MSBTE CAMPUS ACADEMY
ONLINE LEARNING PLATFORM

Subject :- Operating System
Subect Code :- 22516

2 Marks

- **Define operating system.**
- **2. List any four characteristics of an operating system.**
- **3. Define time and space complexity.**
- **4. What do you mean by spooling ?**
- **5. List any 2 advantages and disadvantages of batch os.**
- **6. What do you mean by Dalvik virtual machine ?**
- **7. Enlist any 4 system calls related with process management.**
- **8. Define task scheduler and performance monitor.**
- **9. Define process & program.**
- **10. Define process scheduling.**
- **11. Describe shared memory and message passing.**
- **12. What do you mean by user level and kernel level threads. ‘**
- **13. What is the use of ps command ?**
- **14. What do you mean by preemptive and non-preemptive scheduling ?**
- **15. What do you mean by cpu scheduler ?**
- **16. List any two advantages & disadvantages of fcfs.**
- **17. List out any 4 functions of memory management.**
- **18. What do you mean by Internal and External fragmentation.**
- **19. Define file with its attributes.**
- **20. Define file and directory.**
- **21. What is the concept of paging ?**

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4 Marks

- 1. Explain OS as a resource management.
- 2. Describe dual mode operation.
- 3. Explain system view and user view with the help of an example.
- 4. Difference between multi-processing. and multiprogramming.
- 5. Explain symmetric and asymmetric os.
- 6. Difference between client-server and peer-to-peer model.
- 7. Describe command line Os. Also state any two difference between UNIX and DOS.
- 8. Describe services of operating system.
- 9. Explain system calls with the help of a diagram.
- 10. List out types of system calls and explain process management system call.
- 11. List general methods used to pass parameters in system calls.
- 12. Explain process with its memory layout. 13. Explain process states with the help of a diagram.
- 14. Difference between long term and short term scheduler.
- 15. Describe how context switching is executed by operating system.
- 16. What is inter-process communication ? Explain any one technique of it.
- 17. Difference between user level and kernel level thread.
- 18. What do you mean by threads ? State the major advantages of thread.
- 19. What are the benefits of multi threading ?
- 20. Define the following : Turn around time , burst time , waiting time , response time and throughput
- 21. Describe CPU & I/O burst cycle with the help of a diagram.
- 22. List out any 4 scheduling algorithms . Explain FCFS.
- 23. Explain priority scheduling. Also find out the average waiting time for the given problem.

Process	Burst time	Priority
P1	10	3
P2	1	1
P3	2	3
P4	1	4
P5	5	2

- 24. Explain round robin algorithm .
- 25. Find out the average waiting time for the given problem using SJF & Round robin.

Process	Burst time
P1	10
P2	3
P3	7
P4	5

- 26. Describe the prevention conditions for deadlock .
- 27. Explain swapping in operating system with diagram and example.
- 28. Difference between contiguous and non-contiguous memory allocation.
- 29. Describe segmentation in operating system.
- 30. Describe the different types of files.

- **31. Describe single level and two level directory structure.**
- **32. Describe RAID structure.**
- **33. Define optimal page replacement. Explain with example.**
- **34. Describe the features of message passing system.**
- **35. Explain the following linux command : ps , kill , sleep.**

6 Marks

- 1. Explain batch operating system with the help of a diagram.
- 2. Explain time sharing operating system.
- 3. Explain multi programming os.
- 4. Explain distributed os in details.
- 5. Explain android architecture.
- 6. Explain real time os with its types.
- 7. List and explain components of an operating system.
- 8. Explain process control block with the help of a neat labeled diagram.
- 9. Explain schedulers with its following types.
- 10. Explain thread life cycle with a neat labeled diagram.
- 11. Explain multi-threading models.
- 12. With neat diagram explain multi level queue scheduling .
- 13. Explain deadlock with the help of a diagram.
- 14. Explain bankers algorithm.
- 15. Explain fixed portioning with the help of an example.
- 16. Explain variable portioning with the help of an example.
- 17. Explain the concept of virtual memory with the help of a diagram.
- 18. Explain paging with advantages and disadvantages.
- 19. Explain different file operations with the help of an example.
- 20. Explain sequential and direct access method.
- 21. Explain linked allocation with the help of a diagram.
- 22. Explain tree level structure.
- 23. Explain RAID levels