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P28

SEAT No. :

[Total No. of Pages : 2

TE/Insem./APR-32

T.E. (E & TC)

306189 : 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) Neat diagrams must be drawn wherever necessary.
- 3) Assume suitable data if necessary.

Q1) a) Draw and explain programmer's model of ARM7. [6]

b) Explain briefly any four operating modes of ARM7. [4]

OR

Q2) a) Explain features of RISC design philosophy. How ARM architecture is different than pure RISC? [6]

b) Explain features of TJVA TM4C123 Processor. [4]

Q3) a) Explain GPIO ports of LPC2148 and registers to control the same. [5]

b) Draw and explain memory map of LPC2148. [5]

OR

Q4) a) Write an ARM based ALP to find count of positive numbers from series of ten 32 bit numbers store count in R10 register. [6]

b) Enlist features and applications of timer in LPC2148. [4]

P.T.O.

Q5) a) Interface 8 LEDs with port- ϕ of LPC2148. Write an embedded C program for flashing alternate LEDs. [6]

b) Explain function of any two registers w.r.t. VIC of LPC2148. [4]

i) VIC Int Enable

ii) VIC Int Ctrl

iii) VIC Int Select

OR

Q6) a) Draw interfacing diagram of keypad matrix with LPC2148. Draw flow chart to detect a key. [6]

b) List features of UART0 and compare it with UART1. [4]