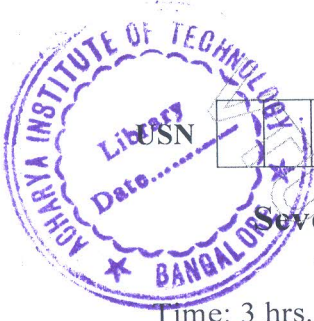# CBCS SCHEME

17MT743

Seventh Semester B.E. Degree Examination, July/August 2021
Real Time Systems

Time: 3 hrs.

Max. Marks: 100

Note: *Answer any FIVE full questions.*

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)**

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

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

3 a. With the help of a block diagram, explain single chip microcomputers and microcontrollers. **(10 Marks)**

   b. Explain the basic interrupt mechanism with neat flowchart and also explain about basic interrupt system. **(10 Marks)**

4 a. With a neat sketch, explain different LAN topologies. **(10 Marks)**

   b. Write a short note on ISO seven layer models. **(10 Marks)**

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

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

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)**

7 a. Differentiate between multiuser operating system and multitasking operating system. **(10 Marks)**

   b. Explain the priority structures of RTOS. **(10 Marks)**

8 a. With necessary sketch, explain the functions of Task management, Task states and Task Descriptor. **(10 Marks)**

   b. With a neat sketch, explain Task chaining and swapping mechanism. **(10 Marks)**

9 a. Explain Foreground/Background system with neat sketch. **(10 Marks)**

   b. Describe single program approach with flow chart. **(10 Marks)**

10 a. Describe Hately and Pirabhi method. **(10 Marks)**

    b. Explain Ward and Mellor method with a neat sketch. **(10 Marks)**

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