Code No: 154BR

R18

Time: 2 hours   **Max. Marks: 75**

Answer any five questions
All questions carry equal marks

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1.a) Mention the objectives and functions of Real-Time Embedded systems.
  b) Distinguish between client-server and peer-to-peer models of distributed systems. [7+8]

2. What is a System call? Explain the various types of system calls provided by an operating system. [15]

3.a) Describe the differences among long-term scheduling, short-term and medium term scheduling.
  b) Describe the actions taken by a thread library to context-switch between user level threads. [8+7]

4. Demonstrate Round Robin CPU scheduling algorithms with suitable example. [15]

5. Write about deadlock conditions and bankers algorithm in detail. [15]

6.a) How does the signal() operation associated with monitors differ from the corresponding operation defined for semaphores.
  b) Is it possible to have a deadlock involving only a single process? Explain. [8+7]

7. Consider the reference string: 7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 7, 0, 1 for a memory with three frames. Trace FIFO, optimal, and LRU page replacement algorithms. [15]

8. Explain File Free Space management approaches. [15]

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