N.B. (1) Question No.1 is compulsory.
     (2) Solve **any three** questions from the remaining five questions.
     (3) All questions carry equal marks.

Q.1 (a) Describe the SCON and SBUF - SFR's in 8051.   05

    (b) Explain the function of the barrel shifter in the ARM7 core.   05

    (c) Draw and explain the CPSR register of the ARM processor.   05

    (d) Explain the concept of register banks in 8051.   05

Q.2 (a) Explain the structure of the Input/Output ports of the 8051 with neat diagram. 10

    (b) Explain in detail the operating modes of the ARM7.   10

Q.3 (a) Write an assembly language program to transfer a block of data in memory using load and store instructions of the ARM7.   10

    (b) Write a detailed note on the Interrupt structure of the 8051 and explain the related SFRs.   10

Q.4 (a) Write an assembly language program for interfacing 'YES' serially at 9600 band continuously using the 8051.   10

    (b) Explain the interfacing of 8051 to external memory with the help of suitable diagram. (Make necessary assumptions)   10

Q.5 (a) "ARM-Thumb interworking improves the code density". Justify with a neat example.   10

    (b) Write a program (with and without timer) to generate a square wave on pin P1.2. Highlight the difference in the two methods.   10

Q.6 Write short note on (**any three**).   20
    a) DC motor interfacing with 8051.
    b) ARM7 Architecture.
    c) Power saving modes of the 8051.
    d) Thumb state of the ARM7.

****

Course: T.E. (SEM.-V) (REV. -2012) (CBSGS) (Prog T3225)

QP Code: 591300

Correction:

Correction in Q. 5 b ......Instead of pin P1.Z Read as pin P1.7

Query Update time: 03/12/2016 02:55 PM