Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐   **Total No. of Pages : 01**

Total No. of Questions : 08

M.Tech.(VLSI D)(2016 & Onwards) (Sem.–2)
EMBEDDED SYSTEMS
Subject Code : MTVL-203
Paper ID : [74260]

Time : 3 Hrs.   **Max. Marks : 100**

INSTRUCTIONS TO CANDIDATES :
1. **Attempt any FIVE questions out of EIGHT questions.**
2. **Each question carries TWENTY marks.**

Q1   Explain the different design challenges occur in the design of embedded system. Also discuss about trade-offs and limitation of it.

Q2   What is the different memory types used in embedded system design? Discuss their applicability and the role of cache memory.

Q3   Explain the concept of an embedded system and its important characteristics with two suitable examples. Compare RISC and CISC processor based on their salient features and application areas.

Q4   In a wireless LAN network, the 1kB information is transmitted from one subscriber to another and being stored in a RAM at receiver end. Write an ARM assembly language program to count numbers of 1's and 0's in first 100 bytes of information. The information received is stored in RAM starting from 00009000H.

Q5   a) Design tradeoffs due to thermal considerations.

b) Explain UART.

Q6   Explain serial protocols I2C and parallel protocols PCI bus in detail with their applicability in memory in embedded systems.

Q7   Explain the roles of code optimization in embedded system development.

Q8   Explain :

a) Coding issues in embedded system development.

b) Task scheduling in embedded system.