Total No. of Questions : 8]

SEAT No. :

P2959

[Total No. of Pages : 2

[5669]-549
T.E. (E & TC)
ADVANCED PROCESSORS
(2015 Pattern) (Semester - II)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Neat diagrams must be drawn wherever necessary.***
2) ***Figures to right indicate full marks.***
3) ***Assume suitable data if necessary.***
4) ***All questions are compulsory.***

Q1) a) Justify suitability of ARM in embedded applications. **[6]**

b) Explain pin connect block of ARM. State the significance of PINSEL register. **[6]**

c) Interface 8 LEDs with port 0 of LPC 2148. Write an embedded 'C' program for following operations. (Consider a suitable delay). **[8]**

i) Glow all LEDs

ii) Glow alternate LEDs

iii) Glow extreme end LEDs (i.e. LED1 & LED 8)

Repeat above operations continuously.

OR

Q2) a) State & explain the registers of ARM processor. Also explain the significance of SPSR. **[6]**

b) Explain with a neat schematic the system control block of LPC 2148. **[6]**

c) Draw & explain interfacing of GLCD with LPC 2148 with the help of flowchart /algorithm. **[8]**

Q3) a) Draw & explain interfacing of I2C based EEPROM with LPC 2148. **[8]**

b) Explain VIC based on - chip ADC interfacing with LPC 2148. **[8]**

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OR

Q4) a) Explain SD card interfacing with LPC 2148 with the help of interfacing diagram and flowchart. **[8]**

b) Explain GSM interfacing with LPC2148. Write an embedded 'C' program to send a message. **[8]**

Q5) a) Explain the architecture of TMS 320C67X with the help of neat diagram. **[10]**

b) Explain in detail the functional units of C67X. **[8]**

OR

Q6) a) Explain the following architectures. **[9]**

i) VLIW

ii) SIMD

iii) Harvard

b) List various registers of C67X. Also explain AMR & CSR register of C67X. **[9]**

Q7) a) Explain in detail - parallel operation & pipeline operation of C67X. **[8]**

b) Explain the function of Following instructions: **[8]**

i) MPYU. M1 or . M2

ii) MVKLH. S1 or. S2

iii) SADD .L1 or . L2

iv) LDBU. D1 or .D2

OR

Q8) a) Write a note on:

i) Conditional operations.

ii) Internal memory. **[8]**

b) Explain in detail-fixed point Instructions & Floating point instructions. **[8]**

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