

<b>Name:</b> _____	<b>ID No.</b> _____
<b>Date :</b> _____	<b>Section :</b> _____

### Solution Key to Problem Set 5

#### 1. MULTIPLE CHOICES (MCQs)

1)

Which of the following processing techniques allows utilizing special processors for specialized chores?

- coprocessing
- Parallel processing
- Multitasking
- Multiprocessing

2)

\_\_\_\_\_ allows a user to perform specific tasks on the computer, such as writing a letter or surfing the Web.

- Graphical User Interface
- Application software
- System software

3)

The DOS command \_\_\_\_\_ prepares a disk for use, erasing what was there before.

- del
- format
- dir
- copy

4)

Which of the following is an operating system designed for handheld PCs or mobile devices?

- Windows Mobile
- Palm OS
- Symbian OS
- all of the above

5)

The operating system most commonly used on Sun computers is \_\_\_\_\_.

- Mac OS
- OS/2
- Solaris

6)

Which of the following is the most recent personal version of Windows?

- Windows XP
- Windows Me
- Windows Vista
- Windows 7

7)

\_\_\_\_\_ are designed to help you recover from a major computer problem, such as rolling back your hard drive to an earlier state.

- Recovery utilities
- Uninstall utilities
- File compression programs
- Diagnostic programs

8)

The operating system is the go-between, "meshing" the user's application program with the resources of the system. In the lecture I explained "meshing" as a pattern of interlinking pairs of nodes. Suppose you have 25 nodes, how many interlinks in total (T) will exist?

- 25
- 50
- 150
- 300

9)

Windows Embedded is designed for \_\_\_\_\_.

- mainframes and supercomputers
- personal computer
- non-personal computer-based devices
- non of the above

10)

All of the following are document data file extensions except

- .doc
- .bmp
- .xls
- .ppt

## 2. TRUE OR FALSE (T / F)

1)

The process of placing items in buffer so they can be retrieved by appropriate device is called "multitasking".

True

False

2)

Most operating systems today use a command line interface.

True

False

3)

Unix is an open source operating system available for free via the Internet.

True

False

4)

In the future, operating systems may be driven primarily by a voice interface.

True

False

5)

Many utilities are built into operating systems as well as being available as stand-alone programs.

True

False

6)

NetWare is one of the most widely used operating system on PC-based networks.

True

False

### 3. QUESTIONS

- (a) **Identify the main functions of an operating system? In which aspects do various operating systems differ? What are the key trends in the future of operating systems?**

An operating system, such as Windows, Solaris and Mac OS etc., is the go-between, “meshing” the user’s application program with the resources of the system. Its primary responsibilities are management and control. To carry out these responsibilities, the main functions an operating system does are:

- Booting the computer and configuring (input and output) devices.
- Interfacing with users.
- Managing and monitoring resources and jobs.
- File management (logical and physical)
- Security and recoverability.

Operating systems mainly differ in the following aspects:

- Command line vs. graphical user interface.
- Personal vs. network operating systems.
- Types and numbers of processors supported
- Support for virtualization and other technologies

Manufacturers of operating systems are developing OS for the future. The key trends are: OS will likely to:

- continue to become more user-friendly;
- eventually be driven primarily by a voice interface;
- be used to access an increasing number of Internet resources and applications, such as Web based software and services;
- support more synchronization between an individual’s various computing devices, such as a desktop PC, handheld PC, and smart phone.

- (b) **Explain the concept of “utilities programs.”**

Utilities programs are type of systems programs written to perform specific system tasks, usually related to managing (e.g. file management programs, disk management programs, uninstall utilities, etc.) or maintaining the system (e.g. file compression programs, antivirus programs, etc.) Many utilities are built into operating systems as well as being available as stand-alone programs.

- (c) State and briefly explain the various sources of help available to application software users. Give at least one example of each source.

**Application-based help:** This is available from within a program, such as Microsoft Excel (when you press F1 Key or click on Help in the Menu Bar) and features a “Table of Contents,” “Index,” and “Search.”

**Web-based help:** This is available via software manufacturer Web sites such as [www.microsoft.com](http://www.microsoft.com), online tutorials, and discussion groups.

**Offline help:** This is available via computer books, periodicals such as PC Magazine, self-teaching video tutorials, etc.

- (d) Explain the concept of “buffer.”

One of the processing techniques for increased efficiency in operating systems is memory management, such as the use of virtual memory. Virtual memory is implemented via buffering and spooling. A buffer is an area created either in the RAM or on the hard drive to hold input and output data on their way in or out of system. The process of placing items in buffer so they can be retrieved by appropriate device, e.g. a printer, is called spooling.