

Multiple choice questions

1. Which is the core of an Operating System?

- A) Shell
- B) Kernel
- C) Compiler
- D) Loader

Answer: B

2. Which interface allows user programs to request OS services?

- A) Interrupt
- B) System Call
- C) BIOS
- D) Cache

Answer: B

3. A process is:

- A) Program in execution
- B) Compiler
- C) File
- D) Thread

Answer: A

4. IPC stands for:

- A) Internal Process Control
- B) Inter Process Communication
- C) Input Process Control
- D) Internet Protocol Communication

Answer: B

5. Which is used for process synchronization?

- A) Semaphore
- B) Linker
- C) Loader
- D) Assembler

Answer: A

6. FCFS scheduling stands for:

- A) First Come First Serve
- B) Fast CPU First Served
- C) First CPU First
- D) File Control

Answer: A

7. Round Robin scheduling uses:

- A) Priority
- B) Time Quantum
- C) Semaphore
- D) Mutex

Answer: B

8. Which condition is necessary for deadlock?

- A) Mutual exclusion
- B) Paging
- C) Caching
- D) Spooling

Answer: A

9. Banker's algorithm is used for:

- A) Scheduling
- B) Deadlock avoidance
- C) Paging
- D) Segmentation

Answer: B

10. Paging eliminates:

- A) Internal fragmentation
- B) External fragmentation
- C) Deadlock
- D) Starvation

Answer: B

11. Virtual memory commonly uses:

- A) Demand Paging
- B) FIFO only
- C) RAID
- D) Spooling

Answer: A

12. Thrashing occurs due to:

- A) Excessive paging
- B) Disk failure
- C) CPU overheating
- D) Compilation

Answer: A

13. RAID is mainly used for:

- A) Reliability
- B) Printing
- C) Scheduling
- D) Compilation

Answer: A

14. Linux is a:

- A) Closed-source OS
- B) Open-source OS
- C) Database
- D) Compiler

Answer: B

15. Which command lists files?

- A) pwd
- B) ls
- C) cd
- D) rm

Answer: B

16. Which command creates a directory?

- A) mkdir
- B) rmdir
- C) touch
- D) cat

Answer: A

17. Which command shows current directory?

- A) pwd
- B) who
- C) ps
- D) mv

Answer: A

18. Which command changes file permissions?

- A) chmod
- B) cp
- C) grep
- D) echo

Answer: A

19. A thread is a:

- A) Heavyweight process
- B) Lightweight process
- C) File
- D) Program

Answer: B

20. Disk scheduling improves:

- A) Disk performance
- B) RAM size
- C) CPU speed
- D) Compilation

Answer: A

Fill in the Blanks

1. The core of an operating system is called the _____. Answer: Kernel
2. _____ is used for synchronization. Answer: Semaphore
3. FCFS stands for _____. Answer: First Come First Serve
4. RR scheduling uses a _____. Answer: Time Quantum
5. A running program is called a _____. Answer: Process
6. _____ removes external fragmentation. Answer: Paging
7. _____ memory allows larger programs. Answer: Virtual
8. Banker's algorithm avoids _____. Answer: Deadlock
9. Linux is an _____ operating system. Answer: Open Source
10. The mkdir command creates a _____. Answer: Directory

11. The ls command lists _____. Answer: Files
12. pwd displays the _____ directory. Answer: Current
13. chmod changes file _____. Answer: Permissions
14. IPC means Inter-Process _____. Answer: Communication
15. RAID is used for disk _____. Answer: Reliability
16. Demand paging is used in _____ memory. Answer: Virtual
17. A thread is a lightweight _____. Answer: Process
18. CPU scheduling selects the next _____. Answer: Process
19. External fragmentation occurs in _____ allocation. Answer: Contiguous
20. rm command removes _____. Answer: Files

Short Answer Questions

1. Define Operating System.
2. What is a system call?
3. Define process.
4. What is a thread?
5. What is a semaphore?
6. Define deadlock.
7. What is paging?
8. What is virtual memory?
9. What is RAID?
10. Write any two Linux commands.