Chapter 4: Operating Systems

Assignment Solutions

Multiple-Choice Questions (MCQs)

1. Which one of the following provides access to all the active applications by maintaining a row of open application title boxes?
   a. Title bar
   b. Home directory
   c. Bottom bar
   d. None of the above

Ans. c

2. Which one of the following is a collection of icons representing various operations that can be carried out within an application?
   a. Buttons
   b. Menu
   c. Toolbar
   d. None of these

Ans. c

3. The topmost bar in any application window is known as:
   a. Status bar
   b. Tool bar
   c. Title bar
   d. Menu bar

Ans. b

4. Which of the following is a picture that can be displayed on your desktop?
   a. Shortcut
   b. Wallpaper
   c. Top menu panel
   d. None of these

Ans. b

5. Which one of the following can contain files as well as subfolders?
   a. File
   b. Folder
   c. Application
   d. None of these

Ans. b

Very Short Answer Questions

Fill in the Blanks

6. ..... resides below the title bar and contains a number of menus such as File, Edit, and View.

Ans. Menu bar

7. The Search for Files utility helps in searching files and folders. This utility can be started by choosing ..... from the ..... menu.

Ans. Search for Files option from the Places menu

8. When you delete any file from your system, it is moved to the ..... folder.

Ans. Trash

9. ..... refers to the folder where all the personal files of the user are kept.

Ans. Home

10. ..... bar displays the name or title of the currently open window.

Ans. Title

State Whether True or False

11. In the BOSS Linux operating system, the desktop is subdivided into five workspaces.

Ans. False

12. RAM stands for Random Access Memory.

Ans. True

13. The Title bar is located at the bottom of the application window.

Ans. False

14. When you press the Ctrl key, you notice that the underlined letter of the menu option is activated.

Ans. False

15. The combination of the Alt and F4 keys (Alt+F4) is used for closing an application.

Ans. True

16. One can easily restore deleted files and folders from the Trash folder.

Ans. True

17. The right section of the top bar of the GNOME desktop contains the Applications menu.

Ans. False

18. You can use the Shut Down option available in the user name menu to shut down your computer.

Ans. True

19. The volume control icon resides at the right side of the top bar.

Ans. True

20. The language keyboard switch area resides at the right side of the top bar.

Ans. True

Short Answer Questions

21. What is the term for the first directory in a multilevel directory structure?

Ans. Root directory

22. What happens when we double-click a folder?

Ans. When we double-click a folder, its files and sub-folders appear.

23. What is the use of a scroll bar?

Ans. A scroll bar appears when the entire application is not visible due to the small size of the application window. You can use keyboard movement keys or mouse to move scroll bars up/down or left/right to display hidden parts of the application.

24. What do you understand by the term 'booting'?

Ans. Booting is the process of loading OS files into the PC's memory. It is the very first thing that happens when you press the power button of your PC.

25. Which shortcut key from the keyboard is used to rename a file?

Ans. F2

26. How is a new folder created?

Ans. You can create a new folder on a storage drive by performing the following steps:

1. Double-click the Home icon located on the desktop. A window appears.
2. Click File Create Folder. Alternatively, you can right-click an empty area on the Computer window and select Create Folder from the Context menu. A new folder appears in the window.
3. Type the name of the new folder, and then press the ENTER key. The new folder appears with the name provided by you.

27. Define wildcards and its types.

Ans. A wildcard is a special character that is used to match multiple files and directories simultaneously in a search. Two types of wildcards are used in Linux:

- **? (Question Mark):** Represents a single character that can occupy a position in a filename or file name extension.
- **(Asterisk):** Represents one or more characters.

28. List the options of the Applications menu of BOSS Linux.

Ans. The Applications menu consists of the following default items: Accessories, Games, Graphics, Internet, Office, Programming, Sound & Video, System Tools, and Universal Access.

29. Mention any five features of the GNU Linux operating system.

Ans. The following are some features of the GNU Linux operating system:

- Open-source operating system
- Virus-free
- Stable, long-running operating system
- Multiple workspaces
- No constant rebooting

30. Write the steps to shut down a computer.

Ans. The steps to shut down a computer are as follows:

1. Select the user name menu.
2. Select the Shut Down option.

Long Answer Questions

31. Discuss the directory structure of the Linux operating system.

Ans. In the BOSS Linux OS, all the files related to the BOSS Linux are grouped together and kept in a single directory. A file is a named collection of data stored on the storage device. To group similar types of files together, we create directories and place those files in that directory. A directory may contain both the files and other subdirectories. This type of organized file structure is known as a multi-level or hierarchical directory structure.

32. Write down the steps to search a file named sample.doc.

Ans. The steps to search a file named sample.doc are as follows:

1. Click the Places menu and Click Search for Files. The Search for Files window opens.
2. In the Name Contains box, type sample.doc.
3. Click the Look in Folder down arrow and select a drive, or click the others option to specify where to search.
4. Click the Find button.

33. Write down the steps to rename a file abc.doc as xyz.doc.

Ans. The steps to rename a file abc.doc as xyz.doc are as follows:

1. Select the abc.doc file that you want to rename.
2. Select the File menu from the menu bar and click the Properties option. The Properties dialog window appears.
3. Type a new name xyz.doc in the Name box of the Properties dialog box.
4. Click the Close button at the bottom right side of the window.

34. What happens to the files and folders that you delete from the disk drive of your computer?

Ans. Deleted files are stored in the Trash folder. These files are not removed from your computer until you empty the Trash folder. It means that you can restore the files if they have not been deleted from the Trash folder. However, it is suggested to empty the Trash folder periodically to free up the disk space.

35. List any four functions of an operating system.

Ans. The functions of an OS are as follows:

- **Processor management:** The management of a processor (or CPU) by an operating system is known as processor management. Processor management is also referred to as CPU scheduling.
- **Device management:** Memory management is the process of allocating memory to different programs and freeing up memory space when it is no longer needed by the programs.
- **Memory/storage management:** It can be defined as the process of activating and controlling peripheral devices (such as mouse, printer, or keyboard) attached to a computer.
- **Information/file management:** The operating system manages and protects the information and resources available on the computer system. It ensures that the owner of the information is able to control that information, and that two concurrent resources should not interfere with each other.

36. Discuss any four components of the GNOME desktop.

Ans. The four components of the GNOME desktop are as follows:

1. **Desktop:** Refers to an area of the screen in a GUI on which different files, folders, and icons (for example, application launchers) are placed for quick and easy access.
2. **Bars:** Refer to the two long bars that appear on the top and bottom of the desktop. These bars display icons, such as application launchers and indicators (for example, date and time, weather, and the name of the currently logged-in user). By default, the top panel displays the main Menu bar.
3. **Workspace:** Allows you to group similar tasks. In the BOSS Linux operating system, the desktop is subdivided into four workspaces. You can easily switch from one workspace to another whenever you want.
4. **Window:** Refers to a box or frame that appears whenever you open a program, file, or folder. There are generally three types of the window—the application window, the document window, and the dialog box.

37. Write short notes on the following:

a. Computer b. Trash
c. Workspace d. Help

Ans. a. **Computer:** A computer is an electronic device which is used to perform a variety of operations on the basis of a set of instructions called program. It takes input from the user in the form of data or instruction. On receiving the instructions from the user, the computer processes the data and generates some output and displays it to the user.

b. **Trash:** The Trash folder stores all your deleted files. When you delete any file on your PC, it does not get permanently deleted; instead, it is taken to the Trash folder. Therefore, if by mistake you have deleted an important file, you can find it in the Trash folder and restore it.

c. **Workspace:** The workspace allows you to group similar tasks. In the BOSS Linux OS, the desktop is subdivided into four workspaces. You can easily switch from one workspace to another whenever you want.

d. **Help:** It refers to the online help manual about the BOSS Linux operating system.

Application-Oriented Questions

1. Match the following:

a.	Hardware	i.	Solves the computing problems of users
b.	Operating system	ii.	Person who uses application software on the computer system
c.	Application program	iii.	Components that we can see and touch
d.	Humanware	iv.	Controls and coordinates the use of hardware resources

Ans.

a.	Hardware	iii.	Components that we can see and touch
b.	Operating system	iv.	Controls and coordinates the use of hardware resources
c.	Application program	i.	Solves the computing problems of users
d.	Humanware	ii.	Person who uses application software on the computer system

2. In the following table, some features of an operating system are given. Explain these features under the Description column.

Features of OS	Description
Processor management	
Device management	
File management	
Memory management	

Ans.

Features of OS	Description
Processor management	The management of a processor (or CPU) by an operating system is known as processor management.
Device management	It can be defined as the process of activating and controlling peripheral devices (such as mouse, printer, or keyboard) attached to a computer.
File management	The operating system manages and protects the information and resources available on the computer system.

Features of OS	Description
Memory management	Memory management is the process of allocating memory to different programs and freeing up memory space when it is no longer needed by the program.

3. In the following table, some components of the GNOME Desktop under the GNOME components column are mentioned.

   Explain these components under the Description column.

GNOME components	Description
Desktop	
Bars	
Workspaces	
Windows	

Ans.

GNOME components	Description
Desktop	Refers to an area of the screen in a GUI on which different files, folders, and icons (for example, application launchers) are placed for quick and easy access
Bars	Refer to the two long bars that appear on the top and bottom of the desktop
Workspaces	Allow you to group similar tasks
Windows	Refers to a box or frame that appears whenever you open a program, file, or older