Total No. of Questions : 6]

SEAT No. :

P522

[Total No. of Pages :1

APR-18/TE/ /Insem. - 123
T.E (E& TC)
ADVANCED PROCESSORS
(2015 Pattern) (Semester-II)

Time : 1 Hour] *[Max. Marks :30*

Instructions to the candidates:

1) *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6*
2) *Figures to the right indicate full marks.*
3) *use of scientific calculator is allowed*
4) *use suitable data where ever required*

Q1) a) Draw and explain the data flow model of ARM 7. **[5]**

b) What is TDMI, Compare the Thumb and ARM Instruction set features of ARM **[5]**

OR

Q2) a) Draw and explain the CPSR of ARM in detail. **[5]**

b) Draw and explain in short block diagram of TIVA TM4C123 processor **[5]**

Q3) a) State features of LPC2148 **[5]**

b) Write an ARM based ALP to find the largest number from series of 8,32 bit numbers and store result at location pointed by RESULT. **[5]**

OR

Q4) a) Explain with neat diagram relation between CCLK and PCLK with the help of VPB/Divider.Find the configuration of VPB divider to achieve PCLK=30MHz for FOSC=12MHz **[5]**

b) Draw and explain the memory organization of LPC2148, **[5]**

Q5) a) Draw an interfacing diagram for LED connected to port 1 of LPC2148 and write an embedded C program to alternatively flash the LEDS. **[5]**

b) Draw and explain the interrupt structure of LPC2148. **[5]**

OR

Q6) a) Write an embedded C program to generate the delay of 1 sec using Timer of LPC2148 with PR=10, CCLK=20 MHz **[5]**

b) Draw an interfacing diagram of 4x4 matrix keypad with LPC2148 and write an algorithm to detect the key pressed **[5]**

❄ ❄ ❄