



Seventh Semester B.E. Degree Examination, July/August 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. Explain the classification of programming in Real time Systems. (10 Marks)  
b. Explain briefly sequence control with neat diagram. (10 Marks)

OR

- 2 a. Explain distributed system with a neat diagram and mention its advantages. (10 Marks)  
b. With an example, explain the supervisory control system. (10 Marks)

### Module-2

- 3 a. With a neat diagram, explain the general purpose digital computer. (10 Marks)  
b. Discuss the reason for development of specialized processor and also explain MIMD and SIMD with neat block diagrams. (10 Marks)

OR

- 4 a. Analyze the operation of different LAN topologies with neat diagrams. (10 Marks)  
b. With a neat block diagrams and timing diagram, explain digital input interface. (10 Marks)

### Module-3

- 5 a. Explain the following terms:  
i) Security ii) Readability iii) Portability iv) Flexibility v) Simplicity. (10 Marks)  
b. Explain low level facilities. (04 Marks)  
c. Describe declaration, initialization of variables and constants. (06 Marks)

OR

- 6 a. Write short notes on:  
i) Control structures ii) Exception handling. (10 Marks)  
b. Discuss about modularity used in real time languages. (04 Marks)  
c. With a neat diagram, explain interrupt masking. (06 Marks)

### Module-4

- 7 a. With a neat diagram, explain memory management in Real Time System. (10 Marks)  
b. With a neat diagram, explain task state diagram. (10 Marks)

OR

- 8 a. Explain three broad level of priority with neat diagram. (10 Marks)  
b. With a neat diagram, explain multi user and multitasking operating system. (10 Marks)

### Module-5

- 9 a. Explain software design of RTS using software module. (10 Marks)  
b. Explain the outline of abstract modeling approach of ward and Mellor. (10 Marks)

OR

- 10 a. Explain foreground and background system with a flow chart. (10 Marks)  
b. With a neat diagram, explain planning phase and development phase. (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.