YADAVA COLLEGE(AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE

OPERATING SYSTEMS

CLASS: **SEMESTER:**

UNIT I

1. What is the primary function of an operating system?
   a) Managing hardware resources b) Compiling code
   c) Designing applications d) Connecting to the internet
2. Which system is designed for time-critical tasks?
   a) Distributed system **b) Real-time system**
   c) Clustered system d) Mainframe system
3. Which of the following is a component of an operating system?
   a) System calls b) Compiler
   c) Web browser d) Database
4. What is a clustered system primarily used for?
   a) Mobile computing **b) High availability**
   c) Gaming d) Embedded control
5. Which system is typically used in mobile phones?
   a) Mainframe system **b) Handheld system**
   c) Clustered system d) Distributed system
6. What does system generation refer to in OS design?
   a) Creating user accounts b) Installing applications
   c) Tailoring OS to hardware d) Formatting hard drives
7. Which of the following is not a typical OS service?
   a) Program execution b) File manipulation
   c) Email sending d) Error detection

8. What is the role of system calls?

a) Provide GUI **b) Interface between user & hardware**

c) Manage databases d) Encrypt data

9. Which system is best suited for parallel processing?

a) Mainframe system **b) Multiprocessor system**

c) Real-time system d) Handheld system

10. What is the purpose of OS structure?

a) To define user interface **b) To organize system components**

c) To manage network protocols d) To compile programs

UNIT II

11. What defines a process in an operating system?

a) A hardware component **b) A running program**

c) A network protocol d) A memory block

12. Which operation is not typically performed on a process?

a) Creation b) Termination

c) Compilation d) Scheduling

13. What is inter-process communication used for?

a) File sharing **b) Process synchronization**

c) Memory allocation d) Thread creation

14. Which model supports multiple threads within a single process?

a) Single-threaded model **b) Multithreading model**

c) Distributed model d) Client-server model

15. What is a common threading issue?

a) Deadlock b) Paging

c) Segmentation d) Swapping

16. Which OS supports Java threads natively?

a) Linux **b) Windows 2000**

c) Solaris d) Android

17. What is the main benefit of multithreading?

a) Increased memory usage b) Faster compilation

c) Improved CPU utilization d) Reduced security

18. Which thread model maps many user threads to one kernel thread?

a) One-to-one **b) Many-to-one**

c) Many-to-many d) Two-level

19. What is the role of the thread scheduler?

a) Allocate memory b) Manage file systems

c) Decide thread execution order d) Encrypt data

20. Which of the following is a thread implementation in Java?

a) Runnable interface b) Thread pool

c) Fork-join **d) Thread class**

UNIT III

21. What is the goal of CPU scheduling?

a) Maximize throughput b) Minimize memory usage

c) Increase disk space d) Reduce power consumption

22. Which scheduling algorithm selects the shortest job next?

a) FCFS **b) SJF**

c) Round Robin d) Priority

23. What does FCFS stand for?

a) First Come First Served b) Fast CPU Function Scheduler

c) File Control Function System d) First Control File System

24. Which algorithm is best for time-sharing systems?

a) SJF **b) Round Robin**

c) FCFS d) Priority

25. What is a disadvantage of SJF?

a) High overhead **b) Starvation**

c) Low throughput d) Complex implementation

26. What is a real-time scheduling algorithm used for?

a) Batch processing b) Interactive systems

c) Time-critical tasks d) File management

27. Which metric is used to evaluate scheduling algorithms?

a) CPU temperature **b) Turnaround time**

c) Disk speed d) Network latency

28. What is context switching?

a) Changing file formats **b) Switching between processes**

c) Rebooting the system d) Encrypting data

29. Which scheduling type uses multiple processors?

a) Single-threaded scheduling **b) Multiple processor scheduling**

c) Real-time scheduling d) Priority scheduling

30. What is the main challenge in real-time scheduling?

a) Memory leaks b) Network congestion

c) File corruption **d) Meeting deadlines**

UNIT IV

31. What causes a deadlock?

a) Excess memory **b) Circular wait**

c) Fast CPU d) Large files

32. Which strategy avoids deadlocks?

a) Paging b) Swapping

c) Prevention d) Segmentation

33. What is deadlock detection used for?

a) Identifying memory leaks **b) Finding blocked processes**

c) Scheduling threads d) Encrypting files

34. What is the recovery method from deadlock?

a) Rebooting **b) Killing processes**

c) Increasing RAM d) Formatting disk

35. What is swapping in memory management?

a) Changing file names **b) Moving processes in/out of memory**

c) Encrypting data d) Scheduling threads

36. What divides memory into fixed-size blocks?

a) Paging b) Segmentation

c) Swapping d) Partitioning

37. What combines segmentation and paging?

a) Virtual memory **b) Segmentation with paging**

c) Real-time memory d) Threaded memory

38. What is the main goal of memory management?

a) Increase CPU speed **b) Optimize memory usage**

c) Reduce disk space d) Improve graphics

39. What is a segment in memory?

a) A thread b) A process

c) A logical unit d) A file

40. What is the role of the memory manager?

a) Encrypt files **b) Allocate and deallocate memory**

c) Manage CPU d) Handle I/O

UNIT V

41. What is a file in OS terms?

a) A hardware device **b) A collection of data**

c) A network protocol d) A memory segment

42. Which method allows sequential access to file data?

a) Random access b) Indexed access

c) Sequential access d) Direct access

43. What is a directory structure used for?

a) Encrypting files **b) Organizing files**

c) Scheduling processes d) Managing threads

44. What is the role of I/O hardware?

a) Process scheduling b) File encryption

c) Data transfer d) Memory allocation

45. What transforms I/O requests into hardware operations?

a) File system **b) Device driver**

c) Scheduler d) Compiler

46. What is STREAMS used for?

a) File compression **b) Modular I/O**

c) Memory management d) CPU scheduling

47. Which component handles file access methods?

a) Memory manager b) CPU scheduler

c) File system interface d) Thread manager

48. What is a common file access method?

a) Paging b) Segmentation

c) Sequential d) Swapping

49. What is the function of a device driver?

a) Encrypt data **b) Interface with hardware**

c) Manage threads d) Compile code

50. What is the purpose of file system interface?

a) Manage CPU **b) Provide access to files**

c) Encrypt memory d) Schedule processes