

9. E - COMMERCE, M - COMMERCE

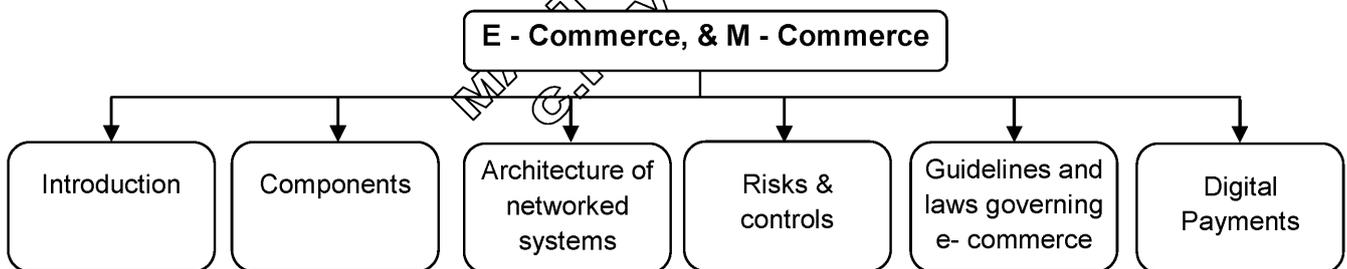
QUESTION WISE ANALYSIS OF PREVIOUS EXAMINATIONS

| No. | M-14 | N-14 | M-15 | N-15 | M-16 | N-16 | M-17 | N-17 | M-18 (O) | M-18 (N) | N-18 (O) | N-18 (N) | M-19 (O) | M-19 (N) | N-19 (O) | N-19 (N) | N-20 (O) | N-20 (N) |
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| THEORY QUESTIONS FOR CLASSROOM DISCUSSION | | | | | | | | | | | | | | | | | | |
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CHAPTER OVERVIEW

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SECTION 1: THEORY FOR CLASSROOM DISCUSSION



PART 1: INTRODUCTION TO E-COMMERCE

Q.No.1. Define the term E-Commerce?

(B)

- 1) Sale /Purchase of goods or services through electronic mode is E-Commerce. It is a process of doing business electronically.
- 2) It refers to the use of Technology in the form of Computers, Desktops, Mobile Applications, etc. in business transactions.
- 3) It involves the automation of a variety of Business-To-Business (B2B) and Business-To-Consumer (B2C) transactions through reliable and secure connections.

SIMILAR QUESTION:

1. Currently the scenario in commerce has been shifted from physical to electronic form, Then define e-commerce.
- A. Refer above answer.

Top 5 E-Commerce Websites in India



Q.No.2. Explain the Benefits of E-Business to Customer / Individual / User?**(B)**

- 1) **CONVENIENCE:** Every product is at individual's fingertips on internet.
- 2) **TIME SAVING:** No. of operations that can be performed both by potential buyers and sellers increase.
- 3) **VARIOUS OPTIONS:** There are several options available for customers which are easy to compare and provided by different players in the market.
- 4) **EASY TO FIND REVIEWS:** There are many reviews about a particular site or product which provides valuable feedback.
- 5) **COUPON AND DEALS:** There are discount coupons and reward points available for customers to encourage online transactions.
- 6) **ANYTIME ACCESS:** Even midnight access to the e commerce platforms is available which brings in customer suitability.

SIMILAR QUESTION:

1. E-commerce offers plethora of boons and added flexibilities. Comment.
- A. Refer above answer.

Q.No.3. Explain the Benefits of E-Business to Business / Sellers?**(B)**

- 1) **INCREASED CUSTOMER BASE:** Since the number of people getting online is increasing, it creates new customers and also retains the old ones.
- 2) **RECURRING PAYMENTS MADE EASY:** Every business has similar operations. Brings in uniformity of scaled operations.
- 3) **INSTANT TRANSACTION:** The transactions of e-commerce are based on real time processes. This has made possible to handle number of deals.
- 4) **PROVIDES A DYNAMIC MARKET:** Since there are several players, providing a dynamic market which enhances quality and business.
- 5) **REDUCTION IN COSTS:**
 - a) To buyers from increased competition in procurement as more suppliers can compete in an electronically open marketplace.
 - b) To suppliers by electronically accessing on-line databases of bid opportunities, on-line abilities to submit bids, and on-line review of rewards.
 - c) In overhead costs through uniformity, automation, and large-scale integration of management processes.
 - d) Advertising costs.
- 6) **INCREASE IN EFFICIENCY IN VARIOUS WAYS:**
 - a) Reduction in time to complete business transactions, particularly from delivery to payment.
 - b) Reduction in errors, time for information processing by eliminating the need to re-enter the data.
 - c) Reduction in inventories
- 7) **CREATION OF NEW MARKETS:** It gives ability to easily and cheaply reach potential new customers.
- 8) **EASIER ENTRY INTO NEW MARKETS:** It offers enterprises of any size and location to expand geographically into any location.
- 9) **BETTER QUALITY OF GOODS:** **Due to** standard specifications and competition improved variety of customized goods are produced and offered through expanded markets.
- 10) **ELIMINATION OF TIME DELAYS:** It enables smooth processing of linked business processes and eliminates time delays.

SIMILAR QUESTION:

1. Apart from customers, business people too are experiencing the benefits of e-commerce .How?
- A. Refer above answer.

Q.No.4. Explain the Benefits of E-Business to the Government?**(C)****BENEFITS TO GOVERNMENT**

- 1) **Instrument to fight corruption:** E-commerce helps to curb the corruption to the great extent as all the transactions are properly recorded and done in a transparent manner.
- 2) **Reduction in use of ecologically damaging materials** through electronic transactions rather than physical objects.

Q.No.5. What are the Disadvantages of E-Business?**(C)****FOLLOWING ARE THE DISADVANTAGES OF E-BUSINESS:**

- 1) **INTERNET CONNECTION:** Internet connectivity is a pre-requisite to perform online transactions. Internet connectivity may not be available in rural or remote areas.
- 2) **HIGH START-UP COSTS:** The various components of costs involved with e-commerce are due to the following factors:
 - a) **Connection:** Connection costs to the Internet (i.e., direct link or connection provider).
 - b) **Hardware/software:** This includes cost of sophisticated computer, modem, routers, etc.
 - c) **Set up:** This includes employee work hours involved in the processes of setting up the systems.
 - d) **Maintenance:** This includes costs involved in training of employees and maintenance of Web-pages.
- 3) **LEGAL ISSUES:** Legal issues are significant impediment ^(=Obstacle) to conducting business on the Internet. The legal environment in which e-commerce is conducted is full of unclear and conflicting laws.
- 4) **SOME BUSINESS PROCESSES MAY NEVER LEND THEMSELVES TO E-COMMERCE:** Many items such as perishable foods and high-cost items such as jewelry and antiques may be impossible to adequately inspect from a remote location, regardless of technologies that are devised in the future.
- 5) **CULTURAL IMPEDIMENTS TO E-BUSINESS:** Some customers are still somewhat fearful of sending their credit card numbers over the Internet. Moreover, many customers prefer to view products in person rather than on a computer screen.
- 6) **SECURITY CONCERNS:** There is always fear of safety and security to the personal information due to the increased spywares and malwares being rampant ^(=wide spread) on the internet.

Q.No.6. what is a business model?**(C)**

- 1) A Business Model can be defined as the mechanism by which a business intends to generate revenue and profits.
- 2) It is the organization of product, service and information flows, and the sources of revenues and benefits for suppliers and customers.
- 3) An e-business model is the adaptation of an organization's business model to the internet economy.
- 4) A Business Model is adopted by an organization as a framework to describe how it makes money on a sustainable basis and grows.
- 5) A business model also enables a firm to analyze its environment more effectively and thereby exploit the potential of its markets; better understand its customers; and raise entry barriers for rivals.
- 6) E-business models utilize the benefits of electronic communications to achieve the value adding processes.

Q.No.7. Write about various e-Markets?

(C)

| S.NO. | E-MARKET | DESCRIPTION |
|-------|---------------------|---|
| 1) | e-Shops | An e-shop is a virtual store front that sells products and services online. Examples - www.sonicnet.com, www.wforwomen.com |
| 2) | e-Malls | The e-mall is defined as the retailing model of a shopping mall, a conglomeration of different shops situated in a convenient location in e-commerce. |
| 3) | e-auctions | Electronic auctions provide a channel of communication through which the bidding process for products and services can take place between competing buyers. Example - www.onsale.com |
| 4) | Portals | Portals are the channels through which websites are offered as content. The control of content can be a source of revenue for firms through charging firms for advertising or charging consumers a subscription for access. |
| 5) | Buyer Aggregators | The Buyer Aggregator brings together large numbers of individual buyers so that they can gain the types of savings that are usually the privilege of large volume buyers. Example - www.zomato.com |
| 6) | Virtual Communities | Virtual Community is a community of customers who share a common interest and use the internet to communicate with each other. Ex.Amazon.com |
| 7) | E-marketing | E-marketing is the use of electronic communications technology such as the internet, to achieve marketing objectives For example, customers can compare prices of products by rival firms. |
| 8) | E-procurement | E-procurement is the management of all procurement activities via electronic means. E-procurement infomediaries specialize in providing up-to-date and real-time information on all aspects of the supply of materials to businesses. |
| 9) | E-distribution | The E-distribution model helps distributors to achieve efficiency savings by managing large volumes of customers, automating orders, communicating with partners and facilitating value-adding services such as order tracking through each point in the supply chain. An example of a firm specializing in e-distribution is wipro.com (www.wipro.com) |

Q.No.8. How can we relate e-business models with e-business markets?

(C)

THE E-BUSINESS MODELS RELATING TO E-BUSINESS MARKETS CAN BE SUMMARIZED AS GIVEN BELOW IN THE TABLE:

| Models | Definition | e-business markets | Examples |
|-----------------------------------|---|--|---------------------------------|
| Business-to-Consumer (B2C) | Generally, this supports the activities within the customer chain in that it focuses on sell-side activities. | e-shops, e-malls, e-auctions, buyer aggregators, portals etc. | www.cisco.com www.amazon.com |
| Business-to-Business (B2B) | This supports the supply chain of organizations that involves repeat commerce between a company and its suppliers or other partners. | e-auctions, e-procurement, e-distribution, portals, e-marketing etc. | www.emall.com |
| Consumer-to-Consumer (C2C) | With C2C e-business model, consumers sell directly to other consumers via on-line classified ads and auctions, or by selling personal services and expertise on-line. | e-auctions, virtual communities etc. | www.eBay.com |
| Consumer to Business (C2B) | In this model, consumers set prices and companies bid to offer products and services | e-marketing, e-distribution | www.bankbazar.com |

| | | | |
|-------------------------------------|---|--------------|--|
| Consumer to Government (C2G) | This covers all the e-commerce transaction between consumers and government. | e- marketing | www.incometaxindia.gov.in |
| Government to Consumer (G2C) | This allows consumers to provide feedback or ask information about government authority from public sector. | e-marketing | e-Seva (Andhra Pradesh) |
| Business to Government (B2G) | B2G model is a variant of B2B model. Such websites are used by governments to trade and exchange information with various business organizations. | e-marketing | Business pay taxes, file reports, or sell goods and services to Government agencies. |

PART 2: COMPONENTS OF E - COMMERCE

Q.No.9. What are the components of E-commerce?

(A)

FOLLOWING ARE THE COMPONENTS OF E-COMMERCE:

- 1) **User:** This may be individual / organization or anybody using the e-commerce platforms.
- 2) **E-commerce Vendors:** This is the organization / entity providing goods/ services as demanded by the user. For example: flipkart.
- 3) **Technology Infrastructure:** The computers, servers, database, mobile apps, digital libraries, data interchange that enables e-commerce transactions
- 4) **Internet / Network:** Internet connectivity is important for any e-commerce transactions to complete.
- 5) **Web portal:** Web Portal is the application through which user interacts with the e-commerce vendor. it is an interface which can be accessed through several gadgets, now through smart TVs also.
- 6) **Payment Gateway:** Payment gateway represents the way e-commerce / m-commerce vendors collect their payments from customers. As of now numerous methods are available like Credit / Debit card, Online bank payment, vendor own payment wallet, Cash on Delivery (COD), Third party payment wallets like SBI BUDDY or PAYTM, UPI, etc.

SIMILAR QUESTION:

1. E-commerce organizational setup is not easy. Comment.
- A. Refer above answer.

Q.No.10. What activities are required for E-commerce vendors to ensure better, effective and efficient transaction?

(C)

E-COMMERCE VENDORS FURTHER NEEDS TO ENSURE FOLLOWING FOR BETTER, EFFECTIVE AND EFFICIENT TRANSACTION:

- 1) **Suppliers and Supply Chain Management:** For effectiveness, they need to ensure that
 - a) They have enough and the right goods suppliers.
 - b) They (suppliers) are financially and operationally safe.
 - c) Suppliers are able to provide real-time stock inventory.
 - d) The order to deliver time is very short.
- 2) **Warehouse operations:** Many e-commerce companies are investing huge amounts of money in automating the whole warehouses.
- 3) **Shipping and returns:** Shipping is supplementary and complementary to whole warehouse operations. Fast returns have become Unique Selling Proposition (USP) for many e-commerce vendors, so these vendors need very effective and efficient return processing.
- 4) **E-Commerce catalogue and product display:** A good catalogue makes a lot of difference to whole customer experience.

- 5) **Marketing and loyalty programs:** Loyalty programs establish a long-term relationship with customer.
- 6) **Showroom and offline purchase:** Few e-commerce vendors have opened outlets for customer experience of their products.
- 7) **Different Ordering Methods:** These are the ways customer can place his/her order, say Cash on Delivery is today most preferred method.
- 8) **Guarantees:** The product/service guarantee associated with product/ service being sold. Money back guarantees help generate a security in customer's mind that in case of any problems, their money shall be safely returned back.
- 9) **Privacy Policy:** Represents policy adopted by the e-commerce vendor vis-à-vis customer data/information. E-commerce website must have a privacy policy.
- 10) **Security:** Vendor website needs to state that online data used to transact is safe that vendors is using appropriate security including security systems like SSL (Secure Socket Layer)

Q.No.11. Write about the technology infrastructure that is required for E-commerce transactions. (B)

THE TECHNOLOGY USED IN E-COMMERCE SHOULD BE:

- 1) **Scalable** with minimal effort to handle peak traffic
- 2) **Easy to use and convenient** for the customers
- 3) **Responsive Design** to make a website accessible and usable on every device is important for the success of an e-commerce site.

THE TECHNOLOGY INFRASTRUCTURE THAT IS REQUIRED FOR E-COMMERCE TRANSACTIONS IS:

- 1) **Computers, Servers and Database:** Big e-commerce organization invest huge amount of money/time in creating these systems which are the backbone for success.
- 2) **Mobile Apps:** A mobile app is a software application programmed to run specifically on a mobile device. A mobile website works on all mobile devices and costs about the same as creating an app. It includes the following modules : **Mobile store front modules, Mobile ticketing module, Mobile advertising and marketing module, Mobile customer support and information module, Mobile banking**
- 3) **Digital Library:** A Digital Library is a special library with a focused collection of digital objects that can include text, visual material, audio material, video material, stored as electronic media formats. Digital libraries can vary immensely in size and scope, and can be maintained by individuals, organizations, or affiliated with established physical library buildings or institutions, or with academic institutions. The digital content may be stored locally, or accessed remotely via computer networks. An electronic library is a type of information retrieval system.
- 4) **Data Interchange:** Data Interchange is an electronic communication of data. For ensuring the correctness of data interchange between multiple players in e-commerce, business specific protocols are being used. There are defined standards to ensure seamless / exact communication in e-commerce.
- 5) **Internet/Network:** This is the key to success of e-commerce transactions. The success of e-commerce trade depends upon the internet capability of organization.

Similar questions:

1. E-Commerce Infrastructure identifies the functionalities of the Hardware and Software components, specifies the corresponding service level requirements, and describes the management and operations of the whole system. In this context what is the technology infrastructure that is required for E-commerce transactions?
A. Refer above answer.

PART 3: ARCHITECTURE OF NETWORKED SYSTEMS

Q.No.12. Define architecture in networked systems. Write its types

(C)

Architecture is a term to define the style of design and method of construction, used generally for buildings and other physical structures. In e-commerce, it denotes the way network architectures are build.

Networked systems can have two types of architecture namely: Two tier and Three tier.

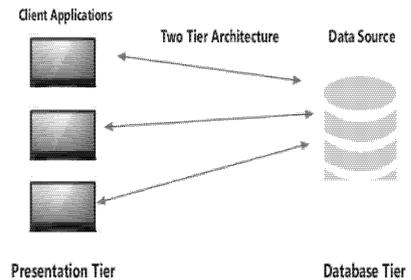
- 1) **Two Tier(=level) Client Server:** In a Two-tier network, client (user) sends request to Server and the Server responds to the request by fetching(=getting) the data from client. The Two-tier architecture is divided into two tiers- Presentation Tier and Database Tier.
- 2) **Three Tier Client-Server:** Three-tier architecture is a client-server architecture in which the functional process logic, data access, computer data storage and user interface are developed and maintained as independent modules on separate platforms.

Q.No.13. Write about two tier architecture.

(RTP-N18, N19) (A)

TWO TIER(=LEVEL) CLIENT SERVER: In a Two-tier network, client (user) sends request to Server and the Server responds to the request by fetching(=getting) the data from client. The Two-tier architecture is divided into two tiers- Presentation Tier and Database Tier.

- 1) **Presentation Tier (Client Application/Client Tier):** This is the interface that allows user to log-in and interact with the e-commerce / m-commerce vendor. This application also connects to database tier and displays data.
- 2) **Database Tier (Data Tier):** The product data / price data and other related data are kept here. User cannot access the data at this level but only through the application tier.



ADVANTAGES:

- 1) The system performance is higher because business logic(=business rules of handling the data) and database are physically close.
- 2) Since processing is shared between the client and server, more users could interact with system.
- 3) Easy to setup and maintain entire system smoothly.

DISADVANTAGES:

- 1) Performance deteriorates if number of users increases.
- 2) Restricted flexibility.

SIMILAR QUESTIONS:

1. The two-tier is based on Client Server architecture. The two-tier architecture is like client server application. The direct communication takes place between client and server. Comment
- A. Refer above answer

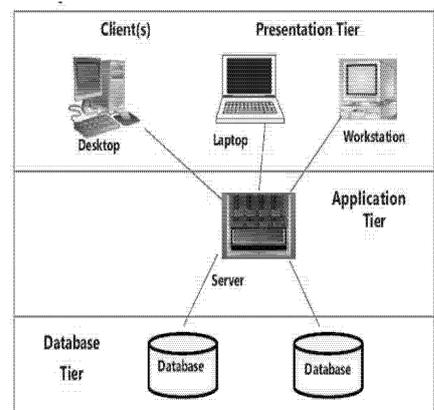
Q.No.14: Explain three tier architecture.

(RTP-N18) (A)

ALL E-COMMERCE APPLICATIONS FOLLOW THE THREE-TIER NETWORK ARCHITECTURE.

THREE TIER CLIENT-SERVERS: Three-tier architecture is a client-server architecture in which the functional process logic, data access, computer data storage and user interface are developed and maintained as independent modules on separate platforms. The three-tier architecture is as follows:

- 1) **PRESENTATION TIER:** Occupies the top level and displays information related to services available on a website. This tier communicates with other tiers.
- 2) **APPLICATION TIER:** Also, called the Middle Tier, Logic Tier, Business Logic; this tier is pulled from the presentation tier. It controls application functionality by performing detailed processing.
- 3) **DATABASE TIER:** This tier houses the database servers where information is stored and retrieved. Data in this tier is kept independent of application servers or business logic.



4) ADVANTAGES OF THREE-TIER SYSTEMS:

- a) **Clear separation of user-interface-control and data presentation from application-logic:** Through this separation more clients can have access to a wide variety of server applications.
- b) **Dynamic load balancing:** If bottlenecks(=blocks) in terms of performance occur, the server process can be moved to other servers at runtime.
- c) **Change management:** It is easy and faster to exchange a component on the server than to furnish numerous PCs with new program versions.

5) DISADVANTAGES OF THREE-TIER SYSTEM:

- a) It creates an increased need for network traffic management, server load balancing, and fault tolerance.
- b) Current tools are relatively immature and are more complex.
- c) Maintenance tools are currently inadequate for maintaining server libraries.

SIMILAR QUESTION:

- 1. Emerging technologies add up new tiers in ecommerce transactions making them more secure and fast but at the same time add complexity in this context write about three tier architecture involved in an e-commerce transaction.
- A. Refer above answer.

Q.No.15. Define the term M-Commerce? What are the three layers in M-Commerce? (Or) Describe E-commerce architecture vide Internet. (RTP-M18) (B)

M-COMMERCE (MOBILE COMMERCE): M-commerce (mobile commerce) is buying and selling of goods and services through wireless handheld devices such as cellular telephone and personal digital assistants (PDAs).



The three layers are

| S. No. | Layer | Includes | Purpose |
|--------|-------------------------|--|---|
| 1 | Client / User Interface | Mobile Web Browser and Internet. | This layer helps the e-commerce customer connect to e-commerce merchant. |
| 2 | Application Layer | Application Server and back end server. | Through these application's customer logs to merchant systems and check for products. |
| 3 | Database Layer | The information store house, where all data relating to products, price it kept. | This layer is accessible to user through application layer. |

SIMILAR QUESTION:

- 1. M-commerce too have the same multi-tier architecture like e-commerce list the tiers in a m-commerce transaction.
- A. Refer above answer.

PART 4: RISKS & CONTROLS

Q.No.16. What are the Risks associated with e-commerce? (A)

RISK: Risk is possibility of loss. The same may be result of intentional or un-intentional action by individuals. Risks associated with e-commerce transactions are high compared to general internet activities.

These include the following:

- 1) **PRIVACY AND SECURITY:** Comes in the point of hacking. These risks occur due to lack of personalized digital access and knowledge.
- 2) **QUALITY ISSUES:** These quality issues are raised by customers as the original product differs from the one that was ordered.

- 3) **DELAY IN GOODS AND HIDDEN COSTS:** When goods are ordered from another country, there are hidden costs enforced by Companies.
- 4) **NEEDS ACCESS TO INTERNET AND LACK OF PERSONAL TOUCH:** The e-commerce requires an internet connection which is an extra expense and lacks personal touch.
- 5) **SECURITY AND CREDIT CARD ISSUES:** There is a possibility of cloning ^(=copying) the credit cards and debit cards which poses a security threat.
- 6) **INFRASTRUCTURE:** There is a greater need of not only digital infrastructure but also network expansion of roads and railways which remains a substantial challenge in developing countries.
- 7) **PROBLEM OF ANONYMITY** ^(=SECRECY): There is a need to identify and authenticate users in the virtual global market where anyone can sell to or buy from anyone, anything from anywhere.
- 8) **REPUDIATION** ^(=REFUSAL) **OF CONTRACT:** It is possible that the electronic transaction in the form of contract, sale order or purchase by the trading partner or customer may be denied.
- 9) **LACK OF AUTHENTICITY OF TRANSACTIONS:** The electronic documents that are produced during an e-Commerce transaction may not be authentic and reliable.
- 10) **DATA LOSS OR THEFT OR DUPLICATION:** The data transmitted over the Internet may be lost, duplicated, tampered with or replayed.
- 11) **ATTACK FROM HACKERS:** *Web servers used for e-Commerce may be vulnerable to hackers.*
- 12) **DENIAL OF SERVICE:** *Service to customers may be denied due to non-availability of system as it may be affected by viruses, e-mail bombs and floods.*
- 13) **NON-RECOGNITION OF ELECTRONIC TRANSACTIONS:** *E-Commerce transactions, as electronic records and digital signatures may not be recognized as evidence in courts of law in some countries.*
- 14) **LACK OF AUDIT TRAILS:** *Audit trails in e-Commerce system may be lacking and the logs may be incomplete, too voluminous or easily tampered with.*
- 15) **PROBLEM OF PIRACY:** *Intellectual property may not be adequately protected when such property is transacted through e-Commerce.*

SIMILAR QUESTION:

1. E-commerce is a set of boons and banes. Lack of understanding about the vulnerabilities and threats of e-commerce brings lot of banes than boons in this context list out the risks involved in e-commerce transactions.
- A. Refer above answer.

Q.No.17. On whom controls are required to be placed in the chain of e-business environment? (B)

INTERNAL CONTROL: Internal control is a process for assuring achievement of an organization's objectives in operational effectiveness and efficiency, reliable financial reporting, and compliance with laws, regulations and policies.

In an e-business environment, controls are necessary for all persons in the chain, including-

- 1) **USERS:** This is important to ensure that the genuine user is using the e-commerce/ m-commerce platform and protect him from hackers.
- 2) **SELLERS / BUYERS / MERCHANTS:** Many e-commerce businesses have lost huge amount of money as they did not have proper controls put in place. These include controls on Product catalogues, Price catalogues, Discounts and promotional schemes, Product returns, Accounting for cash received through Cash on Delivery mode of sales.
- 3) **GOVERNMENT:** Governments across the world and in India have few critical concerns vis-a-vis electronic transactions, namely:
 - a) Tax accounting of all products / services sold.
 - b) All products / services sold are legal.
- 4) **NETWORK SERVICE PROVIDERS:** They need to ensure availability and security of network. Any downtime (=interruption) of network can be disastrous for business.

- 5) **TECHNOLOGY SERVICE PROVIDERS:** These include all other service providers other than **Network service provider**. They provide services such as cloud computing back-ends, applications back-ends, etc.. They are also prone to risk of availability and security.
- 6) **LOGISTICS SERVICE PROVIDERS:** Logistics service providers are the important ones who are finally responsible for timely product deliveries.
- 7) **PAYMENT GATEWAYS:** E-commerce vendors' shall run their business smoothly only when their payment gateways are efficient, effective and foolproof.

SIMILAR QUESTION:

1. Presence of internal controls ensures smooth organizational performance and no one in the e-commerce chain is exception. List out the various components in the chain of e-commerce that requires internal controls.
- A. Refer above answer.

Q.No.18. What controls are needed for various participants in an e-commerce environment? (B) (N 19)

Each participant needs to put in place policies, practices and procedures to protect from E - Commerce / M - Commerce related risks. Any lack of exercising controls by anyone can bring the risk to whole chain. These will include the following:

- 1) **EDUCATING THE PARTICIPANT ABOUT THE NATURE OF RISKS:** Every participant needs to be educated / sensitized towards risk associated with such transactions. Organizations need to put in place infrastructure / policy guidelines for the same.
- 2) **COMMUNICATION OF ORGANIZATIONAL POLICIES TO ITS CUSTOMERS:** To avoid customer dissatisfaction and disputes, it is necessary to make the following information clear throughout your website:
 - a) **Privacy Policies:** These should be available through links on any website.
 - b) **Information security:** Create a page that educates customers about any security practices and controls.
 - c) **Shipping and billing policies:** These policies should be clear, comprehensive and available through a link on the home page during online purchase.
 - d) **Refund policies:** Establish and display a clear, concise statement of customer's refund and credit policy.
- 3) **ENSURE COMPLIANCE WITH INDUSTRY BODY STANDARDS:** All e-Commerce organizations are required to comply with the laws of the land. In India Reserve Bank of India, has been releasing these standards from time to time.
- 4) **PROTECT YOUR E-COMMERCE BUSINESS FROM INTRUSION:**
 - a) **Viruses:** Check your website daily for viruses, which may cause loss of valuable data.
 - b) **Hackers:** Use software tools to carry out regular assessments to check how vulnerable (=in danger) your website is to hackers.
 - c) **Passwords:** Ensure that employees regularly change their passwords, and that passwords set by former employees of your organization are defunct(=invalid).
 - d) **Regular software updates:** Always use up to date security software, otherwise your website will be vulnerable to attacks.
 - e) **Sensitive data:** Consider encrypting(=encoding) financial information and other confidential data (using encryption software).
 - f) **Know the details of your payment service provider contract.**

SIMILAR QUESTION:

1. Consumer education and awareness are important in e-commerce transactions. Companies need to inform their polices beforehand to the consumers. Comment
- A. Refer point no. 1 above answer

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Q.No.19. Write about several IT Risks as per SA (Standard on Auditing) 315?

(B)

SA 315 RECOGNIZES THAT IT POSES SPECIFIC RISKS TO AN ENTITY'S INTERNAL CONTROL IN THE FOLLOWING FORMS:

- 1) Reliance on systems or programs that are inaccurately processing data or processing inaccurate data or both.
- 2) Unauthorized access to data which may lead to destruction of data or improper changes to data. It may also lead to recording of unauthorized or non-existent transactions or inaccurate recording of transactions.
- 3) Risks may also arise when multiple users access common database.
- 4) The possibility of IT personnel gaining access privileges beyond their assigned duties thereby breaking down segregation of duties.
- 5) Unauthorized changes to data in master files.
- 6) Unauthorized changes to systems or programs.
- 7) Failure to make necessary changes to systems or programs.
- 8) Inappropriate manual intervention.
- 9) Potential loss of data or inability to access data as required.

Q.No.20. What kind of controls are to be used for addressing key cyber security risks?

(B)

- 1) A Network Diagram detailing servers, databases, hubs, routers, internal and external network, etc.
- 2) List of Digital Assets used by the Company and the IT Managers responsible for the protection of those digital assets along with the physical location of those assets.
- 3) Policy and Procedure document of the criticality of the Digital Assets, the use of those digital assets, any direct impact on the financial statements of the company, access restrictions to those assets.
- 4) Any incidents of cyber security breach which occurred and the actions taken and controls built in to avoid them from occurring again.
- 5) Are the IT managers who responsible for safeguarding of assets from cyber- attacks, are adequately skilled and trained to perform the functions or not.
- 6) Periodical review of access rights to all IT resources to ensure that the access to the users is commensurate with their functional roles and responsibilities.
- 7) Adequate approvals exist before the access is granted to any IT resource.
- 8) Timely employee awareness campaigns focusing on methods of intrusion which can be stopped based on individual actions.
- 9) Annual review by the CIO, based on the Company's digital assets and the IT Environment in which it operates assessing which are the most critical cyber security risks and designing controls to address the same.
- 10) The Entity should have a IT Security Policy circulated to all Employees detailing the procedures to be adhered to when accessing IT systems/ resources like password security, restricted use of internet, etc.
- 11) *Use of firewalls by the Company to allow internet activity in accordance with the rules defined.*
- 12) *Any baseline security configurations established by the Company under any security standards which are periodically reviewed.*
- 13) *All remote access logins are configured for two factor' authentications like - using of username, password, pin, token, etc.*
- 14) *Any vulnerability scans or penetration testing performed by the Company and any findings noted.*
- 15) *Are the backups scheduled properly and timely checked by restoration of data?*

SIMILAR QUESTION:

1. Controls are always required to address key cyber security risks comment.
- A. Refer the above answer.

PART 5: GUIDELINES AND LAWS GOVERNING E-COMMERCE

Q.No.21. An entity going for E-Commerce / M-Commerce business needs to create clear policy guidelines for various aspects. What are they? (B)

AN ENTITY GOING FOR E-COMMERCE / M-COMMERCE BUSINESS NEEDS TO CREATE CLEAR POLICY GUIDELINES ON VARIOUS ASPECTS AS STATED BELOW:

- 1) **BILLING:** The issues to be addressed are:
 - a) Format of bill
 - b) The details to be shared in bills.
 - c) Applicable GST.
- 2) **PRODUCT GUARANTEE / WARRANTY:** Proper display of product guarantee / warranty online as well as documents sent along with the products.
- 3) **SHIPPING:** The shipping time, frequency of shipping, packing at the time of shipping, all these issues shall be put in policy documents.
- 4) **DELIVERY:** Policies need to be defined for:
 - a) Which mode of delivery to be chosen?
 - b) When deliveries are to be made?
 - c) Where deliveries are to be made?
- 5) **RETURN:** Policies need to be defined defining
 - a) Which goods to be accepted in return?
 - b) The number of days within which returns can be accepted.
 - c) The process of verifying the authenticity of products received back.
 - d) The time within which buyer shall be paid his/her amount back for goods returned.
- 6) **PAYMENT:** Policy guidelines need to be created for the following payment related issues:
 - a) Mode of payment.
 - b) For which products, specific payment mode shall be there. *For example, we may restrict Cash on Delivery option for few consumable products only.*

SIMILAR QUESTION:

1. Proper policies are to be put in place for efficient handling of e-commerce transactions comment.
- A. Refer the above answer.

Q.No.22. List out the commercial laws governing E-Commerce & M-Commerce transactions? (C) (FOR STUDENT SELF STUDY)

All E-Commerce / M-Commerce transactions are commercial business transactions. All such transactions are governed by multiple Laws including Commercial Laws as stated below:

- 1) **INCOME TAX ACT, 1961:** For the purpose of Income Tax, decision with respect to place of origin of transaction is critical.
- 2) **COMPANIES ACT, 2013:** Most of the entities doing E-Commerce / M-Commerce business are corporate entities and hence they come under the purview of Companies Act also.

- 3) **FOREIGN TRADE (DEVELOPMENT AND REGULATION) ACT, 1992:** An Act to provide for the development and regulation of foreign trade by facilitating imports into, augmenting exports from, India and for matters connected therewith or incidental thereto.
- 4) **THE FACTORIES ACT, 1948:** Act to regulate working conditions of workers. The act extends to place of storage as well as transportation.
- 5) **THE CUSTOM ACT, 1962:** The act that defines import / export of goods / services from India and provides for levy of appropriate customs duty.
- 6) **THE GOODS AND SERVICES TAX ACT, 2017 (GST):** This Act requires to upload each sales and purchase invoice on GSTN which helps in reconciliation of transactions between businesses.
- 7) **INDIAN CONTRACT ACT, 1872:** The act defines constituents of a valid contract. In case of e-commerce / m-commerce business it becomes important to define these constituents.
- 8) **THE COMPETITION ACT, 2002:** This Law regulates practices that try to curb competition in India.
- 9) **FOREIGN EXCHANGE MANAGEMENT ACT (FEMA 1999):** This Law will regulate **Foreign Direct Investments, Flow of foreign exchange in India.** The law has important implications for e-commerce / m-commerce business.
- 10) **CONSUMER PROTECTION ACT, 1986:** This Law protects consumer rights. Most of the litigations on e-commerce and m-commerce transactions come through this Law.

Q.No.23. What are the Special Laws governing E-Commerce / M-Commerce businesses? (B)

E-COMMERCE / M-COMMERCE BUSINESSES ARE GOVERNED BY SOME SPECIAL LAWS SINCE THE TRANSACTIONS ARE DONE ELECTRONICALLY.

- 1) **INFORMATION TECHNOLOGY ACT, 2000:** This law governs all internet activities and online transactions in India. It provides penalties, prosecution for non-compliance. The important issues dealt in by the law includes:
 - a) Legality of products / services being offered online.
 - b) Data Protection
 - c) Protecting Your Customer's Privacy Online
 - d) Online Advertising Compliance
 - e) Compliance with the provisions of Information Technology Act.
- 2) **RESERVE BANK OF INDIA, 1932:** E-commerce / M-commerce merchants need to comply RBI guidelines for online payments through various modes. For example:
 - a) The conversion of all Credit / Debit cards to be made CHIP based.
 - b) An OTP / PIN for all transactions done on point of sale machines through debit / credit cards.
 - c) The compliance with capital adequacy norms for payments wallet like SBI BUDDY/ PAYTM etc.

SIMILAR QUESTION:

1. In addition to general laws e-commerce companies have some specific laws to be complied. Discuss.
- A. Refer the above answer.

Q.No.24. What are the latest trends in E-commerce? (C)

THE LATEST TRENDS IN E-COMMERCE ARE AS FOLLOWS:

- 1) **CONTENT:** The content of the web should be such which not only attracts the customers' attention but also helps in engaging them. The latest trend is using videos for content marketing to attract customers.
- 2) **SOCIAL COMMERCE:** Social media these days is an integral part of almost every consumer's online habits. The latest trend is the inclusion of e-commerce in social networks, such as Facebook, Twitter, YouTube, etc.

- 3) **MOBILE COMMERCE:** The user is moving from desktop to mobile computing. 55% of the online traffic is generated from mobile devices and still it is on the increase. Mobile marketing is an important e-commerce trend.
- 4) **BIOMETRICS:** Biometric verification is a recent e-commerce technology trend that measures the physical characteristics of users such as fingerprints, palm, face, or voice to solve security issues.
- 5) **ARTIFICIAL INTELLIGENCE:** Another trend in e-commerce is the use of Chatbot, a fully automated chat agent that will answer all the questions of consumers and act as a first point of contact
- 6) **PREDICTIVE ANALYSIS:** The use of predictive analysis tools is increasing to predict the online customers' behavior. The analytical approach would lead to an increase in the number of new customers.

PART 6: DIGITAL PAYMENTS

Q.No.25. What is Digital Payment? State the new methods of Digital Payment?

(A) (N 18)

DIGITAL PAYMENT:

- A) It is also called Electronic Payment.
- B) It is a way of payment which is made through digital modes.
- C) Here both payer and payee use digital modes to send and receive money.
- D) Hard cash is not involved in this mode of payment.
- E) It is an instant and convenient way to make payment.

NEW METHODS OF DIGITAL PAYMENT:

- 1) **UPI (Unified Payment Interface):** It is a system that powers multiple bank accounts (of participating banks), several banking services like fund transfer and merchant payments in a single mobile application. Ex: BHIM, SBI UPI app, HDFC UPI app, Mobile, Phone app, etc. Currently this facility is available for Android users only.
- 2) **Immediate Payment Service (IMPS):** It is an instant interbank electronic fund transfer service through mobile phones. It can also be used through ATM, Internet Banking, etc.
- 3) **Mobile Apps like BHIM (Bharat Interface for Money):**
It is a Mobile App developed by National Payments Corporation of India (NPCI) based on UPI (Unified Payment Interface) for instant transfer of money between the bank accounts of any two parties.
It is built on IMPS infrastructure.
BHIM works on all mobile devices and enables users to send or receive money to other UPI payment addresses by scanning QR code or using account number with Indian Financial Systems Code (IFSC) code or MMID (Mobile Money Identifier) Code for users who do not have a UPI-based bank account.
- 4) **Mobile Wallets:** It is a virtual wallet that stores payment card information on a mobile device. They provide a convenient way for a user to make in-store payments. Ex. PayTm, Freecharge, SBI Buddy, MobiKwick, Google Pay, Phone Pe, etc.
- 5) **Aadhaar Enabled Payment Service (AEPS):** It is an Aadhar based digital payment mode. Customer needs only his or her Aadhar number to pay to any merchant. It allows bank to bank transactions. Customers will need to link their AADHAR numbers to their bank accounts.
- 6) **Unstructured Supplementary Service Data (USSD):** USSD banking or *99# Banking is a mobile banking based digital payment mode. User does not need to have a smartphone or internet connection to use USSD banking. S/he can use this service for many financial and non-financial operations such as checking balance, sending money, changing Mobile Banking Personal Identification number (MPIN), getting Mobile Money Identifier (MMI), etc.
- 7) **Mobile Banking:** It uses software, usually called an App, provided by the banks or financial institution for the purpose. Each Bank provides its own mobile banking App for Android, Windows and iOS mobile platform(s).

- 8) **Crypto currency:** Crypto currency is a digital currency produced by a public network, rather than any government, that uses cryptography to ensure that payments are sent and received safely. A cryptocurrency is a medium of exchange wherein records of individual coin ownership are stored in a computerized database using strong cryptography

SIMILAR QUESTION:

1. Payments are made easy now-a-days with the availability of different avenues of payment technologies. list out different payment mechanisms.
- A. Refer the above answer

Q.No.26. What are the Traditional Methods of Digital Payment?

(A)

- 1) **CARDS:** Cards are provided by banks to their account holders. These have been the most used digital payment modes till now. Various types of cards are as follows:
 - a) **Credit Card:** It is a small plastic card allowing the holder to purchase goods or services on credit. In this mode of payment, the buyer's cash flow is not immediately impacted. User makes payment at end of billing cycle which is generally a monthly cycle. Credit card issuer may charge some fee per transaction.
 - b) **Debit Cards:** It is also a small plastic card issued by a bank. It allows the holder to purchase goods or services on Debit. In this mode of payment, the buyer's cash flow is immediately affected and buyer's account is debited.
 - c) **Smart Card:** Smart card is a prepaid card similar to credit card and debit card in appearance, but it has a small microprocessor chip embedded in it.
- 2) **INTERNET BANKING:** In this mode, customer is required to log in to his / her bank account to make payment. Generally, all banks allow net banking facilities to their customers.

Q.No.27. List out the Advantages and Drawbacks of Digital Payments?

(A) (RTP-N20)

ADVANTAGES OF DIGITAL PAYMENTS

- 1) **Easy and convenient:** They are easy and convenient. Person need not keep loads of cash with them.
- 2) **Pay or send money from anywhere:** With digital payment modes, one can pay from anywhere anytime.
- 3) **Discounts from taxes:** Government has announced many discounts to encourage digital payments. User gets 0.75% discounts on fuels and 10% discount on insurance premiums of government insurers.
- 4) **Written record:** Every transaction gets automatically recorded in a passbook or inside an E-Wallet app. This helps user to maintain record, track spending and budget planning without forgetting.
- 5) **Less Risk:** Digital payments have less risk if used wisely. If user losses mobile phone or debit/credit card or Aadhar card, no need to worry. No one can use anyone else's money without MPIN, PIN or fingerprint in case of Aadhar. Of course, it is advisable for user to block his card, if lost.
- 6) **Competitive advantage to business:** Digital payment enables businesses gain a competitive advantage over those who accept payment only through traditional methods.
- 7) **Environment Friendly:** Digital payment eliminates the use of paper.

DRAWBACKS OF DIGITAL PAYMENTS:

- 1) **Difficult for a Non-technical person:** Most of the digital payment modes are based on mobile phone, the internet and cards. Non-technical persons such as farmers, workers, etc. may feel them to be difficult to operate.
- 2) **The risk of data theft:** Hackers can hack the servers of the bank or the E-Wallet being used by the customer and easily get his/her personal information. They can use this information to steal money from the customer's account.
- 3) **Overspending:** If it is physical cash one keeps limited stock of the same. In case of Digital Payment modes user can access full amount available in his account and hence they may lead to overspending.

- 4) **Disputed transactions:** In case the electronic money such as credit card is misused by someone else, it is very difficult to receive a refund.
- 5) **Increased business costs:** Businesses have to incur additional costs in procuring, installing and maintaining sophisticated payment-security technologies.
- 6) **The necessity of internet access:** Digital payment cannot be performed if Internet connection fails.

SIMILAR QUESTION:

1. Even though digital payments are advantageous they pose risks if the consumer is not wise enough in using them. List out pros and cons of digital payments.
- A. Refer the above answer
2. Ms. Nisha has set up a home tiffin service along with her business partner Ms. Seema. Though Nisha is not convinced, her business partner Ms. Seema is certain to adopt the digital mode of payment than traditional method in their business. To convince Nisha about the same, Ms. Seema jotted down the advantages and disadvantages of digital payment. Identify the points she would have prepared? (RTP-N20)
- A. Refer the above answer

SECTION 2: QUESTIONS FOR ACADEMIC INTEREST FOR STUDENTS ELF STUDY

Q.No.1. The business and technological environment in which the entities operate are rapidly changing on account of the E-Commerce platforms on which most of them now operate. Therefore, it is imperative for the consideration of Cyber Security Risks in the audit procedures. Comment (C)

- 1) Risk Assessment is always a very important part and parcel of the audit procedures.
- 2) One of the most important aspects to be kept in mind during the risk assessment process is giving due consideration to the changing risks in the entity and its environment due to the ever-evolving technology conditions which can have a potential impact on the financial statements.
There could be cyber security risks with **Direct** as well as **Indirect** impact.
- 3) A **Direct Financial Impact** could be if the Application at the Company's Retailers which contains financial information has weak passwords at all Open Systems Interconnection (OSI) layers resulting in harming the integrity of data.
- 4) An **Indirect Operational Impact** could be if the sensitive customer information in the form of Bank Account Numbers Recipes of Patented products, etc. could be breached which would result in legal and regulatory actions on the Company on account of breach of confidential information.

Q.No.2. What are the objectives of IT Act 2000 with regard to E-commerce? (C)

THE OBJECTIVES OF IT ACT 2000 CAN BE SUMMARIZED AS FOLLOWS:

- 1) To grant legal recognition for transactions carried out by means of electronic data interchange or electronic commerce in place of paper based method of communication.
- 2) To give legal recognition to digital signature for authentication of any information or matter, which requires authentication under any law.
- 3) To facilitate electronic filing of documents with Government departments.
- 4) To facilitate electronic storage of data.
- 5) To provide legal sanction to transfer fund electronically to and between banks and financial institutions.
- 6) To provide legal recognition for keeping books of account in electronic format by bankers.
- 7) In order to amend the Indian Penal Code, Indian Evidence Act, 1972, Bankers Book Evidence Act, 1891 and RBI Act, 1934.
- 8) To provide legal infrastructure to promote e-commerce and secure information system.
- 9) To manage cyber-crimes at national and international levels by enforcing laws.
- 10) This Act governs all internet activities in India and is applicable to all online transactions in India, and provides for penalties, prosecution for non-compliances.

Q.No.3. Explain the steps involved in E-Commerce Transaction?

(B)

STEP 1: Go to website (like www.flipkart.com,) and create your user id. Those who have social media ids, can directly link through those ids. (or) Go to Google Play Store and download the relevant APP (Application).

STEP 2: Select the type of product you wish to buy.

STEP 3: From the products listed, user needs to select the correct product.

STEP 4: User makes the final choice and goes for making payment online.

STEP 5: At the time of making payment, e-commerce vendor shows all final details.

STEP 6: Once user goes for online payment, the e-commerce vendor displays the payment options like cash on delivery, Payment by Debit/Credit Cards, etc.

STEP 7: Once the user selects the payment option, he is directed to the payment gateway where he enters the OTP or the password. Once the payment is made, the confirmation email / SMS are received by the user.

STEP 8: Based on the delivery terms, the product is delivered to the customer in specified time.

SIMILAR QUESTION:

1. Making an e-commerce transaction is easy Comment.
- A. Refer above answer.

Q.No.4. Difference between Traditional Commerce and E-Commerce?

(C)

Traditional Commerce Vs E-Commerce

| BASE FOR COMPARISON | TRADITIONAL COMMERCE | E-COMMERCE |
|---|--|---|
| Definition | Traditional commerce includes all those activities which encourage exchange, goods / services which are manual and non-electronic. | E-Commerce means carrying out commercial transactions or exchange of information, electronically on the internet. |
| Transaction Processing | Manual | Electronically |
| Availability for commercial transactions | For limited time. special stores which may run 24 hours, but in general available for limited time. | 24 x 7 x 365 |
| Nature of purchase | Goods can be inspected physically before purchase. | Goods cannot be inspected physically before purchase. |
| Customer interaction | Face-to-face | Screen-to-face |
| Business Scope | Limited to particular area. | Worldwide reach |
| Information exchange | No uniform platform for exchange of information. | Provides a uniform platform for information exchange. |
| Resource focus | Supply side | Demand side |
| Marketing | One way marketing | One-to-one marketing |
| Payment | Cash, cheque, credit card, etc. | Credit card, fund transfer, Cash in Delivery, Payment Wallets, UPCI application etc. |
| Delivery of goods | Instantly | Takes time, but now e-commerce websites have created options of same day delivery, or delivery within 4 hours. |
| Fraud | Relatively lesser as there is personal interaction between the buyer and the seller. | Lack of physical presence in markets and unclear legal issues give loopholes for frauds. |

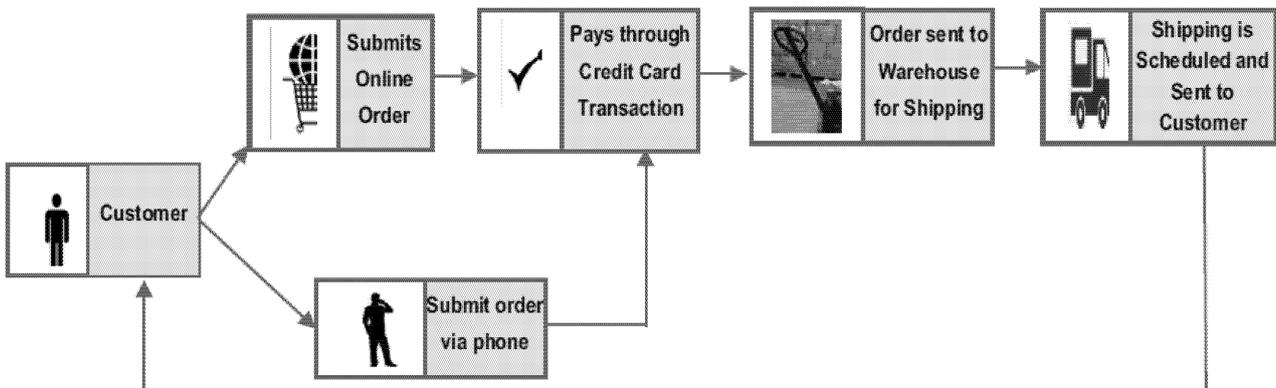
| | | |
|----------------------|---|---|
| Process | Because of manual processing of business transactions; chances of clerical errors are high. | Automated processing of business transactions minimizes the clerical errors. |
| Profit Impact | The cost incurred on the middlemen, overhead, inventory and limited sales reduces the profit of the organization. | By increasing sales, cutting cost and streamlining operating processes - (i) The profits margin of manufacturers is increased. (ii) Above (i) allow manufacturers to give discounts to customers. (iii) Customers get better prices. |

Q.No.5. Explain the Work Flow Diagram of E-COMMERCE? (RTP-M18) (C) (M 18)

Description of E-Commerce Work Flow Diagram

| S. No. | Step | Activities |
|--------|-------------------------------|---|
| 1) | Customers login | Few e-commerce merchants may allow same transactions to be done through phone, but the basic information flow is e-mode. |
| 2) | Product / Service Selection | Customer selects products / services from available options. |
| 3) | Customer Places Order | Order placed for selected product / service by customer. This step leads to next important activity PAYMENT GATEWAY. |
| 4) | Payment Gateway | Here customer makes a selection of the payment method. In case payment methods is other than cash on delivery (COD). |
| 5) | Dispatch and Shipping Process | This process may be executed at two different ends. First if product / service inventory is managed by e-commerce vendor than dispatch shall be initiated at merchant warehouse. Second, many e-commerce merchants allow third party vendors to sale through merchant websites. For example: FLIPKART |
| 6) | Delivery Tracking | Another key element denoting success of e-commerce business is timely delivery. Merchants keep a track of where the product / service delivery to customers are immediately updated. |
| 7) | COD tracking | In case products are sold on COD payment mode, merchants need to have additional check on matching delivery with payments. |

WORK FLOW DIAGRAM of E-COMMERCE



THE END

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