

04695

**BACHELOR OF COMPUTER  
APPLICATIONS (PRE - REVISED)**

**Term-End Examination**

**December, 2013**

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

*Time : 3 Hours*

*Maximum Marks : 75*

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*Note : Question No. 1 is compulsory. Answer any three questions from the rest.*

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1. (a) What is Random Access Memory ? Explain its working with the help of its logic diagram. 6
- (b) What is the function of the Control Unit ? Explain wilke's control unit with the help of a diagram. 7
- (c) Explain the four addressing modes used in microprocessors, giving an example of each. 6
- (d) Explain parameter passing using stack in Assembly language with the help of an example. 6
- (e) Simplify the Boolean expression given below using K-map : 5

$$F(a, b, c, d) = a.b.c.d + \bar{a}.b.\bar{c}.d + \bar{a}.b + a.\bar{b}.c + a.\bar{d}$$

2. (a) Write a program for the expression : 6
- $$F = \frac{A \times B}{E * F}$$
- Using
- (i) 1- address instructions
  - (ii) 2- address instructions
- Make suitable assumptions.
- (b) What is a parity bit ? Explain its use with the help of an example. 4
- (c) Explain how error can be detected and corrected using Hamming error correcting code. 5
3. (a) What are Programmer Visible Registers ? Explain the four types of such registers. 5
- (b) Explain the following instructions of 8086 microprocessor with the help of an example. 10
- (i) LOOPE/LOOPZ
  - (ii) MUL
  - (iii) RCL
  - (iv) AND
  - (v) TEST
4. (a) Write an Assembly program in 8086 assembly language to display the largest and smallest element in an array. 5
- (b) What is Cache Memory ? Explain its organization and importance. Explain the three ways in which main memory block can be mapped in cache. 8
- (c) Explain polling as a method of Bus Arbitration. 2
5. (a) What are Decoders ? Explain the working of a  $3 \times 8$  Decoder using its logic diagram and truth table. 5

- (b) Explain the following with the help of an example/diagram. **10**
- (i) J.K. flip flop
  - (ii) Seek time and latency time
  - (iii) DMA
  - (iv) BCD
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