

**BACHELOR OF COMPUTER APPLICATIONS
(BCA) (Pre-Revised)**

01745

Term-End Examination

December, 2016

**CS-64 : INTRODUCTION TO COMPUTER
ORGANISATION**

Time : 3 hours

Maximum Marks : 75

*Note : Question number 1 is compulsory. Attempt any
three questions from the rest.*

1. (a) Find the even and odd parity bits for the following 7-bit data : 4
- (i) 1010111
 - (ii) 0101101
 - (iii) 1111111
 - (iv) 1010101
- (b) Explain three Displacement Addressing mechanisms with the help of examples. 6
- (c) Simplify the following function using K-map : 7
- $F(A, B, C, D) = \sum(2, 6, 10, 14)$
- Draw the resultant logic diagram. 7

- (d) Write a program in 8086 Assembly language that converts a lowercase string stored in an array to an uppercase string. 7
- (e) Perform the following conversions : 6
- (i) $(569)_{10}$ to Binary number
 - (ii) $(10110101)_2$ to Octal number
 - (iii) $(5AF)_{16}$ to Decimal number
 - (iv) $(545)_8$ to Hexadecimal number
 - (v) $(6B\cdot28)_{16}$ to Binary number
 - (vi) $(23\cdot125)_{10}$ to Hexadecimal number
2. (a) What are micro-operations ? Describe any two types of micro-operations. 7
- (b) What are microinstructions ? Describe the horizontal and vertical microinstruction formats with the help of a diagram. 8
3. (a) What are flip-flops ? Describe the construction of a master-slave flip-flop using R-S flip-flops. 7
- (b) Explain the use of Code Segment (CS) and Data Segment (DS) registers in 8086 microprocessor with the help of examples. 4

- (c) What are the various fields of a simple instruction ? Explain with the help of a diagram. 4
4. (a) Describe the FAR and NEAR Procedures in 8086 Assembly. 4
- (b) What is an interrupt ? Explain the processing of an interrupt in 8086 microprocessor with the help of a diagram. 6
- (c) Explain the logic diagram of a 3×8 Decoder. 5
5. Explain the following with the help of suitable examples/diagrams : 15
- (a) XCHG Instruction in 8086 Microprocessor
- (b) Representation of Floating Point Number
- (c) I/O Processor
- (d) Cache Memory
- (e) Logical Layout of Magnetic Disk
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