

1. What is the primary purpose of an Operating System?

- a) To manage hardware resources
- b) To play games
- c) To run Microsoft Office
- d) To browse the internet

2. Which of the following is not a type of Operating System?

- a) Time-Sharing OS
- b) Batch OS
- c) Multithreading OS
- d) Real-Time OS

3. What is the core of an Operating System?

- a) Kernel
- b) Shell
- c) File System
- d) GUI

4. What does GUI stand for?

- a) General User Interface
- b) Graphical User Interface
- c) General Utility Interface
- d) Graphical Utility Interface

5. Which OS is open-source?

- a) Windows
- b) macOS
- c) Linux
- d) iOS

6. Which of these is a Mobile Operating System?

- a) Ubuntu
- b) Fedora
- c) Android
- d) FreeBSD

7. What type of OS processes tasks within strict time constraints?

- a) Time-Sharing OS
- b) Distributed OS
- c) Real-Time OS
- d) Batch OS

8. Which component of the OS interacts directly with hardware?

- a) File Manager
- b) Kernel
- c) CLI
- d) Shell

9. What is the function of the Process Manager?

- a) Manage hardware devices
- b) Create and schedule processes
- c) Allocate memory
- d) Manage files

10. What does multitasking in OS mean?

- a) Running a single task
- b) Running multiple tasks simultaneously
- c) Running tasks one after the other
- d) Running no tasks

11. What is the main advantage of a Distributed Operating System?

- a) Low cost
- b) Improved resource sharing
- c) Increased complexity
- d) Limited scalability

12. Which of these file systems is used by Windows?

- a) ext4
- b) NTFS
- c) APFS
- d) FAT16

13. Which of these is an example of a Real-Time Operating System?

- a) Windows 10
- b) VxWorks
- c) macOS
- d) Fedora

14. What is virtual memory?

- a) Physical storage used as RAM
- b) Extra CPU cores
- c) Faster cache memory
- d) A type of hard disk

15. What type of kernel does Linux use?

- a) Microkernel
- b) Hybrid kernel
- c) Monolithic kernel
- d) None of the above

16. Which OS is designed specifically for IoT devices?

- a) Windows Server
- b) FreeRTOS
- c) Chrome OS
- d) Ubuntu

17. What does CLI stand for?

- a) Clear Line Interface
- b) Command Line Interface
- c) Code Level Interface
- d) Client Level Interface

18. What is the main role of device drivers in an OS?

- a) Control processes
- b) Manage hardware
- c) Display the user interface
- d) Organize files

19. Which OS is most widely used on personal computers?

- a) Linux
- b) macOS
- c) Windows
- d) Android

20. What does paging in memory management do?

- a) Splits processes into equal-sized pages
- b) Merges small processes
- c) Swaps memory addresses
- d) Converts data to binary

21. What is the file extension of an executable file in Windows?

- a) .txt
- b) .exe
- c) .jpg
- d) .bat

22. Which mobile OS is based on Linux?

- a) iOS
- b) Android
- c) Windows Mobile
- d) HarmonyOS

23. What type of OS is used in servers?

- a) Embedded OS
- b) Network OS
- c) Mobile OS
- d) Time-Sharing OS

24. What is the latest version of Android OS as of 2025?

- a) Nougat
- b) Pie
- c) Android 14
- d) Marshmallow

25. What is the primary function of a firewall in OS security?

- a) Manage files
- b) Block unauthorized access
- c) Enhance graphics
- d) Optimize system speed

26. What does the OS use to separate memory areas of different processes?

- a) Paging
- b) Segmentation
- c) Multitasking
- d) Swapping

27. Which of these OS types is best suited for time-critical applications?

- a) Batch OS
- b) Distributed OS
- c) Real-Time OS
- d) Mobile OS

28. What is a thread in the context of an OS?

- a) A lightweight process
- b) A type of kernel
- c) A type of file system
- d) A hardware component

29. Which of these is not a kernel type?

- a) Microkernel
- b) Monolithic kernel
- c) Hybrid kernel
- d) Batch kernel

30. What is the primary purpose of a swap space in memory management?

- a) Store frequently used files
- b) Enhance CPU speed
- c) Provide additional memory for processes
- d) Manage I/O operations

31. Which OS uses the APFS file system?

- a) Windows
- b) macOS
- c) Linux
- d) Android

32. What is the main purpose of a bootloader?

- a) Load the OS into memory
- b) Display the GUI
- c) Manage network resources
- d) Store system logs

33. Which of these is an example of a distributed OS?

- a) Windows 11
- b) macOS Sonoma
- c) Google's cloud infrastructure
- d) Ubuntu

34. What does a hypervisor do?

- a) Manages virtual machines
- b) Runs kernel services
- c) Organizes files in the OS
- d) Allocates memory

35. What type of scheduler decides which process gets CPU time next?

- a) Long-term scheduler
- b) Short-term scheduler
- c) Medium-term scheduler
- d) Round-robin scheduler

36. Which OS component handles user authentication?

- a) File Manager
- b) Kernel
- c) Security Module
- d) Process Manager

37. What is the default file system for Linux?

- a) FAT32
- b) NTFS
- c) ext4
- d) HFS+

38. Which of these OS features enables multiple users to log in simultaneously?

- a) Multithreading
- b) Multitasking
- c) Time-Sharing
- d) Virtualization

39. What is the main function of a file system in an OS?

- a) Store and organize data
- b) Manage device drivers
- c) Allocate CPU resources
- d) Optimize process scheduling

40. Which Linux distribution is designed for penetration testing?

- a) Ubuntu
- b) Fedora
- c) Kali Linux
- d) CentOS

41. Which of these is a command-line OS?

- a) Windows
- b) DOS
- c) macOS
- d) Android

42. What is an interrupt in the context of an OS?

- a) A process that executes in the background
- b) A signal to the CPU to stop the current process
- c) A kernel error
- d) A type of memory

43. What is the role of a shell in an OS?

- a) Manage memory
- b) Provide a user interface
- c) Allocate resources
- d) Enhance graphics

44. Which OS is primarily used in Apple mobile devices?

- a) macOS
- b) iOS
- c) Android
- d) HarmonyOS

45. Which Windows version introduced the Start Menu?

- a) Windows XP
- b) Windows 7
- c) Windows 95
- d) Windows Vista

46. Which OS is optimized for edge computing?

- a) FreeBSD
- b) TinyOS
- c) EdgeX Foundry
- d) Windows Server

47. What is the function of the Task Manager in Windows?

- a) Manage files
- b) Monitor system performance
- c) Configure device drivers
- d) Create user accounts

48. Which Android version was the first to introduce Material Design?

- a) KitKat
- b) Lollipop
- c) Marshmallow
- d) Oreo

49. What is a bootable disk?

- a) A disk containing the OS
- b) A disk storing user data
- c) A disk for storing multimedia files
- d) A backup storage disk

50. Which OS is most commonly used for servers?

- a) Windows
- b) Linux
- c) Android
- d) macOS

51. What is spooling in OS terminology?

- a) Managing multiple CPU cores
- b) Handling I/O tasks efficiently
- c) Compressing memory
- d) Creating temporary storage

52. What does "open source" in OS mean?

- a) Free to use
- b) Source code is publicly available
- c) Licensed for commercial use
- d) Requires internet access

53. What is the primary interface of macOS?

- a) Terminal
- b) Finder
- c) Command Prompt
- d) File Explorer

MCQ Questions on Operating Systems (55 to 100)

55. What is a process in the context of an OS?

- a) A running instance of a program
- b) A hardware component
- c) A type of memory
- d) A type of kernel

56. What does multitasking allow an OS to do?

- a) Execute multiple programs simultaneously
- b) Switch off background processes
- c) Use multiple keyboards
- d) Load multiple OS versions

57. Which command is used to view files in a directory on Linux?

- a) dir
- b) ls

- c) list
- d) cd

58. Which of these OS features helps protect against malware?

- a) Device independence
- b) Multithreading
- c) Security and access control
- d) File system management

59. What is the purpose of the BIOS in a computer?

- a) Load the OS
- b) Manage processes
- c) Monitor system resources
- d) Execute applications

60. Which OS introduced the Spotlight search feature?

- a) Windows
- b) macOS
- c) Linux
- d) Android

61. What is the primary purpose of a task scheduler in an OS?

- a) Assign CPU time to processes
- b) Manage user authentication
- c) Display graphical interfaces
- d) Allocate memory

62. What does the ext4 file system stand for?

- a) Extended File System version 4
- b) External File System version 4
- c) Enhanced Type File System
- d) Extra Type File System

63. What does the command cd do in a CLI?

- a) Copy a file
- b) Delete a directory
- c) Change the current directory
- d) Create a directory

64. Which of these is not an OS process state?

- a) Running
- b) Waiting
- c) Debugging
- d) Ready

65. What is the function of a hypervisor in virtualization?

- a) Manage virtual machine creation
- b) Improve hardware speed
- c) Provide user authentication
- d) Debug system errors

66. What does "context switching" in OS mean?

- a) Switching between users
- b) Switching between processes
- c) Switching between storage devices
- d) Switching between file systems

67. Which OS is primarily used for cloud computing?

- a) macOS
- b) Chrome OS
- c) Linux
- d) HarmonyOS

68. What does FIFO stand for in process scheduling?

- a) First In First Out
- b) File Input File Output
- c) First Input First Output
- d) File Information Format Output

69. Which of the following is a microkernel-based OS?

- a) Linux
- b) Minix
- c) Windows XP
- d) FreeBSD

70. What is the main advantage of virtual memory?

- a) Faster hardware access
- b) Increased CPU speed
- c) Ability to run larger programs than physical memory allows
- d) Improved network speed

71. Which OS is designed for Apple computers?

- a) iOS
- b) macOS
- c) Linux
- d) Chrome OS

72. What does a firewall in an OS do?

- a) Manage file storage
- b) Prevent unauthorized network access
- c) Optimize system performance
- d) Control memory usage

73. Which OS feature allows simultaneous processing on multiple CPUs?

- a) Multithreading
- b) Multitasking
- c) Multiprocessing
- d) Multischeduling

74. What does "segmentation" in memory management refer to?

- a) Dividing memory into fixed-sized pages
- b) Dividing memory into variable-sized segments
- c) Swapping memory to disk
- d) Merging memory blocks

75. What is the role of an inode in a file system?

- a) Store file metadata
- b) Manage memory allocation
- c) Schedule processes
- d) Load the kernel

76. Which Linux command is used to create a new directory?

- a) mkdir
- b) touch
- c) newdir
- d) createdir

77. What does the process table in an OS contain?

- a) Information about active processes
- b) List of installed applications
- c) User login details
- d) Available hardware drivers

78. Which type of OS is used in medical devices?

- a) Batch OS
- b) Real-Time OS
- c) Mobile OS
- d) Distributed OS

79. What is the primary role of device drivers?

- a) Enhance system security
- b) Facilitate communication between OS and hardware
- c) Monitor system performance
- d) Manage virtual memory

80. Which of these is a mobile operating system?

- a) Fedora
- b) Ubuntu
- c) iOS
- d) FreeBSD

81. Which of the following is not an Android version name?

- a) Pie
- b) Lollipop
- c) Cakewalk
- d) KitKat

82. What is the maximum file size supported by FAT32?

- a) 2 GB
- b) 4 GB
- c) 8 GB
- d) 16 GB

83. Which command is used to terminate a process in Linux?

- a) end
- b) terminate
- c) kill
- d) stop

84. What does "thrashing" in an OS refer to?

- a) Excessive CPU usage
- b) Continuous swapping of processes between memory and disk
- c) Overloading of the file system
- d) Hardware overheating

85. What does a time-sharing OS enable?

- a) Real-time task processing
- b) Resource sharing among multiple users
- c) Dedicated system access
- d) Offline task execution

86. Which Linux distribution is best suited for beginners?

- a) Ubuntu
- b) Kali Linux
- c) CentOS
- d) Fedora

87. What does APFS stand for?

- a) Advanced Performance File System
- b) Apple File System
- c) Automated Partition File System
- d) Adaptive Performance File Storage

88. Which of these is an example of an embedded OS?

- a) FreeBSD
- b) TinyOS
- c) Windows 11
- d) Fedora

89. What is the function of the taskbar in Windows?

- a) Display system settings
- b) Provide quick access to applications
- c) Monitor hardware usage
- d) Store application logs

90. Which Windows command is used to display the directory structure?

- a) ls
- b) tree
- c) dir
- d) show

91. Which OS feature handles deadlock prevention?

- a) Memory Manager
- b) Deadlock Avoidance Algorithms
- c) CPU Scheduler
- d) File System

92. Which OS uses the HDFS file system?

- a) Linux
- b) macOS
- c) Windows
- d) Hadoop

93. What is the main purpose of the Scheduler in an OS?

- a) Assign tasks to CPU
- b) Manage file permissions
- c) Control network connections
- d) Optimize memory usage

94. Which OS is commonly used in robotics?

- a) Android
- b) ROS (Robot Operating System)
- c) Windows Server
- d) Fedora

95. What does "booting" a system mean?

- a) Installing an OS
- b) Restarting a system
- c) Loading the OS into memory
- d) Shutting down the system

96. Which OS is used in Google Chromebooks?

- a) Chrome OS
- b) Android
- c) Windows
- d) Ubuntu

97. What is the function of the Command Prompt in Windows?

- a) Run CLI commands
- b) Manage hardware settings
- c) Display graphics
- d) Perform automatic updates

98. Which Linux command is used to display the content of a file?

- a) ls
- b) cat
- c) view
- d) touch

99. Which OS concept involves "parent" and "child" processes?

- a) Kernel
- b) Process hierarchy
- c) File system
- d) Device drivers

100. What is the primary purpose of virtualization?

- a) Enhance graphics
- b) Run multiple OS on a single machine
- c) Reduce CPU load
- d) Simplify file management

The Future Track