

CBCS SCHEME

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18MT733

Seventh Semester B.E. Degree Examination, Feb./Mar. 2022

Real Time Systems

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Define Real Time System. Explain classification of Real Time System. (10 Marks)
b. Explain DDC. List the advantages of DDC over analog control. (10 Marks)

OR

- 2 a. Analyze the working of different adoptive control with neat diagram. (10 Marks)
b. Explain the sequence control using chemical reactor vessel as an example. (10 Marks)

Module-2

- 3 a. Explain general purpose digital computer. Draw necessary schematic diagram. (10 Marks)
b. Explain analog interface for input and output operation. (10 Marks)

OR

- 4 a. Explain the different forms of parallel computer architectures. (10 Marks)
b. Explain any three data transfer technique using interrupts. (10 Marks)

Module-3

- 5 a. Explain briefly declaration and initialization of variables and constants. (10 Marks)
b. Explain the following concepts in languages for Real Time System:
(i) Data type (ii) Control structures (10 Marks)

OR

- 6 a. Explain the following in real time systems:
(i) Excerption handling (ii) Run time support (10 Marks)
b. List and explain the various requirements in programming languages used for real time applications. (10 Marks)

Module-4

- 7 a. What is task management? List the functions of task management. Discuss about different tasks in task state diagram. (10 Marks)
b. With neat diagram, explain multiuser and multitasking operating system. (10 Marks)

OR

- 8 a. With neat diagram, explain memory management. (10 Marks)
b. What is code sharing? Explain the two methods of code sharing. (10 Marks)

Module-5

- 9 a. Explain the software design of Real Time Systems using software module. (10 Marks)
b. Explain the foreground and background system with a flow chart. (10 Marks)

OR

- 10 a. With a relevant diagram, explain Ward and Miller's method. (10 Marks)
b. Write notes on: (i) Yourdon methodology (ii) Drying oven-context diagram (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.