Chapter 11: Societal Impacts of IT

Solutions

Multiple-Choice Questions (MCQs)

1. ..... is a set of exclusive rights granted to developers to protect their work.
   a. Plagiarism b. Copyright
   c. ICT d. Patent

Ans. b

2. ..... helps in managing the implementation and administration of a website.
   a. Webmaster b. System Analyst
   c. Software Engineer d. Technical Writer

Ans. a

3. Which of the following refers to giving or selling licensed software to others for temporary use?
   a. Renting b. Piracy
   c. Counterfeiting d. Hacking

Ans. a

Very Short Answer Questions

4. List some domains benefitted by the emergence of ICT.

Ans. Some domains benefitted by the emergence of ICT are as follows:
- Education
- Healthcare
- Governance
- Design and manufacturing
- Business

5. What do you mean by Information Technology?

Ans. Information Technology refers to the process of creating, storing, exchanging, processing, and using information in its various forms, such as vocal, pictorial, textual, and numerical.

6. What is the function of a database administrator?

Ans. A database administrator has to design, implement, monitor, maintain, configure, and administer the databases of an organization.

Short Answer Questions

7. What do you mean by societal impacts of IT?

Ans. In the past few decades, the Information Technology (IT) has brought a revolution in the computing and communication fields. Today, thanks to the Internet, you can send or receive information almost about anything in just a few seconds from any corner of the world. The Internet also allows you to communicate with a person or a group of people simultaneously in a real-time environment. Innovations in the IT field have affected many areas of our daily life, such as education, entertainment, and health. The revolution in the IT sector has also created many new careers, such as software engineers, programmers, and hardware engineers.

For the progress of mankind, it is good that the constant evolution of the IT industry is opening up new channels for growth in almost every field. However, despite its numerous advantages, the IT sector poses serious problems in the form of ethical and other issues, arising due to the misuse of its assets and products.

8. List the benefits of ICT in education.

Ans. The following are the benefits of ICT in education:
- The use of computers in the education domain has simplified the learning of students.
- By using the information communication technologies, teachers of primary and secondary schools have made learning interactive and enjoyable.
- Generally, students find images and pictorial representation of concepts to be more interesting as compared to the theoretical knowledge. Therefore, teachers explain the complex topics in the simplified manner by using images, videos, and simulations.
- The use of ICT in education has brought positive impact on the success of students from various perspectives, such as knowledge, comprehension, practical and presentation skills.

9. List the guidelines to avoid plagiarism.

Ans. You should follow the following guidelines to avoid plagiarism:
- You should have a clear understanding of plagiarism and its consequences so that you can stop unintentional plagiarism.
- Identify the sources of information that you are going to include in your work.
- Collect all kinds of sources of information, such as books, magazines, journals, and websites.
- If you need to copy a portion from someone's work, ensure to enclose the copied portion in quotes and state its source.

Long Answer Questions

10. Describe the different forms of software piracy.

Ans. The following are forms of software piracy:
- **Softlifting:** Purchasing a licensed copy of software and uploading it on several computers by violating the software license terms and conditions.
- **Uploading and downloading:** Creating duplicate copies of the licensed software or uploading and downloading it from the Internet.
- **Software counterfeiting:** Illegally selling and making replicas of the licensed or copyrighted software.

- **Hard disk loading:** Installing an illegal copy of software on the hard disk of a personal computer.
- **Renting:** Giving or selling licensed software to other persons for temporary use.

11. Explain the laws formulated to restrict software piracy.

Ans. The following are the three types of laws formulated to restrict software piracy:

- **Copyright:** Refers to a set of exclusive rights granted to the developer or author to protect their work. The copyright law enables the author to protect his/her intellectual property from being pirated.
- **Patent:** Refers to a set of exclusive rights, which are granted by the national government to a developer or owner of an intellectual property for protecting his/her, intellectual property. You cannot use a patented intellectual property without getting a license from its patent holder.
- **Trademark:** Refers to the registered word or logo of an organization, which indicates the identity of that organization and the fact that the work is the property of that organization.

12. Discuss the different types of career opportunities available in the IT sector.

Ans. The following are some important careers in the IT sector:

- **Programmer/Analyst:** Implements the computer information system and develops software for the system using programming languages
- **Database Analyst:** Designs and develops the information flow model and database architecture
- **Database Administrator (DBA):** Designs, implements, monitors, maintains, configures, and administers the databases of an organization
- **Hardware Engineer:** Arranges and configures the hardware parts of a computer
- **Web Developer/ Multimedia Developer:** Develops multimedia content for website. Multimedia developers use the programming and designing tools, such as Macromedia Flash and Dreamweaver to develop interactive and attractive applications
- **Help Desk Executive:** Provides support to customers and solves their software-related problems either personally or on telephone
- **Webmaster:** Manages the implementation and administration of a website
- **Information System (Technology) Manager:** Handles the interior IT architecture (complete setup) of an organization. The IT managers handle various aspects of the IT department, such as databases, operating systems, networks, technical support, computers, and server maintenance
- **Network Administrator:** Manages Local Area Network (LAN) of an organization.
- **System Analyst:** Analyzes the business requirement and then recommends appropriate software and hardware to meet those requirements
- **Networking Engineer:** Implements various network settings, such as LAN and WAN for an organization
- **Network Security Analyst:** Implements and maintains the network and security policies
- **Computer Programmer:** Develops programs to interact directly with an operating system
- **Software Engineer:** Designs and develops, programs for computer systems and software applications
- **System Administrator:** Manages all the computer and operating systems of an organization
- **Technical Writer:** Manages documentation of hardware and software for a particular organization or for third-party vendors
- **Web Programmer:** Develops software applications and websites

Application-Oriented Questions

1. Match the following:

a.	Softlifting	:	i.	Installing an illegal copy of software on the hard disk of a personal computer
b.	Uploading and downloading	:	ii.	Illegal selling and making replicas of licensed or copyrighted software
c.	Software counterfeiting	:	iii.	Purchasing a licensed copy of software and uploading it in several computers by violating the software license terms and conditions
d.	Hard disk loading	:	iv.	Creating copies of licensed software or uploading and downloading the software from the Internet

Ans.

a.	Softlifting	:	iii.	Purchasing a licensed copy of software and uploading it in several computers by violating the software license terms and conditions
b.	Uploading and downloading	:	iv.	Creating copies of licensed software or uploading and downloading the software from the Internet
c.	Software counterfeiting	:	ii.	Illegal selling and making replicas of licensed or copyrighted software
d.	Hard disk loading	:	i.	Installing an illegal copy of software on the hard disk of a personal computer