Q.2a. What are various criterions that can determine the level of advancement of e-commerce?

Answer:
1 Technological factors – The degree of advancement of the telecommunications infrastructure which provides access to the new technology for business and consumers.
2 Political factors – including the role of government in creating government legislation, initiatives and funding to support the use and development of e-commerce and information technology.
3 Social factors – incorporating the level and advancement in IT education and training which will enable both potential buyers and the workforce to understand and use the new technology.
4 Economic factors – including the general wealth and commercial health of the nation and the elements that contribute to it.

(b) What is exchanged in the following e-commerce model: C-to-C, B-to-G, C-to-B and G-to-B?
Answer:
Consumer-to-Consumer (C-to-C) In this category consumers interact directly with other consumers. They exchange information such as:

a. Expert knowledge where one person asks a question about anything and gets an e-mail reply from the community of other individuals, as in the case of the New York Times-affiliated abuzz.com website.
b. Opinions about companies and products, for example epinions.com.

Business-to-Government (B-to-G) The exchange of information, services and products between business organisations and government agencies on-line.
This may include,

a. E-procurement services, in which businesses learn about the purchasing needs of agencies and provide services.
b. A virtual workplace in which a business and a government agency could coordinate the work on a contracted project by collaborating on-line to coordinate on-line meetings, review plans and manage progress.
c. Rental of on-line applications and databases designed especially for use by government agencies.

Consumer-to-Business (C-to-B) This is the exchange of products, information or services from individuals to business. A classic example of this would be individuals selling their services to businesses.

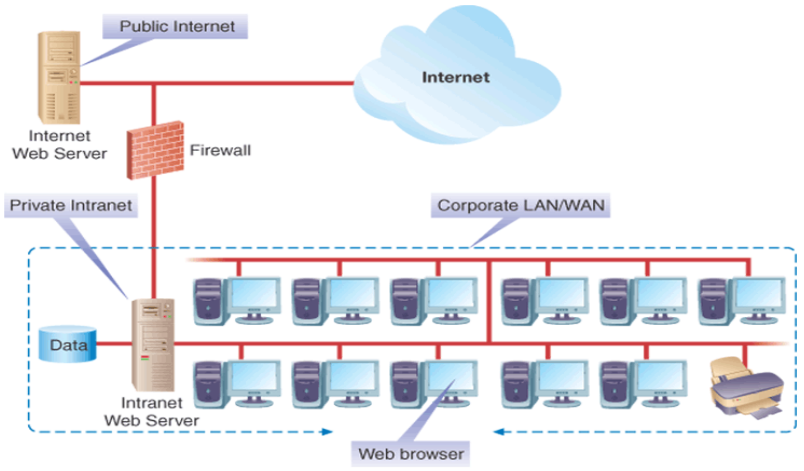
Government-to-Consumer (G-to-B) (Also known as e-government). Government sites offering information, forms and facilities to conduct transactions for individuals, including paying bills and submitting official forms on-line such as tax returns.

Q.3a. Describe briefly architecture of Intranet. List various applications of Intranet in B to B e-commerce.

Answer: Intranet System Architecture

- Firewalls – hardware devices with special software that prevent unauthorized access
- An intranet server is placed behind the firewall
- Packets are never routed outside the firewall, but remain within the organizations network

Figure 5.9 Intranet architecture.



Intranet Applications

- Training: Employee can access video lectures, presentation slides from their desktop
- Application Integration: Intranet integrates all disparate applications installed in different environments to consolidate information
  - Enterprise Resource Planning (ERP)
  - Customer Relationship Management (CRM)
  - Sales Force Automation (SFA)
- Online Entry of Information
- Real-Time Access to Information
- Collaboration

b.What do you mean by software agent? Write various reasons why this technology is expected to grow rapidly.

Answer: Page no. 124, 126 of Text book

Q.4a. Explain how to create an internet marketing strategy.

Answer: A comprehensive Internet marketing strategy can launch or increase sales substantially for a business. Internet marketing requires knowledge of social media, search engine optimization (SEO), blogs, email lists, affiliate marketing and more.

(Briefly explain the following or similar points)

- Develop your brand name and image before communicating with your market.
- Study your competitors
- Study your market.
- Mimic the successful marketing strategies of your competitors.
- Create a multi-faceted Internet marketing strategy.
- Set up tracking capabilities for all of your campaigns.
- Launch your campaign in the same few days and weeks.
- Evaluate your ROI and repeat any strategies that were successful, if and when you launch new products.

b.What are primary objectives of advertising? Are these applicable to online or offline advertising? Which of these two types of advertising is more effective?

Answer:

Advertising has a number of objectives:

• Building brand awareness- Making people aware of a brand or product is an important long-term goal for any marketer. Once customers know about the brand, the marketer has taken the first step toward gaining the customer's trust and patronage

• Creating consumer demand- Consumers can't want what they don't know about. Advertising needs to convince consumers about what they should want and why they should want it. Modern online advertising provides a great way to communicate the USPs (unique selling points) of a product, thereby helping stimulate demand.

• Informing consumers of the advertiser's ability to satisfy that demand- Once the consumer is aware of and desires a product, they need to find out how to satisfy that desire. If brand building has been effective, they will know that a particular brand exists

• Driving response and sales-All forms of online marketing need to drive traffic and sales in the long term. However, the immediacy of online advertising also drives traffic and sales in the short and medium terms.

These objectives are applicable to online and offline advertising.

The Key Differentiator

Online advertising is able to drive instant sales and conversions. Unlike offline advertising mediums, the consumer can go from advertisement to merchant in one easy click. Because of the connected nature of the Internet, online activities are highly trackable and measurable, which makes it possible to target advertisements and to accurately track and gauge the effectiveness of the advertising. Each display advertisement can be tracked for success.

Q.5 a. What are generic sources of e-business risks? What is the objective of e-business risk management?

Answer:

Risk Source:	Check risk issues:
Bad Guys	- fraud - graffiti - denial of service - virus attack - cyber-squatting
Commercial Environment	- customer behaviour - supplier performance - exchange rate movements
Legal System	- e-business legislation - standard commercial laws - laws in overseas markets
People	- attitudes to data security - defamatory e-mails - advertising on the web
Processes	- intellectual property - delivery of products/services
Technology	- website downtime - mission-critical systems - security
Business Strategy	- viability - acceptability - sustainability

b. Elaborate on various guidelines for the design of an e-payment system.

Answer:

1.Take measures to address risks (regarding safety, security, and privacy) and inform users making the measures taken visible, understandable, and justifiable.

2**.** Ask and use personal information parsimoniously, explaining what type of information will be retained, what it will be used for, and how it will be managed.

3**.** Provide a clear and explicitly privacy policy; make it known and understandable to users. Display privacy seals or announce compliance to related privacy legislation or codes of fair information

practice.

4. Provide clear and complete explanation of costs associated with payment and use of the system; aim to lower or even eliminate these costs for the user.

5. Allow users to control critical actions and information: Provide flexible interaction sequence delaying commitment to the transaction until it is absolutely necessary. Allow users to block accounts off line or deactivate passwords.

6. Seek reputation and trust transference from reputed partners and technology providers and communicate trust transference to users; in practice this may mean informing users about partnerships and business relations with reputable partners.

7.Ensure that interaction with the payment system resembles users' expectations about the payment process. Designers should seek to understand users' mental model of the payment process, comply with the process applied by market leaders, avoiding frequent changes to how this process is implemented.

8.Support automation of payments: support scheduled payments and multiple, batch payments; support features such as personal address books or databases with payee information.

9.Provide usable authentication; limit the number of authentication steps to two if possible and avoid re-authentication prior to less significant operations, such as viewing account status.

10.Support customization of the payment system, for example, features for currency conversion, personalized message to go with payments, multiple logins for a group of people (e.g., family, organization, etc.)

Q.6 a. Two main options for implementing CRM are: (1) a CRM package installed on your premises, or (2) a hosted CRM solution. Explain both of these giving pros and cons, if any, of the both.

Answer: On-premise CRM There are many CRM systems that are available for purchase off-the-shelf. These can then be tailored to your needs. Companies such as Siebel, Oracle, SAP, and Chordiant are well known in this area.

Pros:

Can be tailored to your business

Can be integrated with your other systems

Most companies offer flexible packages that are suitable for small and medium businesses

Cons:

More expensive in the short run (costs can vary from several thousand to several million dollars)

Can take a long time (months or even years) to implement fully

Hosted CRM Web-based applications for CRM with no software to download. In this case, the CRM system resides online and you rent the service on a monthly basis. Examples include, Sage Software, Microsoft Dynamics, Entellium, Clear C2, SAP, NetSuite, VanillaSoft

Pros

Less expensive in the short run (monthly fees run from about $65 to $150)

Appropriate for businesses with standard CRM needs, and little or no internal IT support

Can be implemented quickly (often within a few months)

Cons:

Cannot be integrated with other back office systems. You are allowing someone else to control your customer information and data

b. Describe various supply chain problems and their solutions.

Answer: Typical problems along the supply chain

- Slow and prone to errors because of the length of the chain involving many internal and external partners
- Large inventories without the ability to meet demand
- Insufficient logistics infrastructure
- Poor quality

- Bullwhip effect: Erratic shifts in orders up and down supply chains
  - Creates production and inventory problems
  - Stockpiling can lead to large inventories

Effect is handled by information sharing—collaborative commerce

Need for information sharing along the supply chain including issues on:

- product pricing
- inventory
- shipping status
- credit and financial information
- technology news
- Information systems are the links that enable communication and collaboration along the supply chain
- Information and information technology are one of the keys to the success, and even the survival in today's economy

Q.7 a. Describe any four applications in e-commerce where Data Mining (DM) techniques can be implemented.

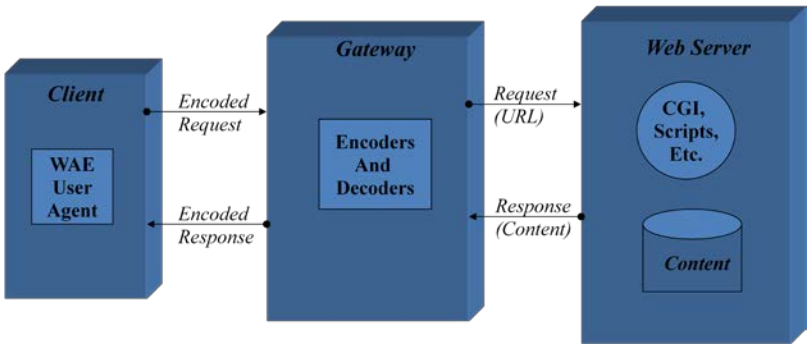
Answer: (Describe any four or similar of the following applications)

DM in customer profiling

DM in recommendation system

DM in web personalization
DM in multimedia e-commerce
DM and buyer behaviour in e-commerce

Q.8 a. Give an overview of WAP programming model. (8)



• **WAP Device**

- Is used to access WAP applications and content. It might be a PDA, handheld computer.

• **WAP Client**

- Entity that receives content from Internet via a WAP Gateway. This is usually the WAP Browser.

• **WAP Content/Origin/Application Server**

- Element in the network where the information or web/WAP applications resides.

• **Proxy**

- Acts both as a client and as a server in the network.Typically has
  - Protocol gateway : translates requests from the WAP protocol stack to WWW protocol stack
  - Content encoders and decoders : translate WAP content into compact encoded formats to reduce the size of data over the network

It allows content and applications to be hosted on standard WWW servers and developed using proven WWW technologies such as CGI scripting

• **WAP Gateway**

- Intermediary element used to connect two different types of network. It receives request directly from the clients as if it actually were the origin server that clients want to receive the information form. The clients are usually unaware that they are speaking to the Gateway.

• **WAP Browser**

  - Software running on the WAP device that interprets the WAP content arriving from the internet and decides how to display it on WAP device.

WML

• WML – Wireless Markup Language formerly called HDML (Handheld Devices Markup Language)
• Is a tag language that allows the text portions of Web Pages to be presented on cellular phones and Personal Digital Assistants (PDAs) via wireless access.
• WML is used for delivering data to WAP devices, and is HTML- like in its appearance.
• An alternative to WML is I-Mode's cHTML language.

b.Elaborate on various needs and concern of m-Commerce's consumer.

Answer: There are **five** primary needs that yield demand for m-commerce services. These are: connectivity, communication, information, entertainment, and commerce. (explain these briefly)
Consumer concerns surrounding connectivity involve the issues of security, reliability, download times, and cost. (explain these briefly)

Q.9 Write notes on any <u>four</u> of the following:

(i) Cyberstalking
(ii) Phishing
(iii) Internet Gambling
(iv) Intelligent Websites
(v) Website Goals and Objectives

Answer:
(i) Cyberstalking

Cyberstalking is a very serious form of online harassment. At one level, cyberstalking is much like cyberbullying as it involves the sending of repeated annoying and unwelcome messages. But cyberstalking goes far beyond cyberbullying in terms of motivations and tactics. Cyberstalking involves a disturbed obsession with the target, and a perverse desire to control that target in some way, even by attacking the target's family members. Cyberstalkers do not wish to just torment someone for an adolescent power rush... stalkers want to force the target into some kind of submission, and are willing to involve other targets to achieve that disturbed result.

(ii) Phishing

Phishing is the act of attempting to acquire information such as usernames, passwords, and credit card details (and sometimes, indirectly, money) by masquerading as a trustworthy entity in an electronic communication. Phishing is a fraudulent attempt, usually made through email, to steal your personal information. The best way to protect yourself from phishing is to learn how to recognize a phish.
Phishing emails usually appear to come from a well-known organization and ask for your personal information — such as credit card number, social security number, account number or password. Often times phishing attempts appear to come from sites, services and companies with which you do not even have an account.

In order for Internet criminals to successfully "phish" your personal information, they must get you to go from an email to a website. Phishing emails will almost always tell you to click a link that takes you to a site where your personal information is requested. Legitimate organizations would never request this information of you via email.

(iii) Internet Gambling

Internet gambling is gambling played through internet. Internet gambling has become one of the most popular and lucrative business present on the Internet. Gambling money online can come from credit card, electronic check, certified check, money order, or even wire transfer.

Normally, gamblers upload funds to the online gambling company, make bets or play the games that it

offers, and then cash out any winnings. Gamblers can often fund gambling accounts by credit/debit card, and cash out winnings directly back to the card

Online gambling is a banned offense in the state of Maharashtra under the "Bombay wager Act". Other acts/legislations are silent with respect to online gambling/online gaming in India. The most recent law to address gambling online was the Federal Information Technology Rules where such illegal activities may be blocked by Internet providers within India.

(iv) Intelligent Websites
An intelligent website is more than just a brochure on the web. It allows you to edit the website yourself through a Content Management System (CMS)-Maintain an expanding database of your customers and clients; Communicate better with forums or blogs; Administer and track sophisticated email marketing campaigns and gauge the responses to each email; Have all the important statistics at your fingertips. Be fully e-commerce enabled so you can generate income from your site. In fact it is more like an online business than a website.

(v) Website Goals and Objectives
Before you can put your website to work, you must set goals and objectives for your website. Every company has a different set of website goals and objectives that they want to achieve by having an online presence. From the organization of the content and webpages to the web design and visual appeal, these elements need to be well planned before developing your website.

Some of the common website goals that businesses and organizations typically set include:

- New Business Development
- Funneling search engine traffic via SEO and Internet marketing
- Providing Information for Current or Potential Customers
- E-commerce and Selling Online
- Providing News and Information to the Public

TEXTBOOK

I. E-Commerce – An Indian Perspective, P. T. Joseph, S. J., Second Edition, PHI, 2007