C.U.SHAH UNIVERSITY
WADHWAN CITY
University (Winter) Examination -2013

Course Name : B.Sc(I.T)/ BCA Sem-I   **Subject Name: -Computer Organization and Architecture**
 Duration :- 2:30 Hours   **Date : 6/12/2013**

Instructions:-
(**1**) Attempt all Questions of both sections in same answer book / Supplementary.
(**2**) Use of Programmable calculator & any other electronic instrument is prohibited.
(**3**) Instructions written on main answer Book are strictly to be obeyed.
(**4**)Draw neat diagrams & figures (If necessary) at right places.
(**5**) Assume suitable & Perfect data if needed.

SECTION - I

Q-1	Attempt the Following(Each Question content one marks)	(7)
(I)	Write down the Definition of Gate	
(II)	What is Parity bit ? Explain it	
(III)	Draw the Circuit Diagram of Carry in Half Adder	
(IV)	What is Floating Point Representation ?	
(V)	Explain POS(Product Of Sum) with Example	
(VI)	Explain the Function of Control Unit.	
(VII)	What is Bollean Function?	
Q-2 (a)	Which are the charteristics of Digital Computer .	(5)
Q-2 (b)	Prove Demorgan's Law using Bollean Algebra	(5)
Q-2 (c)	What is Computer ? Explain Block Diagram of Digital Computer	(4)

OR

Q-2(a)	What is Binary Number System? Explain the Binary Conversion with Suitable Example	(5)
Q-2(b)	What is Full adder ? Explain the Full adder with Diagram	(5)
Q-2(c)	What is K' Map? Explain K'Map for two Variables with Example	(4)
Q-3 (a)	What is Decoder ? Explain with Diagram	(7)
Q-3 (b)	What is Mux? Explain with suitable Diagram	(7)

OR

Q-3(a)	What is Endcoder ? Explain with Diagram	(7)
Q-3(b)	Explain Don't Care Condition with suitable in K'MAP	(7)

SECTION – II

Q-4 : Answer the following questions		(7)
(a) Differentiate RAM and ROM		(2)
(b) What is IO bus?		(2)
(c) What is a binary counter?		(2)
(d) Define: memory		(1)
Q- 5 Answer the following questions		(14)
(a) Explain RAM with block diagram and function table		(5)
(b) List out various peripherals devices and Explain in brief		(5)
(c) Describe NAND gate		(4)

OR

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Q-5 Answer the following questions (14)
   (a) What is IO and memory bus? Differentiate IO and memory bus (5)
   (b) Explain D flip flop in details (5)
   (c) Describe EX-OR gate (4)
Q-6 Answer the following questions (14)
   (a) What is stack? Explain register stack in details (7)
   (b) What is CPU? Explain ALU with register set (7)
OR
Q-6 Answer the following questions (14)
   (a) What is DMA? Explain DMA controller with block diagram (7)
   (b) What is cache memory? Explain organization of cache memory (7)

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