Seat No.:_____

No. of printed pages: 01

SARDAR PATEL UNIVERSITY
BBA (ITM) SEM-I EXAMINATION- 2016
DIGITAL COMPUTER ELECTRONICS-(UM01EBBI06)

Time: 10:00 a.m. to 12:00 p.m.

Date: 19/11/2016, Saturday

Total Marks: 60

Q.1(A)	Write a detail note on all four Number System by taking proper example.	[08]
(B)	Write a note on Character Representation. Explain the ASCII character representation format with an example.	[07]

<div align="center">OR</div>

Q.1(A)	Write a note on Floating-point Number representation. Also represent 10.5_D using this method.	[08]
(B)	Explain the Two's complement Integer Number representation. Explain the method of two's complement subtraction. Find the answer of $1011_B - 110_B$ using two's complement.	[07]

Q.2(A)	Write statement of De'Morgans 1st and 2nd Theorem. Prove the following using two inputted truth table: 1) Bubbled AND Gate is equivalent to NOR Gate. 2) Bubbled OR Gate is equivalent to NAND Gate.	[08]
(B)	Simplify Boolean expression: A.B'+C.D'+A'.B'+C'.D' using formulas of Boolean Algebra. Draw circuit and truth table for the reduced equation.	[07]

<div align="center">OR</div>

Q.2	Write a note on NOT, OR, AND, NAND and NOR Gates with proper symbol, truth table and explanation.	[15]

Q.3(A)	Write a detail note on Decimal to Binary Encoder with proper circuit.	[10]
(B)	Write a note on combinational circuit that can do addition of 3 bits at a time.	[05]

<div align="center">OR</div>

Q.3(A)	Write a note on 4-bit Binary Adder/ Subtractor using 2'c complement.	[08]
(B)	What do you mean by Multiplexer? Explain the same using 4X1 Multiplexer Circuit.	[07]

Q.4(A)	Write a note on RS Flip Flop giving its circuit diagrams and truth tables.	[08]
(B)	Write a note on Ripple Counter giving its block diagram.	[07]

<div align="center">OR</div>

Q.4(A)	Write a detail note on Synchronous Counter giving its block diagram.	[08]
(B)	Write a note on JK Flip Flop giving its circuit diagrams and truth tables.	[07]

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