No. of Printed Pages : 3

CS-64

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

Term-End Examination

June, 2015

03993

CS-64 : INTRODUCTION TO COMPUTER ORGANISATION

Time : 3 hours *Maximum Marks : 75*

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

1. (a) What are Addressing Schemes and why are they required ? Describe any three addressing schemes. *5*

(b) Write a program in 8086 Assembly language that finds the largest value in an array stored in the memory. *5*

(c) What are Flip-flops ? Describe the R-S flip-flop with the help of a diagram. *5*

(d) Describe the Von-Neumann architecture of a computer with the help of a diagram. *5*

(e) Do the following conversions : *10*

(i) $(32{\cdot}6)_8 - (?)_{10}$

(ii) $(97{\cdot}25)_{10} - (?)_2$

(iii) $(F2.A3)_{16} - (?)_2$

(iv) $(63{\cdot}8)_{10} - (?)_{16}$

(v) $(10101.1001)_2 - (?)_8$

2. (a) "Parity bits can be used in semiconductor memories for detection of a single bit error." Explain with the help of an example. *5*

(b) Describe the basic structure of a CPU with the help of a diagram and working of the various registers. *6*

(c) Explain the use of stack in the computer system. *4*

3. (a) Explain the following 8086 instructions with the help of an example for each : *6*

(i) DAA

(ii) MUL

(iii) ROL

(b) What is a microinstruction ? Explain any two microinstructions. *5*

(c) A machine has 20 general purpose registers. How many bits will be needed for register addressing of this machine ? *4*

4. (a) Simplify the Boolean function and draw the logic diagram of the above function and of the simplified function *10*

$$F = \left[\overline{(\overline{\overline{A}+\overline{B}})+(\overline{A+\overline{B}})} \right]$$

(b) Explain Daisy Chaining Bus Arbitration with the help of a diagram. *5*

5. Explain the following : *5×3=15*

(a) DRAM

(b) 2D Memory Organisation

(c) LOOPE/LOOPZ Instruction

(d) Floating Point Numbers

(e) Associative Memory