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INFORMATION TECHNOLOGY FOR CLASS 11

(Study materials based on N.C.E.R.T)

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## UNIT -2 NETWORKING AND INTERNET

### Points to Remember

- ❖ A bridge is a multiport device used for connecting two or more local area networks (LAN), possibly operating at different speeds.
- ❖ S witches are used to connect individual nodes in the network with each other.
- ❖ Routers are used for connecting various networks with each other. A router transmits data from incoming network to another network.
- ❖ A gateway connects networks based on different protocol technologies to communicate with each other.
- ❖ A wide network of networks is known as Internet. It has made it possible to exchange information and communicate with remote nodes.
- ❖ A network protocol defines the rules and conventions of communication that must be followed when two devices interact with each other. It specifies what should be communicated, and how and when communication should take place.
- ❖ An email may be written text and may include multimedia attachment. Sender of thee-mail may send it to one or more intended recipients. Sending and receiving of mails can take place through web based e-mail application.
- ❖ FTP is a File Transfer Protocol used for transferring files from one machine to another through a TC P based network.
- ❖ TELNET stands for TERminal NETwork. It is a client server based application that allows the user working on one system to login and access a remote system.
- ❖ World Wide Web (WWW), commonly known as web, is a repository of information on machines spread all over the Internet and linked to each other.
- ❖ A web page may contain text, images, audio, videos, and information for linking the web pages in the form of hyperlinks.
- ❖ The TC P/IP (Transmission Control Protocol/Internet Protocol) is the glue which holds Internet and WWW (collection of servers where information is stored) together.
- ❖ The term malware refers to malicious software (programs) designed with the intension to affect the normal functionality by causing harm to the system, or with the intension of getting unauthorized access to the system, or denying access to legitimate users computing resources.

- ❖ A virus is a software code that may harm your system by overwriting or corrupting the system files. A computer virus may make several copies of it by inserting its code onto the system programs, files or boot sector of hard drives and thereby may corrupt them.
- ❖ A worm is a malware often received via network, and it automatically keeps on creating several copies of itself on the hard disk thereby flooding the hard disk.
- ❖ Trojan Horse is a code that appears to be desirable and useful but ends up harming the system. Trojan horse can attach itself with a safe application. Such an application when executed creates a backdoor in the system through which a hacker can access the system.
- ❖ Spams are the unwanted electronic mails, generally sent in bulk over the Internet advertisement purpose. However, they may contain link to phishing sites that attempts to steal user information or link to sites that contain malware or infected files.
- ❖ Phishing refers to the act of stealing user's personal information through fraud mails. These mails either entail personal information through embedded forms, or contain links to the web page that may prompt you to provide this information. Intellectual property is the work produced by a person or an organization using the mind and creativity. Intellectual Property Rights (IPR), are the rights of a person or an organization on intellectual property. Commonly defined Intellectual Property Rights include patents, copyright, industrial design rights, trademarks, trade dress like visual appearance of a product or its packaging, and trade secrets.
- ❖ Hacking may be described as having unauthorized access to someone's computer or computer network for stealing resources such as password or confidential files, or causing harm to network or system.
- ❖ Anti-virus is software that aims to protect your system against malicious and potentially unwanted programs. It is responsible for detecting these malicious programs by searching for them, and removing them to keep the system protected.
- ❖ A firewall aims at protecting the internal network of an organization, home, or individual from malicious traffic from external networks. A router or a computer (often dedicated to serve as a firewall) may be installed between external network and internal network for this purpose.
- ❖ Cybercrimes are the crimes related to the misuse of computer or Internet such as theft, fraud, forgery. The IT act defines cybercrime as *an unlawful act where in the computer is either a tool or a target or both.*
- ❖ Cyber laws are the laws for systematic use of e-resources, for example, e-business, and serve as a measure against illegal cyber-crime. Social network refers to the network of people interacting and sharing information such as their views, photographs, videos and any other information.

- ❖ Digital literacy refers to raising knowledge and awareness about technology such as desktop computers, smartphones, tablets, and other electronic gadgets. It also includes familiarity with software tools and Internet.

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