B.E. (Computer Science & Engineering) Semester Seventh (C.B.S.)
Elective - II : Real Time Operating System

P. Pages : 2

Time : Three Hours

|||||| *0845* ||||||

Max. Marks : 80

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Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.

1. a) How a real time system is different from other computer based system? **7**

   b) What are the Performance measures for real time systems? Discuss the Properties that the different Performance measures should have. **7**

OR

2. a) Write down the difference Between Hard and Soft Real time system. **7**

   b) Give the applications of Real Time systems. **7**

3. a) "Round Robin scheduling does not work, for the Real time application? comment on the statement. **7**

   b) Explain Earliest Deadline First(EDF) algorithm in details. **6**

OR

4. a) Define Task and Task state? What is the Role of TCB (Task Control Block). **7**

   b) Write short note on. **6**
   i)   Clock driven approach   ii)   Inter process communication.

5. a) How Real time Databases are different from the general purpose Databases. **7**

   b) What do you mean by optimistic concurrency control for Real time system. **7**

OR

6. a) What are the scheduling problems of RTOS. Explain in details. **7**

   b) Explain petri nets analysis. **7**

7. a) Explain Runtime error Handling in Real Time systems. **7**

   b) List the timing specifications for good Real time language **6**

OR

1

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8. a) Write short note on.

    i) Data Typing.

    ii) Control Structures

6

    b) Write short notes on Task Scheduling why Task synchronization is Required in Real time operating system?

7

9. What do you mean by fault tolerance? How faults are Classified according to their Temporal Behaviour and output Behaviour? Discuss & various types of Redundancies Required to design a fault tolerant system.

13

OR

10. Discuss Fault Tolerant scheduling? What are its different advantages over other scheduling algorithms?

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11. Explain in Wet all of Reliability Evaluation Techniques.

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OR

12. Name two Commercial RTOS. Discuss their capabilities/ Requirements.

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