Kanoria PG Mahila Mahavidyalaya, Jaipur
Department of Computer Science
Operating System 203
BCA II
Question Bank

1. What are the objectives of operating system?
2. What are the advantages of peer-to-peer systems over client-server systems?
3. What is the purpose of system programs/system calls?
4. How does an interrupt differ from a trap?
5. What are disadvantages of multi-processor systems?
6. Defend timesharing differ from multiprogramming? If so, how?
7. Why API's need to be used rather than system call?
8. Compare and contrast DMA and cache memory.
9. Distinguish between batch systems and time sharing systems.
10. What is real time system?
11. What do you mean by system calls?
12. Define process.
13. What is process control block?
14. What is scheduler?
15. What are the use of job queues, ready queues and device queues?
16. What is meant by context switch?
17. What is the main advantage of multiprogramming?
18. Discuss the main advantages of layered approach to system design?
19. List the advantage of multiprocessor system?
20. Define inter process communication.
21. Identify the difference between mainframe and desktop operating system.
22. What is bootstrap program?
23. Illustrate the different interrupt clauses.
24. Identify what virtual machine is and what are the advantages virtual machines.
25. Summarize the functions of DMA.
26. Illustrate the use of fork and exec system calls.
27. What are the three main purposes of an operating system?
28. What is the purpose of system calls?
29. What are the five major activities of an operating system with regard to process management?
30. What are the three major activities of an operating system with regard to memory management?
31. What are the three major activities of an operating system with regard to secondary- storage management?
32. What is an Operating system?
33. List the services provided by an Operating System?
34. What is the Kernel?
35. What is meant by Mainframe Systems?
36. What is Multiprocessor System?
37. What are the advantages of multiprocessors?

38. What is meant by Batch Systems?
39. What are the basic functions of OS and DMA?
40. Explain the concept of multiprocessor and Multicore organization.
41. Discuss in detail about Distributed systems.
42. Demonstrate the three methods for passing parameters to the OS with examples.
43. Explain how protection is provided for the hardware resources by the operating system.
44. List the various services provided by operating systems.
45. Discuss the DMA driven data transfer technique.
46. Discuss about the evolution of virtual machines.
47. Compare and contrast Single-threaded and multi-threaded process.
48. Distinguish between CPU bounded, I/O bounded processes.
49. List out the data fields associated with process control blocks.
50. What is a thread?
51. Define CPU Scheduling.
52. Distinguish between preemptive and non- preemptive Scheduling.
53. List the functions of Dispatcher Module.
54. What are the various scheduling criteria for CPU scheduling?
55. What are the requirements that a solution to the critical section problem must satisfy?
56. Define Critical section problem.
57. How will you calculate turn-around time?
58. Name two hardware instructions and their definitions which can be used for implementing mutual exclusion.
59. What is a semaphore?
60. Define Deadlock.
61. What are the conditions under which a deadlock situation may arise?
62. What are the methods for handling deadlocks?
63. What are the benefits of synchronous and asynchronous communication?
64. Define process?
65. What is meant by the state of the process?
66. Define process control block contain?
67. What are the 3 different types of scheduling queues?
68. Define schedulers?
69. What are the types of scheduler?
70. Define critical section?
71. Define Starvation in deadlock?
72. Name some classic problem of synchronization?
73. Give the condition necessary for a deadlock situation to arise?
74. Define ‘Safe State”?
75. Define race condition.
76. Define entry section and exit section.
77. Explain the difference between preemptive and nonpreemptive scheduling.
78. State critical section problem? Discuss three solutions to solve the critical section problem.
79. Distinguish among short-term, medium-term and long-term scheduling with suitable example.
80. Explain the differences in the degree to which the following scheduling algorithms deiscriminate in

favour of short processes: RR, Multilevel Feedback Queues/

81. Discuss how the following pairs of scheduling criteria conflict in certain settings.
82. Write about the various CPU scheduling algorithms.
83. Write about critical regions and monitors.
84. How can deadlock be detected?
85. Write notes about multiple-processor scheduling and real-time scheduling.
86. Define: Belady's anomaly?
87. What is the purpose of paging the page table?
88. List two differences between logical and physical addresses.
89. What are the steps required to handle a page fault in demand paging?
90. What do you meant by thrashing?
91. Explain dynamic loading.
92. Explain dynamic Linking.
93. Define Overlays.
94. Define swapping.
95. What is Demand Paging?
96. What is pure demand paging?
97. Outline about virtual memory.
98. What are the common strategies to select a free hole from a set of available holes?
99. Distinguish between page and segment.
100. How the problem of external fragmentation can be solved.
101. Define Address binding.
102. List the steps needed to handle page fault.
103. What are the counting based page replacement algorithm?
104. How is memory protected in a paged environment?
105. What are the major problems to implement Demand Paging?
106. What are Pages and Frames?
107. What is the basic method of Segmentation?
108. Define Secondary Memory.
109. What is the basic approach of Page Replacement?
110. What is the various Page Replacement Algorithms used for Page Replacement?
111. What do you mean by Best Fit?
112. Explain about given memory management techniques
113. When page faults will occur? Describe the actions taken by operating system during page fault
114. Distinguish file from dictionary.
115. Define C-SCAN scheduling.
116. List the various file attributes.
117. What are the functions of Virtual File System (VFS) layer in file system implementation?
118. What is a file?
119. What are the various file operations?
120. List the operations that can be performed on a directory.
121. Determine the most common schemes for defining the logical structure of a directory?
122. What are the allocation methods of a disk space?
123. Define seek time and latency time.

124. Define rotational latency and disk bandwidth.
125. Define Spooling.
126. What are the various disk-scheduling algorithms?
127. List three ways of allocating storage, and give advantages of each.
128. What are the advantages of Contiguous Allocation?
129. What are the drawbacks of Contiguous Allocation of Disk Space?
130. Explain about directory structure