

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 01

Total No. of Questions : 08

**M.Tech.(Emb Sys) (2016 & Onwards) (Sem.-1)****SOFTWARE TECHNOLOGY****Subject Code : MTED-104****Paper ID : [74133]****Time : 3 Hrs.****Max. Marks : 100****INSTRUCTION TO CANDIDATES :**

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

1. What are the phases involved in software development life cycle? What activities are involved in embedded system design and maintenance? Illustrate with the help of the example.
2. Explain in detail the terms recursive function and queue data structure. How these terms may help in designing a real time embedded system? Explain with the help of the example.
3. Write a use case scenario for pizza ordering system. Draw its use case and sequence diagrams.
4.
  - a. How will you relate C and assembly language with embedded system?
  - b. What is the role of procedure call in embedded system?
5. With an example, explain shared data problem. Which feature of operating system will handle this problem better? Illustrate with the help of an example.
6.
  - a. What is the interrupt latency?
  - b. Illustrate with suitable example, register usage conventions.
7. Explain in detail the following terms :
  - a. Threads in UML.
  - b. Pointers
  - c. Software development tools.
  - d. Multi c non pre-emptive kernel.
8.
  - a. Compare methods of static and dynamic allocation in memory management.
  - b. How will you create, initialize and delete objects?