Code No. : 6356/N

FACULTY OF INFORMATICS

B.E. 3/4 (I.T.) II Semester (New) (Supple.) Examination, December 2009

REAL TIME SYSTEMS

Time: 3 Hours] [Max. Marks: 75

*Note : Answer **all** questions from Part A. Answer **any five** questions from Part B.*

PART – A **(25 Marks)**

1. Define a Real Time System. Give examples. **3**
2. Define release times and deadlines of Real Time Jobs. **2**
3. What are the different structured design approaches for Real Time Systems design ? **3**
4. Mention some of the features of Ada-real time programming language. **2**
5. What are the services provided by Real Time Operating systems ? **3**
6. Give examples of commercially available Real Time Operating systems. **2**
7. What are the additional issues in Real Time data base system ? **2**
8. What are the ways of maintaining serialization consistency ? **3**
9. What is the difference between hardware fault and software fault ? **2**
10. What are the different forms of error recovery ? **3**

PART – B **(50 Marks)**

11. a) Explain the classification of Real Time Systems. **3**

    b) Explain with necessary figures any Real Time application in detail. **7**

12. a) Describe Real Time System life cycle. **4**

    b) Explain the event based approach for Real Time System design. **6**

13. a) What are the capabilities of commercial Real Time Operating Systems ? 5

    b) Explain the features and architecture of Vx works operating systems. 5

14. a) Explain the disk scheduling algorithms for Real Time Database Systems. 6

    b) Explain about main memory databases. 4

15. a) What is Redundancy ? What are the different types of Redundancy ? 3

    b) Explain the various approaches to achieve Hardware Redundancy. 7

16. Write an Ada program to illustrate the concept of user defined packages in Ada. 10

17. Write short notes on :

    a) Integrated failure handling. 5

    b) Fault and error containment. 5
