

Total No. of Questions :6]

SEAT No. :

P3667

[Total No. of Pages : 2

APR - 15/ENGG. - 123

T.E. (E & TC) (In Sem - Semester - II)

EMBEDDED PROCESSORS

(2012 Pattern)

Time :1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Use calculator is allowed.*
- 5) *Assume suitable data, if necessary.*

Q1) a) Draw and explain Register (Programmer) model of ARM 7. [6]

b) State and explain different operating modes of ARM 7. [4]

OR

Q2) a) Draw and explain data flow model of ARM 7. [6]

b) Explain the following instructions for ARM 7 (any two): [4]

i) ADD R0, R1, R2

ii) LDR R2 [R1]

iii) MVN R0, R1

iv) MLA R4, R5, R6, R7

Q3) a) Draw and explain interfacing of four LED's with port pin p0.0 to p0.3 of LPC 2148 and also write embedded C program for blinking LED. [6]

b) Write features of LPC 2148. [4]

P.T.O.

OR

Q4) a) Explain system control block of LPC 2148 (APB/VPB Block diagram). [6]

b) Explain significance of PINSEL0 and PINSEL1 Registers. [4]

Q5) a) Explain significance of ADDR and ADCR Registers in on chip ADC of LPC 2148. [4]

b) Draw interfacing diagram of GPS using UART with LPC 2148 : also write algorithm/flow chart for the same. [6]

OR

Q6) Write short notes (any two): [10]

a) VIC.

b) SD card interfacing using SPI with LPC 2148.

c) Write features of ADC in LPC 2148.

d) Explain I²C protocol.

