

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,  
LONERE – RAIGAD – 402 103  
Winter Semester Examination – Dec. – 2019**

**Branch: M.Tech. (Electronics Engineering)**  
**Subject: - Embedded System Design MTEEE125A**  
**Date: -21/12/2019**

**Semester: I**  
**Marks: 60**  
**Time: 03 Hrs.**

**Instructions to the Students**

1. Each question carries 12 marks.
2. Attempt any five questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.

**(Marks)**

- Q.1. a) what is the difference between big – endian and little - endian data representation? Explain the difference between Harvard and Von- Neuman architecture. (06)**
- b) Implement Peek ( ) and Poke ( ) in assembly language for ARM. (06)**
- Q.2. a) what is Bus Protocols? Explain a typical microprocessor bus. (06)**
- b) Give hardware architecture of a typical PC. (06)**
- Q.3. a) what is assembly and linking in compilation process? Explain with example.(06)**
- b) How you can control power consumption in embedded system? What are the factors that contribute to the energy consumption of the program. (06)**
- Q.4. a) what is Context Switching? Explain Cooperative Context Switching for the ARM. (06)**
- b) Explain the interprocessor communication mechanism provided by the operating system. (06)**
- Q.5. a) what is performance analysis? Explain single threaded versus multithreaded Control of an accelerator. (06)**
- b) What are the different types of interconnection networks for implementation of distributed embedded systems, explain it. (06)**

**Q.6. a) Explain successive refinement design methodology for embedded systems. (06)**

**b) What is systems – on – silicon? Explain with the help of example. (06)**

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