No. of Printed Pages : 2

CS-64

03017

BACHELOR OF COMPUTER APPLICATIONS (PRE - REVISED)

Term-End Examination

June, 2014

CS-64 : INTRODUCTION TO COMPUTER ORGANISATION

Time : 3 Hours *Maximum Marks : 75*

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

1. (a) What are Adders ? Design a Half Adder and construct full adder using two Half Adders and gates. 7

(b) What are Addressing modes ? Explain Indirect, Register and Displacement Addressing schemes, with the help of an example. 7

(c) What is an Arithmetic Processor and why is it needed ? 3

(d) Write a program in 8086 Assembly language to find the largest and smallest values of an array, stored in memory. 5

(e) Describe FAR and NEAR procedures with the help of an example. 5

(f) Convert $(22.25)_{10}$ into it's equivalent Binary, octal and hexadecimal notation. 3

2. (a) What is a need of Cache Memory ? Explain the direct mapping scheme with the help of a diagram. **7**

(b) Explain the characteristics of Random Access Memory. "The access time and cycle time in RAMs are constant and independent of the location accessed". Justify the statement with the help of a diagram. **5**

(c) List the advantages of learning Assembly language. **3**

3. (a) Explain the working of R-S flip flop with the help of a diagram. **5**

(b) Describe the syntax and working of following instructions : **10**

(i) XCHG (ii) AAA
(iii) LDS (iv) CMP
(v) MUL

4. (a) What is an Instruction Set ? What are the elements of an instruction ? **5**

(b) Describe the structure of CPU with general register organisation. Support your answer with a diagram. **5**

(c) What are Microinstructions ? Explain its format. **5**

5. (a) What are Interrupts and why are they required ? Explain each types with its example. **5**

(b) What are counters ? Draw the logic diagram and truth table of a 3 - bit ripple counters. **6**

(c) Describe the Parity Bit Error Detection mechanism. **4**
