Code: R7 421003

**R7**

B.Tech IV Year II Semester (R07) Advanced Supplementary Examinations, June 2012

**MICRO CONTROLLERS AND APPLICATIONS**

(Electronics and Instrumentation Engineering)

Time: 3 hours Max Marks: 80

Answer any FIVE questions

All questions carry equal marks

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1 Draw the architecture of 8051 microcontroller and explain each block.

2 Explain arithmetic and logical operations with examples.

3 (a) How do you access RAM locations 30-7FH as search pad?
(b) Write short notes on addressing modes.

4 (a) Write a program to transfer data from register to pin 1.7 in the given program.
(b) Write a short notes of transferring data of a RAM using bit addresses.

5 What are the steps involved in MODE1 programming and give an example?

6 (a) A lookup table is used in the program “codekey”. It uses 120 bytes to form a table for the valid keys. Write a subroutine using a series of “CJNE” instructions that will obtain the same result.
(b) When are the scan lines, encoded scan lines and return lines used?

7 (a) List the special function registers of 80196. How does 26 byte addresses accommodate more than 26 special function register bytes?
(b) Describe the function of HSO and HIS unit in 80196.

8 (a) Give the programmer model of ARM.
(b) Explain how a constant is loaded into a general purpose register of ARM processor.

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