

1) Elaborate On the three main types of intellectual property protection;

i) Patent ii) Trademark iii) Copyright

→ Three main types of protection:

- Copyright
- Patent
- Trademark law

i) Patent:

- Grant owner 20-year monopoly on ideas behind an invention.
 - Machines
 - Man-made products
 - Compositions of matter
 - Processing methods
- Invention must be new, non-obvious, novel
- Encourages inventors
- Promotes dissemination of new techniques through licensing
- Stifles competition by raising barriers to entry
 - Patent reform
 - *) Patent trolls
 - *) 2011 America Invents Act

ii) Trademark:

- Identify, distinguish goods, and indicate their source.
- Purpose
 - * Ensure consumer gets what is paid for & expected to receive.
 - * Protect owner against piracy and misappropriation.
- Infringement
 - * Market confusion
 - * Bad faith
- Dilution
 - * Behavior that weakens connection between trademark & product

iii) Copyright:

- Protects original forms of expression (but not ideas) from being copied by others for a period of time.
- "Look and feel" copyright infringement lawsuits.
- Fair use doctrine.
- Digital Millennium Copyright Act, 1998.
 - *) First major effort to adjust copyright laws to internet age.
 - *) Implements WIPO treaty that makes it illegal to make, distribute, or use devices that circumvent technology-based protections of copyrighted materials.

2) Define Privacy. Discuss Information privacy & Information rights in the context of social, political & ethical issues?

- Privacy:

Moral right of individuals to be left alone, free from surveillance or interference from other individuals or organizations.

- Information Privacy:

→ Subset of privacy.

→ Claims:

*) Certain information should not be collected at all.

*) Individuals should control the use of whatever information is collected about them.

Privacy & Information Rights

→ Major ethical issue related to e-commerce
& privacy.



→ Major social issue:

*) Development of "expectations of privacy"
& privacy norms.

→ Major political issue:

*) Development of statutes that govern
relations between record keepers &
individuals.

→ Internet, like other technologies, can:

- *) Enable new crimes
- *) Affect environment
- *) Threaten social values

→ Costs & benefits must be carefully considered, especially when there are no clear-cut legal or cultural guidelines.

→ Social networks

*) Encourage sharing personal details.

*) Pose unique challenge to maintaining privacy.

→ Facebook's facial recognition technology & tagging.

→ Personal control over personal information vs. organization's desire to monetize social network.

3) Give your opinion on the privacy & information rights of a citizen w.r.t the following:

- i) Information collected at ecommerce sites
- ii) Information collected social networking sites
- iii) Information collected from mobile & location based applications.

i) Information collected at e-commerce sites.

- Data collected includes
 - * Personally identifiable information (PII)
 - * Anonymous information
- Types of data collected
 - * Name, address, phone, e-mail, social security
 - * Bank & credit accounts, gender, age, occupation, education
 - * Preference data, transaction data, clickstream data, browser type

ii) Social Networks and Privacy

- Social networks
 - * Encourage sharing personal details
 - * Pose unique challenge to maintaining privacy
- Facebook's facial recognition technology & tagging
- Personal control over personal information vs. organizations' desire to monetize social network.

iii) Mobile & location-based Privacy Issues

- Smartphone apps
 - * Funnel personal information to mobile advertisers for targeting ads.
 - * Track and store user locations
- 42% of users say privacy a concern
- Mobile Device Privacy Act
 - * Not yet passed
 - * Requires informing consumers about data collection

4) List out & elaborate on the most common security threats in e-commerce environment?

→ Three key points of vulnerability in e-commerce environment:

1. Client
2. Server
3. Communication pipeline (Internet communications channels)

Most Common Security threats

- Malicious code
 - *) Viruses
 - *) Worms
 - *) Trojan horses
 - *) Drive-by downloads
 - *) Backdoors
 - *) Bots, botnets
 - *) Threats at both client and server levels.

- Potentially unwanted programs (PUPs)
 - *) Browser parasites
 - *) Adware
 - *) Spyware
- Phishing
 - *) E-mail scams
 - *) Social engineering
 - *) Identity theft
- Hacking
 - *) Hackers vs. crackers
 - *) Types of Hackers : white, black, grey hats
 - *) Hacktivism
- Cyber vandalism
 - *) Disrupting, defacing, destroying web site
- Data breach
 - *) Losing control over corporate information to outsiders

- Credit card fraud / theft
 - *) Hackers target merchant servers; use data to establish credit under false identity.
- Spoofing (Pharming)
- Spam (junk) Web sites
- Denial of service (DoS) attack
 - *) Hackers flood site with useless traffic to overwhelm network.
- Distributed denial of service (DDoS) attack
- Sniffing
 - *) Eavesdropping program that monitors information travelling over a network.
- Insider attacks
 - Poorly designed server & client software
 - Social network security issues.
 - Mobile platform security issues.
- *) Same risks as any Internet device
- Cloud security issues.

5) Describe various tools for achieving security in e-commerce?

- Encryption:

- *) Transforms data into cipher text readable only by sender & receiver
- *) Secures stored information & information transmission.

*) Provides 4 of 6 key dimensions of e-commerce security:

- Message integrity
- Non repudiation
- Authentication
- Confidentiality

*) There are different encryption techniques

like:

- Encrypt
- Symmetric Key Encryption
- Public Key Encryption
- Digital Envelope
- Digital Certificates & Public Key Infrastructure (PKI)

- Firewall
 - *) Hardware or software
 - *) Uses security policy to filter packets
 - *) Two main methods:
 - Packet filters
 - Application gateways
- Proxy servers (proxies)
 - *) Software servers that handle all communications originating from or being sent to the internet.
- Secure Sockets Layer (SSL) and Transport Layer security (TLS)
 - *) Establishes a secure, negotiated client-server session in which URL of requested document, along with contents, is encrypted

- Virtual Private Network (VPN):
 - *) Allows remote users to securely access internal network via the internet.
- Operating system security enhancements
 - *) Upgrades, patches.
- Anti-virus software:
 - *) easiest & least expensive way to prevent threats to system integrity
 - *) Requires daily updates.

6) Write short notes on the following:

i) Auctions and dynamic Pricing

ii) Types of Portals.

i) Auctions and dynamic Pricing:

Dynamic Pricing:

- Airline tickets, coupons, college scholarships
- Prices based on demand characteristics of customers and supply situation of seller.
- Many types of dynamic pricing
 - *) Bundling
 - *) Trigger pricing
 - *) Utilization pricing
 - *) Personalization pricing

Auctions: Types of dynamic pricing

- C2C auctions
 - *) Auction house an intermediary.
- B2C auctions
 - *) Business owns assets;
often used for excess goods

- Can be used to
 - * Sell goods and services
 - * Allocate resources
 - * Allocate and bundle resources

Benefits of Auctions:

- Liquidity
- Price discovery
- Price transparency
- Market efficiency
- Lower transaction costs
- Consumer aggregation
- Network effects.

ii) Types of Portals

- General purpose portals:
 - * Attempt to attract very large general audience.
 - * Retain audience by providing in-depth vertical content channels
 - * e.g., Yahoo, MSN

- Vertical market portals:

- * Attempt to attract highly-focused, loyal audiences with specific interest in:
 - Community (affinity group); eg., iVillage
 - Focused content; eg., ESPN.com

Affinity Group

Facebook

iVillage

Sina.com

Sify.com

Law.com

Geopress.com

Focused Content

ESPN.com

Bloomberg.com

NFL.com

WebMD.com

Gamers.com

Auky.com

Econline.com

Sailnet.com