MGKVP University Question Paper
B.C.A. Examination, 2016
Fourth Semester
Second Paper
(Operating System)
MGKVPonline.com

Time : Three Hours Maximum Marks : 75

Note: Attempt any fh.re questions. All questions carry equal marks.

Note : The answers to short questions should not exceed 200 words and the answers to long question should not exceed 500 words.

1. (a) Explain Real Time and Distributed operating systems and their characteristics. (7½)
   (b) Explain the purpose and importance of system calls in detail with examples. (7½)
2. (a) What is deadlock detection and recovery? Describe the methods for recovering from deadlock. (7½)
   (b) How does deadlock avoidance differ from deadlock prevention? Write about deadlock avoidance algorithm in detail. (7½)
3. Describe the following : (3×5= 15)
   (a) Process State
   (b) Process control block
   (c) Thrashing
4. (a) Explain the different page replacement algorithms with neat examples. (7½)
   (b) Explain file system along with its different components. (7½)
5. (a) Describe the ways of implementing semaphores. (7½)
   (b) Explain the various CPU scheduling algorithm with example. (7½)
6. (a) Explain the different file allocation methods with their advantages and disadvantages. (7½)
   (b) What is disk scheduling? Explain the different types of disk scheduling by giving an example. (7½)
7. (a) What is demand paging? Describe the process of demand paging in operating system. (6)
   (b) Describe the essential properties of the following types of operating system.
      (i) Multiprogrammed OS (9)
      (ii) Time Shared OS
      (iii) Batch Systems
8. Write short notes on : (5+5+5)
      (i) Free space management
      (ii) Critical section problem
      (iii) Disk Reliability

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