CBCS SCHEME

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17MT743

Seventh Semester B.E. Degree Examination, June/July 2023
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. List and explain the classification of Real Time Systems depending on Time constrains. **(12 Marks)**

b. Explain Adaptive control with neat sketch. **(08 Marks)**

OR

2 a. Explain supervisory control with the help of sketch. **(10 Marks)**

b. Give the classification of programming. **(10 Marks)**

Module-2

3 a. Explain analog interface for input and output operation. **(10 Marks)**

b. Explain digital input and output interface. **(10 Marks)**

OR

4 a. Explain the different forms of parallel computer architectures. **(10 Marks)**

b. Explain asynchronous and synchronous transmission technique. **(10 Marks)**

Module-3

5 a. Write notes on modularity and variables in programming. **(12 Marks)**

b. Write a short note on Low-level facilities. **(08 Marks)**

OR

6 a. With a neat sketch, explain standard structural program constructs. **(10 Marks)**

b. List and explain the different features of Real time languages. **(10 Marks)**

Module-4

7 a. Explain cyclic and preemptive scheduling strategies. **(10 Marks)**

b. Draw and explain task state diagram. **(10 Marks)**

OR

8 a. With a neat diagram explain memory management. **(10 Marks)**

b. Explain the general structure of Input Output Subsystem (IOSS). **(10 Marks)**

Module-5

9 a. With neat flow chart describe single program approach. **(10 Marks)**

b. Explain software design of RTS using software module. **(10 Marks)**

OR

10 a. Summarize various methodologies used for designing Real Time Systems. **(04 Marks)**

b. Write short note on Yourdon methodology. **(06 Marks)**

c. Explain the outline of abstract modeling approach of Ward and Mellor. **(10 Marks)**

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