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M.Tech. (ED&T)
THEORY EXAMINATION 2017-18 (Semester-II)
Subject: Embedded System Design (MDT-202)

M.M.: 70

Time: 03 Hrs.

Note: Attempt any five questions. All questions carry equal marks.

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1. A Signal consists of spectrum in the range 0-5 KHz which is to be sampled so that no aliasing results. Determine the minimum sampling rate that can be used to sample the signal. If the sampling rate must be 8 KHz, determine the type and the cut-off frequency of the anti-aliasing filter. Also derive the required results.

2.
a. Explain the CPU performance and its factors.
b. Essential features of Instruction set architectures of CISC & RISC.

3. Explain the Characteristics of an Embedded System.

4.
a. Explain the Basic Architecture of 8051 micro controller.
b. Explain the Types of Processors.

5.
a. Differentiate the Microprocessor vs Microcontroller.
b. Differentiate Von-Neumann Architecture vs Harvard Architecture

6.
a. Explain Debugging Tools in an Embedded System.
b. Explain the Storage Registers in 8051.

7. Write short notes on any two.
a. Simulators
b. Microcontroller starter kits
c. Emulator
