Enrollment No:										

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LDRP INSTITUTE OF TECHNOLOGY & RESEARCH, GANDHINAGAR.
B.E. SEM VI (ELECTRICAL)
MID SEMESTER EXAMINATION FEB-2015

Date : 03/03/2015 Subject Name: Microcontroller & their Applications
Duration : 12:00 to 13:30 Max. Marks : 30

Attempt all questions
Draw appropriate diagram wherever necessary.
Figure on right indicates full marks.

Q-1(A)	Describe RAM memory in 8051 microcontroller. Explain different parts of it.	**5**
Q-1 (B)	Give difference between RISC and CISC Architecture.	**5**
Q-2 (A)	Assume that we have 4 bytes of hexadecimal data: 25H, 62H, 3FH and 52H. (a) Find the checksum byte. (b) perform the checksum operation to ensure data integrity (c) if the second byte 62H has been changed to 22H, show how checksum detects the error.	**5**
Q-2 (B)	Write an 8051 C program to convert packed BCD 0x29 to ASCII and display the bytes on P1 and P2.	**5**
	OR	

Q-2 (A)	Discuss the results you will get after the execution of following program.
	`#include <reg51.h>`
	`void main (void)`
	`{`
	`P0=0x35 & 0x0F;`
	`P2=0x54 ^ 0x78;`
	`P1=0x04 | 0x68;`
	`P0= ~0x55;`
	`P2=0x77 >> 4;`
	`}`
		5

Q-2 (B)	Write an 8051 C program to toggle bit D0 of the port P1 (P1.0) 50,000 times.	**5**
Q-3 (A)	Explain PSW and function of all the bits.	**5**
Q-3 (B)	Write an assembly language program to add 8 bit numbers 95H and B6H. Show the status of parity and auxiliary carry after the execution of the code.	**5**
	OR	
Q-3 (A)	Explain the operation by using PUSH and POP instruction.	**5**
Q-3 (B)	Write an assembly language program to generate 5ms delay by using 8051 system of 12MHz.	**5**

BEST OF LUCK