

Total No. of Questions : 6]

SEAT No. :

P56

[Total No. of Pages : 2

TE/INSEM/APR-61
T.E. (E & Tc)
304191 : EMBEDDED PROCESSORS
(2012 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 whenever necessary.
- 3) Assume suitable data, if necessary.

- Q1) a)** State and Explain different operating modes of ARM. **[6]**
- b) What is significance of CPSR registers of ARM? Explain function of each bit. **[4]**

OR

- Q2) a)** Explain following instructions of ARM7 (any 3) **[6]**
- i) Mov r1, r3, LSL #2
 - ii) BICS r0, r1, r2
 - iii) MLA r0, r1, r2, r3
 - iv) LDR r3, [r1]
- b) Compare ARM7, ARM9, ARM11. **[4]**

- Q3) a)** Draw interfacing diagram and write an embedded C program to interface Eight LEDs connected to P1.16 to P1.23 of LPC2148 **[5]**
- b) Write features of LPC2148. **[5]**

OR

P.T.O.

- Q4)** a) What is the need of Pin Connect Block in LPC2148? Explain the role of PINSELx registers. [5]
- b) Draw and explain memory map of LPC 2148. [5]

- Q5)** a) What is the necessity of Vectored Interrupt Controller? Explain the working of VIC in LPC 2148. [5]
- b) Enlist the features of on-chip ADC in LPC2148. Explain the function of ADCR.ADDR and ADSTAT register. [5]

OR

- Q6)** a) Draw and explain interfacing diagram of 12C EEPROM 24Cxxx with LPC2148. [5]
- b) Draw interfacing diagram of GPS using UART with LPC 2148. Also write algorithm for the same. [5]

