18MT733

Seventh Semester B.E. Degree Examination, July/August 2022
Real Time System

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 Systems. List and explain the classification of Real Time System. **(10 Marks)**

   b. Explain the concept of computer control for the supervisory control. **(10 Marks)**

OR

2 a. Explain Adaptive control with neat sketch. **(15 Marks)**
   b. Write a brief note on PID control. **(05 Marks)**

Module-2

3 a. Illustrate the working of parallel computers with neat sketch. **(10 Marks)**
   b. Explain the following data transfer techniques with neat sketch i) Polling ii) interrupts. **(10 Marks)**

OR

4 a. With a neat sketch illustrate the different LAN topologies. **(10 Marks)**
   b. With the neat sketch explain the analog input system and output system. **(10 Marks)**

Module-3

5 a. List and explain the basic language requirements for real time language. **(10 Marks)**
   b. Illustrate modularity and variables with the help of example codes. **(10 Marks)**

OR

6 a. Explain Data types in languages for Real Time applications. **(10 Marks)**
   b. Descrieb the Exception Handling mechanism in Real Time language with a example code. **(10 Marks)**

Module-4

7 a. Explain the different scheduling strategies. **(08 Marks)**
   b. Describe the Task management module with neat sketch. **(12 Marks)**

OR

8 a. Explain Task chaining and swapping mechanism with neat sketch. **(10 Marks)**
   b. Describe multi tasking operating system with neat sketch. **(10 Marks)**

Module-5

9 a. Describe single program approach with a neat flow chart. **(10 Marks)**
   b. Describe the following preliminary design concept i) Hardware design ii) Software design. **(10 Marks)**

OR

10 a. Describe Foreground/Background approach. **(10 Marks)**
   b. Describe Ward and Mellor method. **(10 Marks)**

* * * * *