

(5 & A-8) Seat No.:

No. of Printed Pages: 01

**SARDAR PATEL UNIVERSITY**  
**F.Y.B.B.A. (ISM) SEM - I EXAMINATION**  
**2016**

**Friday, 18<sup>th</sup> November**  
**10.00 a.m. to 12.00 p.m.**

**Logical Organization of Computer: UM01CBBS02**

- Maximum Marks: 60**
- Q-1 A) List and explain all number system available in computer in detail. 7  
B) Do as Directed: 8
1. Find 10's complement of  $(456812)_{10}$
  2.  $(11011)_2 - (10010)_2 = (?)_2$
  3. Convert Binary Code to Octal Code.  $(111001001)_2 \rightarrow (?)_8$
  4.  $(ABF12.CD)_{16} \rightarrow (?)_8$
- OR**
- Q-1 A) Draw the block diagram of Simple Computer and explain its different functional units. 7  
B) Do as Directed: 8
1. Find 2's complement of  $(11100011)_2$
  2.  $(110011)_2 + (101010)_2 = (?)_2$
  3. Convert Binary Code to Octal Code.  $(1011001)_2 \rightarrow (?)_8$
  4.  $(4578.125)_{10} \rightarrow (?)_2$
- Q-2 A) Explain the following gates with truth table and circuit. 8  
1) AND    2) NOR    3) NOT    4) XNOR
- B) Simplify following using k-map
1.  $F(A,B,C,D) = \sum m(1,2,5,6,8,9,11,15)$
  2. Simplify  $AB' + C'D + AB + CD$  with using Boolean algebra laws. 5
- OR**
- Q-2 A) Explain the following gates with truth table and circuit. 8  
1) OR    2) NAND    3) XOR    4) NOT
- B) Simplify following using k-map
1.  $F(A,B,C,D) = \prod M(1,2,5,6,8,11,12,15)$
  2. Simplify  $A'B + B'C + AC'$  with using Circuit. 5
- Q-3 A) List and Explain function and components of Computer Processor in detail. 2  
B) Draw and explain Instruction Execution Cycle of computer. 8
- OR**
- Q-3 A) Draw and explain the von Neumann Computer Model in detail. 8  
B) Write a note on Array Processor and Pipelining. 7
- Q-4 A) What is Input Device? Explain the various Input Devices in detail. 10  
B) Write a note on RAM and ROM. 5
- OR**
- Q-4 A) What is Output Device? Explain any Five Output Devices in detail. 10  
B) Write a note on Floppy Disk and Hard Disk. 5