Total No. of Questions :6]

SEAT No. : [ ]

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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 programmers'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 TIVA TM4C123 Processor. **[4]**

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

b) Draw and explain memory may 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 R1 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 Cntl

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 UAR1. **[4]**

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