

Q) Describe in detail eight unique features in e-commerce technology.

8 Unique features of E-commerce technology are:

1. Ubiquity
2. Global reach
3. Universal standards
4. Information richness
5. Interactivity
6. Information density
7. Personalization/customization
8. Social technology.

1. Ubiquity:

→ In traditional commerce, a market place is a physical place you visit in order to transact. For example television & radio typically motivate the consumer to go to someplace to make a purchase

→ E-commerce, in contrast, is characterized by its ubiquity it is available just about everywhere, at all times.

→ It liberates the market from being restricted to a physical space & makes it place.

## 2. Global Reach:

→ E-commerce technology permits commercial transactions to cross cultural, regional, & national boundaries far more conveniently & cost-effectively than is true in traditional commerce.

## 3. Universal standards:

→ One strikingly unusual feature of e-commerce technologies is that the technical standards of the internet, & therefore the technical standards for conducting e-commerce, are universal standards - they are shared by all nations around the world.

## 4. Richness:

→ The Internet has the potential for offering considerably more information richness than traditional media such as printing presses, radio, & television because it is interactive & can adjust the message to individual users.

## 5. Interactivity:

→ Unlike any of the commercial technologies of the twentieth century, with the possible exception of the telephone, e-commerce technologies allow for interactivity,

meaning they enable two-way communication between merchant & consumer & among consumers

→ Chatting with an online sales person, for instance, comes very close to the customer shopping experience in a retail shop.

#### 6. Information Density:

→ The density of information over the internet has greatly improved, as long as the total amount of all markets, consumers & businesses quality information. As a result, information becomes more plentiful, less expensive & of higher quality.

#### 7. Personalization & Customization:

→ Personalization: The targeting of marketing messages to specific individuals by adjusting the message to a person's name, interests & past purchases.

→ Customization: Changing the delivered product or service based on user's preferences or prior behavior.

#### 8. Social Technology:

→ In a way quite different from all previous technologies, e-commerce technologies have evolved to be much more social by allowing users to create & share content with a worldwide community.

→ Users are able to create new social networks & strengthen existing ones.

→ The Internet provides a unique, many-to-many model of mass communication.

2) Illustrate the eight key elements of a Business Model

→ A Business model is a set of planned activities designed to result in a profit in a marketplace

## 8 Key elements of Business Model:

### 1. Value proposition:

→ Define how a company's product or service fulfills the need of customers

→ Successful e-commerce value propositions:

\* ) Personalization / customization

\* ) Reduction of product search, price discovery costs

\* ) Facilitation of transactions by managing product delivery.

### 2. Revenue Model:

→ Define how the firm will earn revenue generates profits & produce a superior return on invested capital

→ Major types : \* ) Advertising revenue model

\* ) Subscription revenue model

\* ) Transaction fee revenue model

\* ) Sales revenue model

\* ) Affiliate revenue model

### 3. Market Opportunity:

→ Refers to a company's intended market space & overall potential financial opportunities available to the firm in market space

→ Market opportunity typically divided into smaller niches.

#### 4. Competitive Environment:

→ Refers to other competition selling similar products f operating in the same market space

→ Influenced by:

\* Number & size of active competitors

\* Each competitor's market share

\* Competitor's profitability

\* Competitor's pricing

#### 5. Competitive Advantage:

→ Achieve when a firm can produce a superior product or bring a product to market, at a lower price than most, or all of their competitors.

→ Types of competitive advantage:

First mover advantage & unfair competitive advantage

#### 6. Market Strategy:

→ Plan the details how a company intends to enter a new market & attract strategy.

#### 7. Organizational Development:

→ Describes how the company will organize the work that needs to be accomplished.

#### 8. Management team:

→ Employees of the company responsible for making the business model work.

3) Discuss the key technology concepts for an ecommerce ecosystem

→ The Key concepts are:

⇒ Packet switching:

- \* ) Slices digital messages into packets
- \* ) Sends packets along different communication paths as they become available.
- \* ) Reassembles the packets once they arrive at destination
- \* ) Uses routers
- \* ) Less expensive, wasteful than circuit-switching

⇒ TCP/IP:

- \* ) Transmission control protocol (TCP)
  - Establishes connections among sending & receiving web computers
  - Handles assembly of packets at point of transmission, & reassembly at receiving end.

\* ) Internet protocol (IP):

- Provides the Internet's addressing scheme.

\* ) Four TCP/IP layers:

- Network Interface layer
- Internet layer
- Transport layer
- Application layer

\* ) IP addresses are of two types:

IPv4 & IPv6

\* ) Domain Names, DNS & URLs

- Domain name: IP expressed in natural language

- Domain Name system (DNS): Allows numeric IP addresses to be expressed in natural language.

- Uniform resource locator (URL):  
→ The address used by a web browser to identify the location of content on the web.

⇒ Client / Server Computing:

\* ) Powerful personal computers (clients) connected in network with one or more servers.

\* ) Servers perform common functions for the clients

- ) Storing files
- ) Software Applications
- ) Access to printers, etc

→ What are the current limitation on the 'internet'.  
Suggest any two technologies to overcome these  
limitations..

→ Limitations on the Internet:

#### Storage Limitations:

- Lack of efficient storage management: Despite the significant dropping price & increasing size of storage, the amounts of data that are created today require ever-growing amounts of storage & storage decisions that guarantee efficient storage management, refreshing & removal optimized for different types of data.
- Lack of inherited data integrity, reliability & trust targeting the security & protection of data.
- Lack of efficient caching & mirroring: There is no inherited method for on-path caching & mirroring of data/content that could deal with issues like flesh crowding.

#### Transmission Limitations:

- Lack of efficient transmission of content-oriented traffic: Multimedia content-oriented traffic comprises much larger amounts of data as compared to any other information flow.

- Security requirements of transmission links: It is not sufficient to just protect/encrypt the data, but also protect the communication itself, including the relation/interaction between parties.

- Control Trade-offs:
  - Lack of flexibility in Control: In the current Internet, IP controls components are driven exclusively by cost/performance ratio considerations leaving very limited flexibility
  - While sending data packets we can't prioritize them
  - Lack of congestion control

- Techniques to overcome:
  - Latency solutions:

- One of the challenges of packet switching, where data is divided into chunks & then sent separately to meet again at the destination, is that the Internet does not differentiate between high-priority packets such as video-clips, & those of lower priority, such as self-contained e-mail messages. Because the packets cannot yet be simultaneously reassembled, the result can be distorted audio & video streams.

- \* } Differentiated QoS (DiffServ) is a technology that assigns levels of priority to packets based on type of data being transmitted
- \* } Guaranteed service levels of lower error rates.
  - Ability to purchase the right to move data through network at guaranteed speed in return for higher fee
- \* } Declining costs
- \* } The Internet of Things (IoT)
  - objects connected via sensors to the Internet
  - spearheaded by EU & China

5) Discuss various digital commerce marketing & advertising strategies & tools

→ Internet marketing has many similarities to, & differences from ordinary marketing

→ Strategic issues & questions:

The five main elements of a comprehensive multi-channel marketing plan are:

- web site
- traditional online marketing
- social marketing
- mobile marketing
- and offline marketing

| Type of marketing            | Platforms  | Examples  |
|------------------------------|--|---|
| Web site                     | Traditional web site                                     | Ford.com  |
| Traditional online marketing | Search engine marketing<br>Display advertising<br>E-mail | Google, Bing, Yahoo!<br>Yahoo, Google, MSN<br>Major retailers |
| Social Marketing             | Social networks<br>Video Marketing<br>Blogs / forums     | Facebook/Google<br>Youtube<br>Pinterest                       |
| Mobile Marketing             | Smartphone site<br>Tablet site                           | m.ford.com<br>t.ford.com                                      |
| offline Marketing            | Television<br>Newspaper                                  | Cadillac CTS Olympics 2012<br>Nike Olympics ambush campaign   |

→ The Website as a marketing platform:  
Establishing the customer relationship

→ Traditional Online marketing & advertising  
Tools

- Search Engine Marketing & advertising
- Search Engine Advertising
- Display ad Marketing
- E-mail Marketing
- Affiliate Marketing
- Lead Generation Marketing
- Social, Mobile & local Marketing & Advertising

→ Multi-channel marketing : Integrating online & offline marketing

→ other online marketing strategies

- Customer retention strategies
  - ⇒ personalization, one-to-one marketing
  - ⇒ Versioning
  - ⇒ Free & Premium dynamic pricing & Flash Marketing

• Pricing strategies

• Long tail marketing