BTS-VIII-04.16-0197 Reg. No. | | | | | | | | |

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B.Tech. Degree VIII Semester Examination April 2016

IT 1802 REAL TIME SYSTEMS

(*2012 Scheme*)

Time : 3 Hours Maximum Marks : 100

PART A

(Answer *ALL* questions)

(8 × 5 = 40)

I. (a) Explain the basic model of a real time system.

(b) Differentiate hard real time tasks and firm real time tasks with example.

(c) Explain highest locker protocol.

(d) Briefly explain the features of real time operating systems.

(e) What do you mean by rate control in a network? Explain any one technology for achieving rate control.

(f) Discuss on various QOS models.

(g) Briefly explain the characteristics of temporal data.

(h) Compare between three concurrency control protocols for real time databases.

PART B

(4 × 15 = 60)

II. (a) Explain the characteristics of real time systems. (8)

(b) Explain dynamic task allocation algorithms in multiprocessor and distributed systems. (7)

OR

III. (a) Explain clock synchronization in distributed systems. (7)

(b) Describe clock driven scheduling algorithms. (8)

IV. (a) Explain priority ceiling protocol. (7)

(b) Explain priority inheritance protocol with example. (8)

OR

V. (a) Explain benchmarking of real time operating systems. (7)

(b) Explain POSIX. (8)

VI. (a) Discuss real time communication in a LAN. (7)

(b) Describe routing in packet switched networks. (8)

OR

(P.T.O.)

VII.	(a)	Describe RSVP in detail.	(6)
	(b)	Explain bounded access protocols for LAN.	(9)
VIII.	(a)	Explain: (i) Optimistic concurrency control (ii) Speculative concurrency control	(8)
	(b)	Describe the various applications of real time databases.	(7)

OR

IX.	(a)	Explain locking based concurrency control in detail.	(10)
	(b)	Explain the differences between traditional databases and real time databases.	(5)

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