

Exam. Code : 208601

Subject Code : 4694

M.Sc. (IT) Semester—I

ANALYSIS & DESIGN OF EMBEDDED SYSTEMS

Paper—MIT-101

Time Allowed—3 Hours]

[Maximum Marks—100

Note :—Attempt any FIVE questions. All questions carry equal marks.

1. What is an embedded system ? Explain the basic architecture of an embedded system. What are the different issues and challenges associated with the design of embedded systems ? 20
2. List the advanced microprocessors and microcontrollers used in embedded systems and present their role. What are the functional circuits in a chip or core of a microcomputer ? Explain them. 20
3. What are the various Embedded System high-performance processors ? Give the features and a comparison of exemplary high performance ARM family of processors. 20
4. What are the services provided by the real time operating system (RTOS) ? Explain about the difference between RTOS and general operating system. 20

5. Explain the design approach of an embedded system for saving Memory and Power using RTOS environment. 20
6. What is the difference between embedded device and personal computer? Name and explain various development tools for designing embedded systems. 20
7. (a) Explain the basic features of 8-bit PIC microcontroller.
(b) Explain the AVR 8515 microcontroller. 10,10
8. What does Embedded Software development mean? Explain in brief the different stages in the development and testing of an application. 20