(53) Seat No.:_____ *NO OF PRINTED PAGES # 2*

SARDAR PATEL UNIVERSITY

P.G.D.C.A.A. (I Semester) Examination

Friday – 21st October 2016

10.30 AM – 01:00 PM

PS01CDCT02 – Logical Computer Organization

Total Marks [70]

Q-1 Multiple Choice Questions **[8]**

1. Numbers are stored and transmitted inside a computer in_____.
   A. Binary Form B. ASCII Form
   C. Decimal Form D. Octal Form
2. The Base of Octal Number is _____
   A.8 B. 16
   C. 10 D. 2
3. Full Form of ALU is _____
   A. Arithmetic Logic Unit B. Array Logic Unit
   C. Application Logic Unit D. None of above
4. An invert gate is also called a _____ gate.
   A. NOR B. NOT
   C. XNOR D. NAND
5. The OR gate has two or more input signals. If any input is _____, the Output is high.
   A. high B. low
   C. both A and B D. none
6. A _____is logic circuit that can add two binary numbers.
   A. binary Subtraction B. Binary Adder
   C. AND gate D. OR gate
7. Half adder consist of_____&_____Gates
   A. XOR, AND B. XOR, OR
   C. XNOR, AND D. XNOR, OR
8. In Full Adder and gates output is _____
   A. Carry B. Sum
   C. Remainder D. None

Q-2 Answer the Following Questions (Any Seven) **[14]**

1. Define : Software with examples
2. List out the applications of computer.
3. Explain binary number system
4. Binary to Decimal: $(1110)_2 = (\ ?\ )_{10}$
5. Octal to Decimal : $(127)_8 = (\ ?\ )_{10}$

[P.T.O]

6. Explain NOT gate.

7. Define Gate? List out the basic Gate.

8. Draw the Diagram of the 8 * 3 Encoder.

9. Draw the Truth Table of Half Adder

Q-3 [A] Draw the Block diagram of Computer and explain its functions. [06]

[B] Explain Storage Unit in Details. [06]

OR

[B] Explain First Generation and its characteristic. [06]

Q- 4 [A] Explain binary number system and Calculate $(101110)_2 = (\ ?\ )_{10}$ [06]

[B] Differentiate between positional number System and Non – positional Number System. [06]

OR

[B] Explain octal number system and Calculate $(\ 12127)_8 = (\ ?\ )_{10}$ [06]

Q-5 [A] Write a short note on AND Gate. [06]

[B] Write a short note on NOR Gate. [06]

OR

[B] Write a short note on NAND Gate. [06]

Q-6 [A] Explain 8x3 line encoder in detail [06]

[B] Explain half adder in detail [06]

OR

[B] Explain 4x1 multiplexer in detail. [06]

****** *BEST OF LUCK* ******