a moment checked in an online trading platform than issuing instructions for execution to brokers by phone or by person.

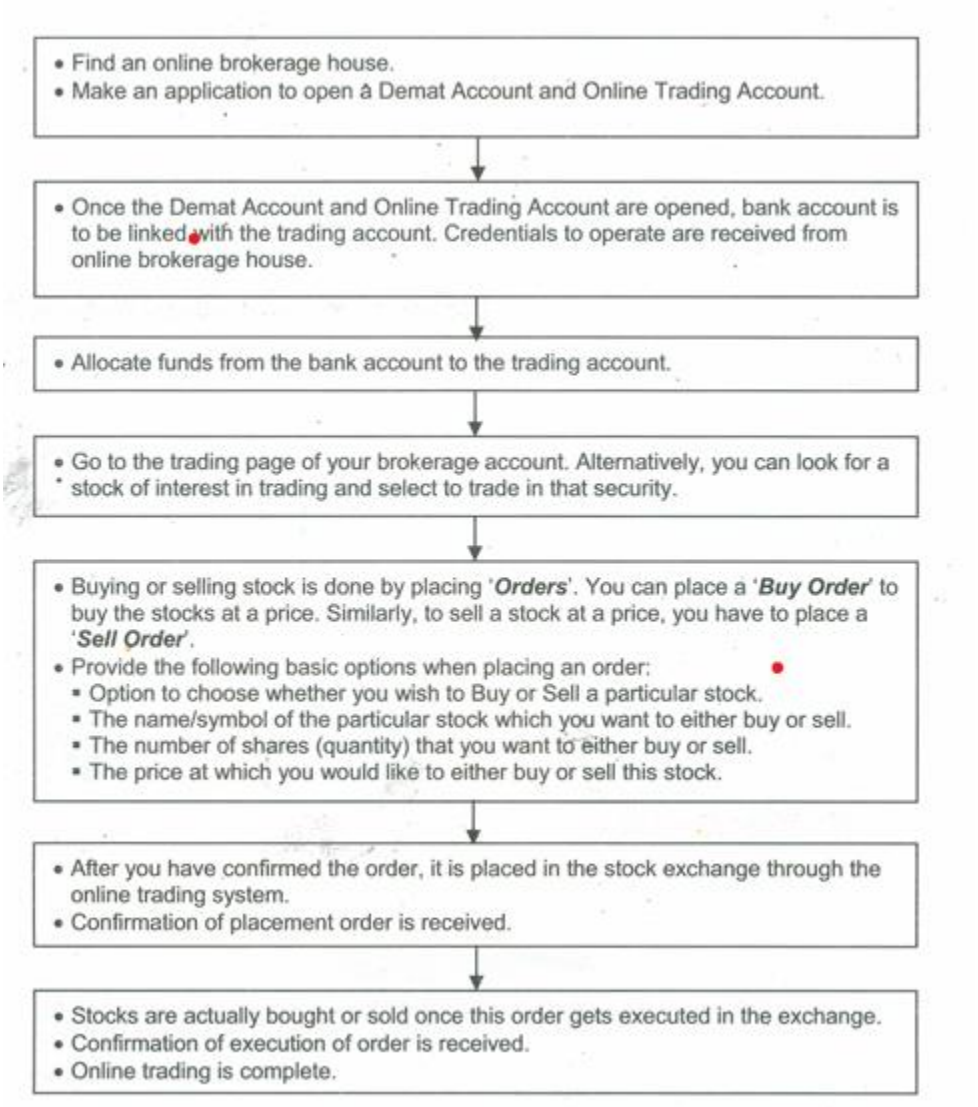
Advantages:

- It leads to paperless transactions. That is, shares are held in electronic form in the demat account.
- It helps in improving market transparency.
- Investors can trade from anywhere with an internet connection.
- Online trading system platforms are available 24/7, allowing traders to buy and sell securities at any time.
- Online trading system has lower commissions and fees compared to traditional brokerage services.
- It helps in smooth market operation while retaining the flexibility of conventional trading practices.
- Traders have access to real-time market data, enabling them to make quick decisions based on the latest information.
- There is free access to high quality research reports generated by financial players.
- All the records of transactions are available online.

Disadvantages:

- Due to the policy of online brokerage house, some stocks may not be, available for trading online for whom the customer needs to contact other brokerage houses.
- The scope of manipulation, speculation and malpractice is more due to the security issues associated with Internet.
- Technology dependency can result in disruptions like platform outages, slow execution speeds, or internet failures, which can negatively impact your online trading. There are chances of losing the trade if online trading system fails.
- Cyber threats such as hacking, phishing attacks, malware, and ransomware are a threat to online trading platforms. Personal and financial information can be compromised by these attacks, resulting in identity theft or financial losses.

Procedure for online trading system:



2.

(a) Explain any 5 types of Electronic Payment Systems. 5

Ans: Electronic payment systems (EPS) are an application of EDI which provides a system for electronic payment and transactions.

Different types of Electronic Payment Systems are:

- Credit card
- Debit card
- Smart cards
- E-credit accounts
- E-money

Credit card: The most common method of making purchases online is using a credit card. The cards have a spending cap and are recognized by a 16-digit number. Visa, Mastercard, and American Express are major players in the credit industry. Customers can use these cards to make purchases in-store or online. The card number, CVV (Card Verification Value) code, expiration date, and other details must be entered by the buyer to authenticate the transaction. Most widely used credit card networks use extra security measures like security codes or one-time passwords (OTPs) to confirm the cardholder's identity.

Debit card: Users can use their debit cards as one of the ways to access their bank accounts, which are linked to them. Debit card usage is frequently subject to net banking or online banking regulations.

Smart cards: With integrated circuits embedded right in, smart cards serve as consumers' electronic wallets. Like debit cards, they can be used to make both physical and electronic payments and can be pre-loaded with funds or tokens.

E-credit accounts: An online business transaction is made possible by an e-credit account. E-credit accounts are typically used in business-to-business transactions. An e-credit account is primarily used for substantial financial transactions conducted remotely, without the need for physical presence. A greater end credit limit and a set repayment period are provided by companies that offer e-credit facilities. Credit card firms issue these accounts, which are connected to the customer's credit card account so that virtual

payments can be made. A credit limit will be granted to the account holder for the transaction, and the account holder must repay the funds within the allotted time frame.

E-money: E-money is also known as digital cash. It is a type of financial instrument that is kept on computer systems and is utilized to do online transactions. For example, bit coins are referred to as e-money. To authenticate and approve the use of e-money, a variety of cryptographic techniques are employed, including digital signatures and public-private key encryption. These days, the term "e-money" can refer to a wide range of items, including funds kept in smart cards, digital currency used in online payment systems, funds transferred via mobile devices, and funds stored in e-wallets.

Situations where e-money is now being utilized:

- Make it easier to use the public transportation system by implementing wireless payment.
- Pre-paid electronic cards for a range of internet transactions.

(b) What is a Digital Signature ? How does it work ? 5

Ans: As per Information Technology Act, 2000, Digital Signature may be defined as authentication of any electronic record by a subscriber by means of an electronic method or procedure in accordance with the provision of concerned sections of the Act.

Digital signature authenticates the identity of the sender of a message or signature holder of the document. It ensures that the contents of the message are intact. The sender cannot repudiate it later. Digital Signatures are easily transportable. They cannot be imitated. They can be automatically time stamped.

Working of digital signature:

The following are various steps in the working of a digital signature:

(a) Sender creates the message (electronic record).

(b) Electronic record is converted into message digest by using a mathematical function known as hash function (which freezes the message).

(c) The message digest is encrypted with the sender's private key.

(d) Sender sends the message.

(e) Receiver receives the message.

(f) Receiver decrypts the message by the sender's public key.

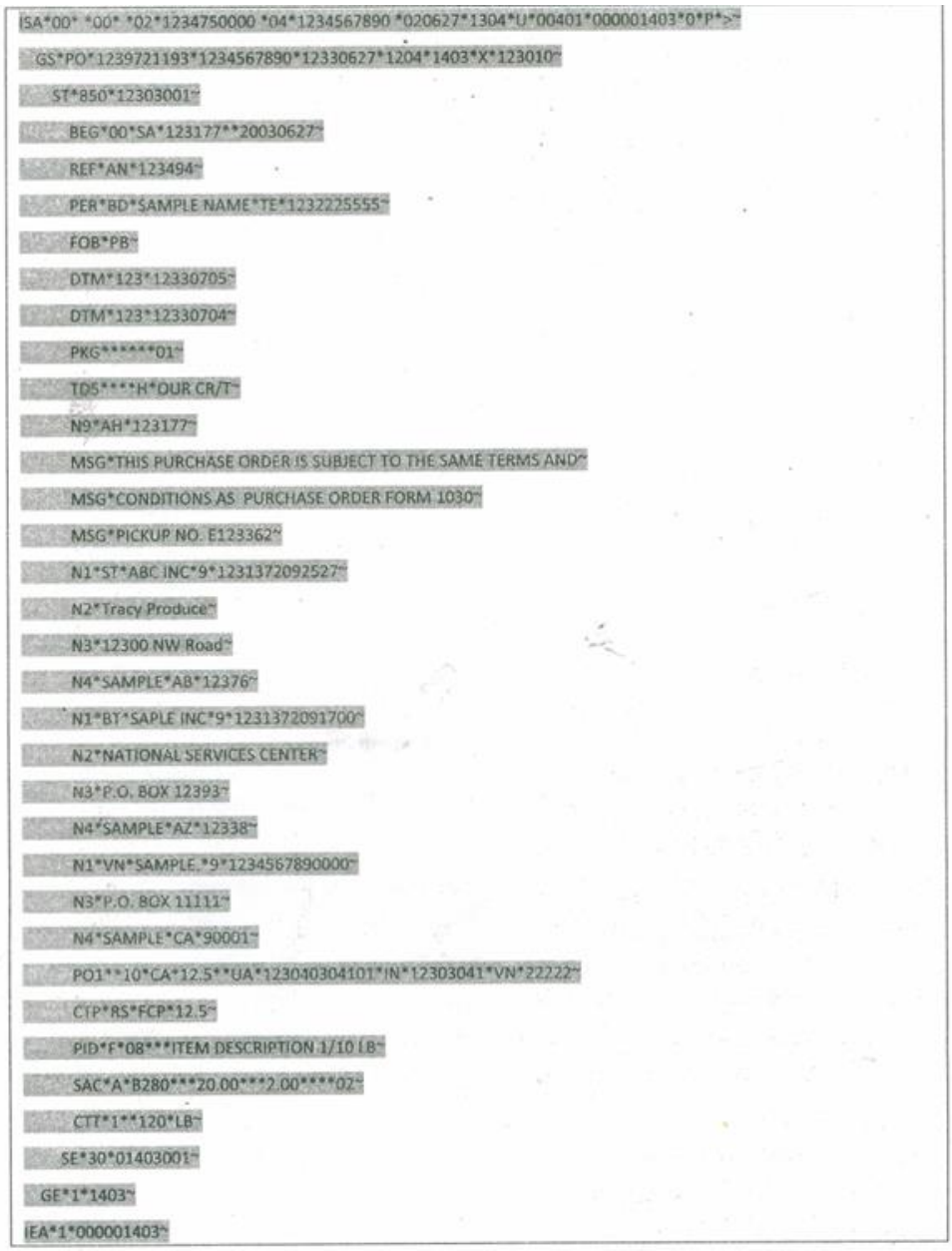
(g) Receiver verifies the message.

3.

(a) Explain any two EDI standards. 5

Ans: There are multiple EDI standards such as ANSI X12, EDIFACT, TRADACOMS (Trading Data Communications), ODE1TE (Organization for Data Exchange by Tele Transmission in Europe), VDA (Verband Der Automobilindustries), SWIFT (Society for Worldwide Interbank Financial Telecommunication).

ANSI X12: ANSI X12 is most popular in North American region. It defines standards for various business transactions such as order processing, material handling, warehousing services, manufacturing services, etc. X12 standard uses transaction set to identify each business transaction and each transaction set is denoted by a numeric code.



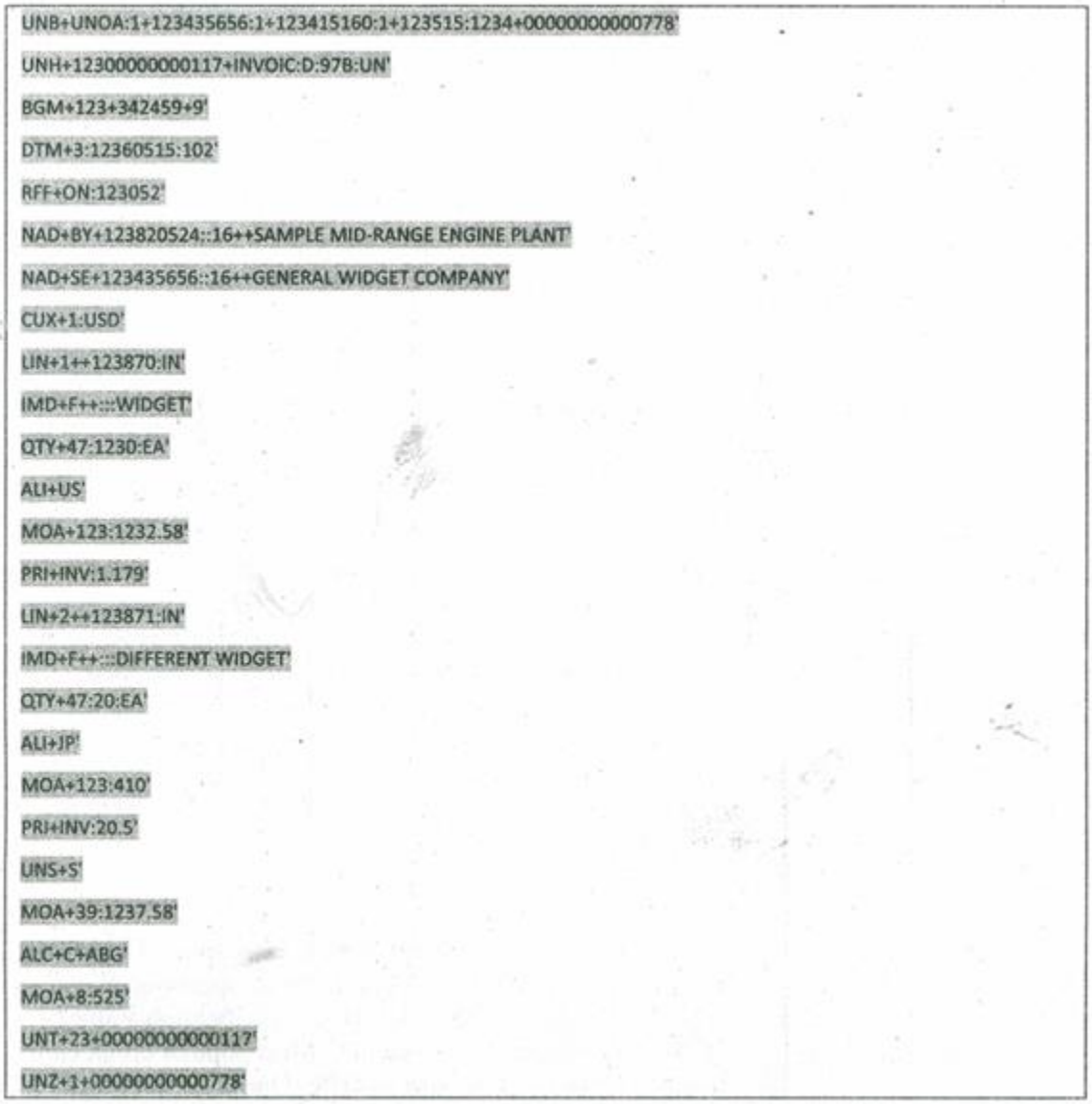
EDIFACT:

EDIFACT is an EDI standard format developed under UN (United Nations), Hence, EDIFACT is also denoted as UNIEDIFACT. This is the international standard which consists of the following four key elements:

- Syntax which defines the message structure
- Data elements within the document

• Segments which groups the date elements

• Messages which are an ordered group of segments and symbolize a business transaction.



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RFF+ON:123052'
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NAD+SE+123435656::16++GENERAL WIDGET COMPANY'
CUX+1:USD'
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IMD+F++:::WIDGET'
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ALI+US'
MOA+123:1232.58'
PRI+INV:1.179'
LIN+2++123871:IN'
IMD+F++:::DIFFERENT WIDGET'
QTY+47:20:EA'
ALI+JP'
MOA+123:410'
PRI+INV:20.5'
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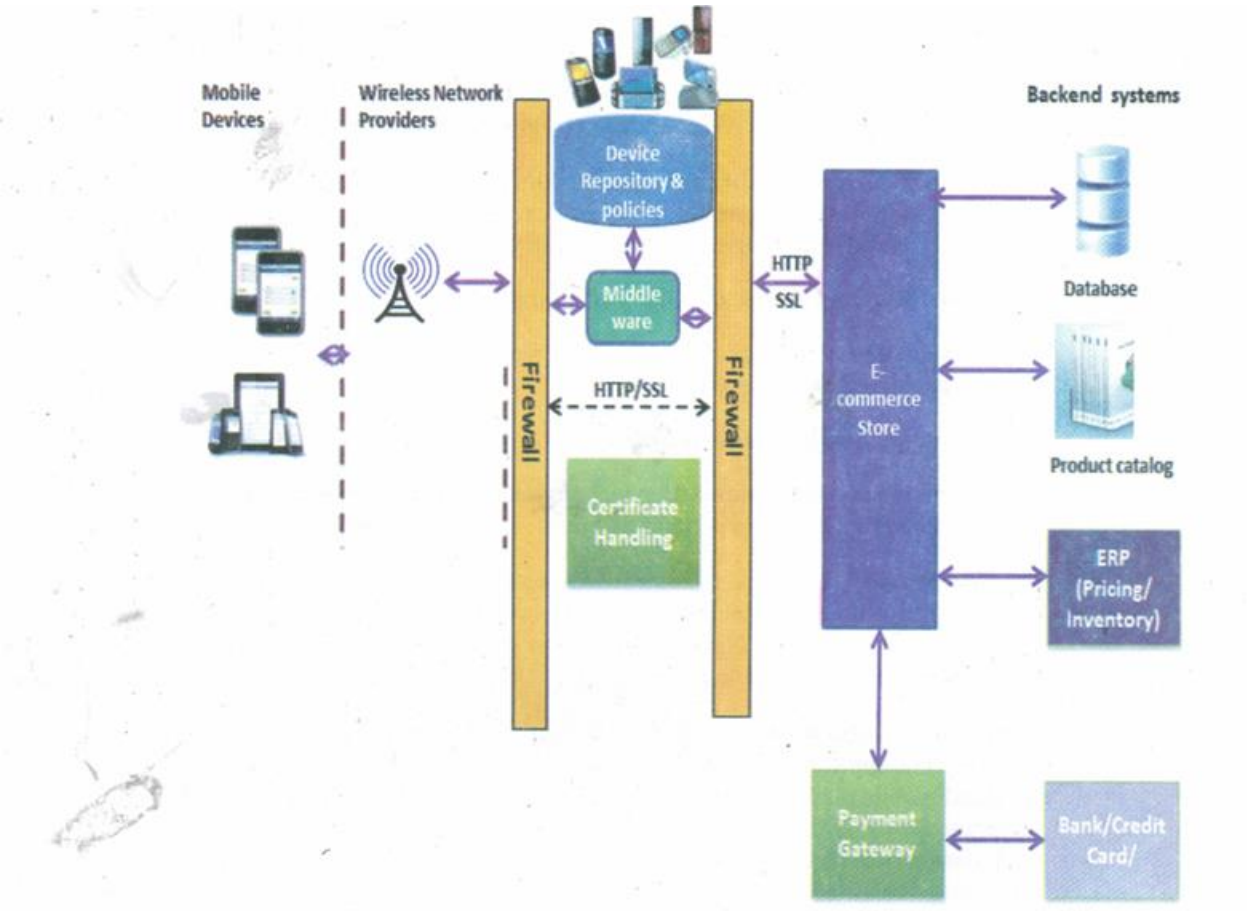
(b) Explain m-commerce application flow. 5

Ans:

The below diagram shows the application flow of m-commerce.



End user uses one of the mobile devices to perform a e-commerce transaction such as buying the product. The transaction is supported by the wireless network provider by providing wireless network bandwidth and signal coverage. The mobile request will then be intercepted by mobile middleware. The mobile middleware authenticates the user and the web site 'through validation of certificate. It also optimizes the rendition using device specific policy as well as experience using its rich device repository.

The request reaches the e-commerce store which does a variety of tasks:

• Gets the inventory and pricing information from internal ERP systems.

• Gets the product metadata from product database.

• Gets product attributes from product catalogue .

• Uses payment gateway to execute the financial transaction

4.

(a) Write a short note on Electronic Markets. 5

Ans: Electronic markets, also known as e-marketplaces or online marketplaces, are digital platforms facilitating the buying and selling of goods, services, or information online. They essentially create a virtual space where businesses and consumers can connect, interact, and execute transactions. The e-marketplaces are new business models that are developing and changing rapidly.

The late 1990s saw the rise of electronic commerce and the Internet, which led to the elimination of intermediaries between buyers and sellers. A seller could sell his products and services directly to a buyer without an intermediary in between. New kinds of intermediaries were created as e-commerce technology advanced in development. New value-added services were being provided by these new intermediaries. With new services that facilitate their trade, new intermediaries draw many new customers and sellers. The e-marketplace, or simply electronic marketplaces, are one of the new business models created in the late 1990s and are described by this new method of conducting business.

Doing business on the e-marketplace enables sellers to enter new markets, to find new buyers, and to increase sales. The e-marketplace gives access to a broader range of products and services offered by sellers to buyers. A buyer has the option to quickly compare various offers by price and quality measures. The e-marketplace services support the exchange of large amounts of data about the supply and demand between the buyer and seller, and the implementation of business transactions.

E-marketplace is supporting many different processes between a buyer and a seller. Some e-marketplaces support only the aggregation of supply and demand, and the searching and matching of buyers or sellers. In addition, many e-marketplaces support different types of auctions and negotiations. On the other hand, not many e-marketplaces support the entire trading process where business services such as contracting, finances, logistics, insurance, legal, payments and other services are needed.

The e-marketplace is a virtual marketplace where buyers and suppliers meet to exchange information abo t product and service offers, and to negotiate and carry out business transactions. The e-marketplace is a web-based information system, where multiple suppliers and multiple buyers can undertake business transactions through Internet.

The e-marketplace uses Internet technologies and standards to distribute product data and to facilitate online transactions.

An intermediary can provide the following four important mechanisms that cause marketplaces to add value:

* Matching buyers and sellers to negotiate prices on a dynamic and real-time basis,

* Ensuring trust among participants by maintaining a neutral position,

* Facilitating market operations by supporting certain transaction phases, and

* Aggregating many buyers and sellers together. Intermediaries bring together buyers and sellers, making it easier to find suitable trading partners

An intermediary provides different services to buyers and suppliers on the e-marketplace. Auctions, payments, logistics, legal, consultancy, and inter-company interactions via third-party inter-organizational systems and associated systems are just a few of the many activities that intermediary services can serve. Intermediaries help businesses cut costs by managing payment processing, transportation, and other transactional aspects. Intermediaries can combine services like logistics, pre-sales assistance, and customer support, making the overall experience more convenient for buyers.

Online marketplaces use intermediaries to add value by facilitating transactions, reducing search costs for both buyers and sellers, and fostering trust.
Online marketplaces make it simpler for customers to find what they need by serving as a single point of contact for information collecting and market transactions.

By assisting sellers in locating eligible purchasers, intermediaries lower their marketing and advertising expenses. Intermediaries can monitor transactions and prevent opportunistic behavior, protecting both buyers and sellers.

The success of the e-marketplace depends on the net benefit to buyers and suppliers. From the viewpoint of transaction cost economics, helps to reduce transaction costs, risks, and coordination costs by the utilization of e-marketplaces.

Characteristics of e-marketplace:

- An e-marketplace system can reduce customers costs for obtaining information about the prices and product offers of alternative suppliers as well as suppliers costs for communicating information about their prices and product characteristics to customers,
- The benefits to individual participants in an e-marketplace increase as more organizations join the system ."
- The e-marketplace can impose significant switching costs on its participants
- The e-marketplace typically requires large capital investments and offers substantial economies of scale and scope,

- Potential participants on the e-marketplace face substantial uncertainty about the actual benefits of joining such a system. Occasionally, this uncertainty remains even after an organization joins the system,

E-marketplaces can be divided into horizontal and vertical marketplaces. A horizontal marketplace addresses a 'specific function (e.g. human resources, office 'Supplies) and serves a wide range of industries, while a vertical marketplace focuses on a wide range of functions 1na specific industry, such as chemicals, steel or automotives.

Marketplaces can be classified into four categories:

- MRO (Maintenance, Repair, Operations) hubs are horizontal markets that enable systematic sourcing of operating inputs,
- Yield managers are horizontal markets that enable spot sourcing of operating inputs,
- Exchanges are vertical markets that enable spot sourcing of manufacturing inputs, and
- Catalogue hubs are vertical markets-that enable systematic sourcing of manufacturing inputs.

The aim of e-marketplace service providers is to provide a wide range of services to all the participants on the e-marketplace, Among others. these services include product development, logistics and insurance services, payments and other similar services, there are not many marketplaces operating today that offer such a wide range of services. Most of them are oriented in providing services of matching buyers and sellers. negotiation and auction services.

(b) Explain the main functionalities of an Online Shopping Portal. 5

Ans: Some of the main functionalities of an online shopping portal are given below:

* User Experience : The ease and intuitiveness with which a client may navigate is referred to as the user experience. This includes responsive design, quick loading times and easy checkout processes. The e-commerce application should be visually appealing, responsive and interactive. The web application should contain consistent hierarchy and layout structure. The web application should provide consistent branding and immersive visual elements. For example, using large, clear images and straight forward menus improves the user experience.

* Search Feature: Ans: Users can locate products easily using a powerful search function. The application should allow the user to search for the product by its attributes such as name, and brand. Features like sorting and filtering options help narrow down choices,

making the shopping experience more efficient. The search should be filtered based on price, brand, and product features.

* Personalization : Personalization refers to tailoring the shopping experience to individual users. This can include showing recommendations based on past purchases or browsing history. The application should provide personalized recommendations based on recent purchase history and user profile attributes for registered users.

* Security : Ensuring the protection of user data is very important. Application should support authentication and authorization. The application should include implementing secure payment gateways, SSL certificates and privacy policies.

* Social Media: E-Commerce application should support social features to promote and advertise the product(s). It allows users to share their purchases and experiences, enhancing engagement and driving traffic. For example, enabling users to share their shopping experiences or products reviews on social media like Facebook or Instagram can promote products to a wider audience.

5.

(a) Explain the roles of various stakeholders in the delivery of goods and services online. 5

Ans: Different stakeholders in the delivery of goods and services online are:

* E-shoppers: They are the end-users of the goods and services. E-shoppers buy products and delivery services from e-retailers. They examine internet marketplaces, choose items, and finish transactions. Provide valuable insights into products, services, and the overall shopping experience, influencing future decisions of both businesses and other customers. Their preferences and feedback drive market trends and influence businesses decision.

* E-Retailers: They are the primary stakeholders responsible for creating and offering goods and services. They buy delivery services from delivery operators and logistics intermediaries. They must ensure product availability, manage inventories, set prices and deliver quality customer service. They also coordinate with shipping providers for delivery of goods to customers. Handle inquiries, manage returns and exchanges, and provide support throughout the purchase journey. Use internet marketing, sales, and tailored suggestions to draw in and keep consumers. Make sure that products are sourced on time, keep up with suppliers, and streamline logistics for effective delivery.

* Delivery operators: Delivery services are crucial for transporting goods from e-retailers to e-consumers. They need to ensure that packages are delivered in timely and safe manner to customers' doorsteps in an efficient manner. Give companies and consumers access to real-time tracking data to promote openness and confidence.

(b) Write a short note on Cyber Laws. 5

Ans: Cyber laws refer to the legal regulations that govern the use of the internet and digital communication. These laws are vital for regulating the digital world, protecting individuals and businesses and ensuring a safe online experience.

Some of the Indian cyber laws are:

The Indian Penal Code, 1860 :

Relevant sections dealing with records and documents with strong legislation covering substantive criminal law was amended with the introduction of IT Act, 2000. The word 'electronic' was inserted thereby treating the electronic records at par with physical records.

The Indian Evidence Act, 1872

Another legislation amended by the IT Act was Indian Evidence Act. Prior to IT Act, all evidences in the courts were in physical form only, Now, evidence can be presented in electronic form also.

The Bankers' Books Evidence (BBE) Act, 1891

With the passing of IT Act, the provisions of Bankers' B09ks Evidence Act were also amended to include printout from a computer system or disc as a valid document and evidence, provided, it is accompanied by a certificate stating that it is a true extract from the official records of the bank and that such entries or records are from a computerised system with data integration.

The Reserve Bank of India Act, 1934

The Reserve Bank of India Act, 1934 was amended to insert a clause relating to the regulation of funds transfer through electronic means between banks (Le. transactions like RTGS and NEFT and other fund transfers) to facilitate EFT and ensure legal admissibility of documents and records therein.