IMP 1 MARKS QUESTIONS (UNIT WISE)
Sub: CS – 22 : Operating Systems Concepts With Unix / Linux

UNIT 1

1. Define Round Robin.

Round-robin scheduling is a preemptive scheduling algorithm in which a specific time is provided to execute each process. This specific time is called time-slice (Quantum).

2. Give any four name of OS type.

batch operating systems, multi-programming operating systems, network operating systems, real-time operating systems, distributed operating systems, and mobile operating systems.

3. Define Thread.

A thread refers to a single sequential flow of activities being executed in a process; it is also known as the thread of execution or the thread of control. Now, thread execution is possible within any OS's process. Apart from that, a process can have several threads.

4. Define OS.

An operating system (OS) is the program that, after being initially loaded into the computer by a boot program, manages all of the other application programs in a computer.

5. Which module gives control of the CPU to the process selected by the short-term scheduler?

dispatcher

6. The processes that are residing in main memory and are ready and waiting to execute are kept on a list called_____.

ready queue

7. Full form of FCFS and SJF.

First Come First Serve and Shortest Job First.

8. The interval from the time of submission of a process to the time of completion is termed as _____.

turnaround time

9. The memory allocated from secondary storage is called _____.

Auxiliary Memory

10. Which CPU Scheduling algorithm automatically executes queued at quantum?

Round robin

11. When the process is halt due to IO interruption is called _____.

interrupt handler

12. Full form of BOS.

Batch Operating System

13. Full form of TSOS.

Time-sharing Operating System

14. Full form of RTOS.

Real-Time Operating System

15. Full form of PCB.

Process Control Block

16. Full form of NOS.

Network Operating System

17. Full form of PID. / PPID./ GID

Process ID / Parent Process ID / Group ID

18. List Process Scheduling Policies.

FCFS, SJF, Round Robin, Priority Scheduling

19. During I/O operation, a process will move in _____ state.

ready state

UNIT 2

1. Define Deadlock.

Deadlock in OS refers to a situation where more than one or two processes or threads are not able to proceed because each is waiting for the other to release a resource.

2. Define Deadlock prevention.

Deadlock prevention is a proactive approach employed by operating systems to eliminate or avoid the formation of deadlocks altogether. By carefully managing resource allocation and process execution, deadlock prevention techniques aim to break the necessary conditions for deadlocks to occur.

3. Define Paging.

Paging is a storage mechanism used in OS to retrieve processes from secondary storage to the main memory as pages.

4. Define Frame.

In terms of physical memory, it is a fixed sized block in physical memory space, or a block of central storage.

5. Define Virtual Memory.

Virtual memory is a common technique used in a computer's operating system (OS). Virtual memory uses both hardware and software to enable a computer to compensate for physical memory shortages, temporarily transferring data from random access memory (RAM) to disk storage.

6. Full form of PDT.

Partition Descriptive Table

7. full form of MMT,SMT,PMT.

Memory-Map Table, Simultaneous Multi-threading , Page Map Table

8. List out Types of Memory Management.

Contiguous Memory Management and Non-Contiguous Memory Management

9. Define Internal Fragmentation.

Internal fragmentation occurs when the memory is distributed into fixed-sized blocks. If the memory allocated to the process is slightly larger than the memory demanded, then the difference between allocated and demanded memory is known as internal fragmentation.

10. Define External Fragmentation.

External fragmentation occurs whenever a method of dynamic memory allocation happens to allocate some memory and leave a small amount of unusable memory.

11. Define Best Fit, First Fit and Worst Fit.

Worst-fit takes memory from the largest free region, giving the process the most space to grow. As a general rule, first-fit is fastest, but increases fragmentation. Best-fit can result in small unusable holes, but in general studies have shown that it can produce better utilization than worst-fit.

12. Define Logical Address & Physical Address.

The Logical Address is generated by the CPU while the program is running and the Physical Address is the location inside the main memory

13. Define Base Register.

The base register holds the smallest legal physical memory address.

UNIT 3

1. Define cd command.

Linux cd command is used to change the current working directory (i.e., in which the current user is working). The "cd" stands for 'change directory. ' It is one of the most frequently used commands in the Linux terminal.

2. _____ command is used to remove empty directory.

rmdir

3. Define shell.

A shell is a type of computer program called a command-line interpreter that lets Linux and Unix users control their operating systems with command-line interfaces.

4. Define ps command.

The ps command can also be used to monitor memory usage of individual processes.

5. Define pipe (|) symbol.

A pipe is a form of redirecting output to another destination for further processing. It provides a temporary connection between two or more commands, programs or processes.

6. The Numeric value of read permission in UNIX is _____.

4

7. Which command is generally used to change file permission?

chmod

8. Which command is used to create symbolic link between files?

ln

9. Define touch command.

The touch command in Linux is used to create a new empty file and to change the timestamps of existing files.

10. Who invented Bourn Shell?

Stephen Bourne at Bell Labs in 1979.

11. Which command gives the details of the user those who are currently logged.

who

12. Which command is used to print the text in shell?

echo

13. Unix was developed at _____.

Bell Labs research center in 1969.

14. C Shell developed by _____.

Bill Joy at the University of California at Berkeley in the late 1970.

15. _____ command provides facilities like calculator.

bc

16. By Default, cal command display_____.

current month calendar

17. Which command is used to changing ownership of file?

chown

18. Which command is used to compare two sorted file line by line?

comm command

19. Full form of GREP, EGREP,FGREP.

global regular expression print (GREP) , Extended global regular expression print (EGREP), fixed global regular expression print (FGREP)

20. Linux was developed by _____.

Linus Torvalds in 1990.

21. Which command is used to display line from beginning of the file.

head

22. Which command is used to display present working directory?

pwd

23. List the types of permissions in UNIX.

Read, Write, Execute

24. List the tools for mathematical calculation.

bc and expr

25. Give the full form of pwd.

Present Working Directory

UNIT 4

1. Define variable in shell.

Variables are a fundamental concept in shell scripting that allow you to store and manipulate data. In a shell script, a variable is a container that holds a value, such as a string, number, or file path.

2. Define Keyword in shell.

Keywords are the words whose meaning has already been explained to the shell. For ex: if, then, else, elif

3. Define System Variable in shell.

Created and maintained by Linux bash shell itself. This type of variable is defined in CAPITAL LETTERS. You can configure aspects of the shell by modifying system variables such as PS1, PS2, PATH, LOGNAME, HOME,SHELL etc.

4. Define set and unset.

The set command in Linux is a built-in shell command that's primarily used to set or unset the values of shell options and positional parameters. It's a versatile command that can be used in a variety of ways, depending on the options and parameters you specify.

5. Define echo.

The echo command is a way to communicate with your Linux terminal. It allows you to send text, variables, and special characters to the standard output, which is usually the terminal screen. The echo command is like a messenger that delivers your words to the terminal.

6. Define read keyword.

The read command reads one line from standard input and assigns the values of each field in the input line to a shell variable using the characters in the IFS (Internal Field Separator) variable as separators.

7. Define $?, $*,$#,$!

$? exit status variable.

$* represents each command-line argument as a single string.

$# stores the total number of arguments.

$! a special shell variable that stores the PID of the most recently executed background process.

8. Define $1,$2,$3.

The most important special, built-in variables are called positional parameters. These hold the command-line arguments to scripts when they are invoked. Positional parameters have the names 1, 2, 3, etc., meaning that their values are denoted by $1, $2, $3, etc.

9. [ ] is used to declare condition in unix. (True/False)

True.

10. echo "$0" returns _____

Name of the File.

11. Full form of GUI & CUI.

Graphical User Interface and Command-line interface

UNIT 5

1. Define LILO.

Linux Loader. LILO is the most commonly used boot loader for Linux. It manages the boot process and can boot Linux kernel images from floppy disks, hard disks or can even act as a boot manager for other operating systems.

2. Define GRUB.

GRUB (also known as GNU GRUB or GNU Grand Unified Bootloader) is a bootloader and boot manager for Linux and other Unix-based OS.

3. GPL stands for.

GNU General Public License

4. LDAP stands for.

Lightweight directory access protocol

5. Write a command to enable ubuntu's firewall.

sudo ufw allow from 203.0.113.0 / 24

6. What is the meaning of sudo.

superuser do.

The sudo command allows you to run programs with the security privileges of another user (by default, as the superuser). It prompts you for your personal password and confirms your request to execute a command by checking a file, called sudoers , which the system administrator configures.

7. Full form of KDE.

K Desktop Environment.

8. Full form of SSL.

Secure Sockets Layer

9. Write the syntax of install any package.

sudo apt-get install <packagename>

10. write the syntax of uninstall of any package.

sudo apt-get remove <package_name>

11. Use of apache server.

Apache is a web server software that is responsible for accepting HTTP requests from visitors and sending them back the requested information in the form of web pages

12. Full form of GNOME.

GNU Network Object Model Environment

13. Define FTP.

File Transfer Protocol (FTP) is a TCP protocol for downloading files between computers.

14. Define WINE.

“Wine Is Not an Emulator”

Wine is a free and open-source compatibility layer to allow application software and computer games developed for Microsoft Windows to run on Unix-like operating systems.

15. Define Firewall.

ufw - Uncomplicated FirewallThe default firewall configuration tool for Ubuntu is ufw. Developed to ease iptables firewall configuration, ufw provides a user-friendly way to create an IPv4 or IPv6 host-based firewall. ufw by default is initially disabled.

16. Which service is used to resolve (translate) hostname to internet protocol (IP) addresses and vice versa.

DNS server

17. What is full form of WINE.

"Wine Is Not an Emulator"

18. Who developed WINE.

Bob Amstadt & Eric Youngdale in 1993.

19. Which service is used for directory services authentication?

LDAP

20. Which command is used to add the user in Linux?

useradd command

21. Which command is used to delete the user.

userdel command

22. Full form of LILO.

Linux Loader

23. Full form of GRUB.

grand unified bootloader

24. Full form of MBR.

Master Boot Record

25. Define kernel.

The kernel is the most important part of the operating system. It is the primary interface between the hardware and the processes of a computer. The kernel connects these two in order to adjust resources as effectively as possible.

26. Define runlevel.

A runlevel is a preset operating state, defined as a single integer that could range from zero to six, in a Unix or Linux-based OS.

28. Full form of DNS.

Domain Name System