R09

B.Tech III Year I Semester (R09) Regular & Supplementary Examinations December 2014
COMPUTER ORGANIZATION
(Electronics and Communication Engineering)

Time: 3 hours   Max Marks: 70

Answer any FIVE questions
All questions carry equal marks
*****

1 (a) Explain about the different functional units present in the computer system.
   (b) Write a brief note on interrupts.

2 (a) Explain the different types of addressing modes with examples.
   (b) An instruction is stored at location 300 with its address field at locations 301. The address field has the value 400. A processor register R_1 contains the number 200. Evaluate the effective address if the addressing mode of the instruction is:
        (i) Immediate.
        (ii) Direct.
        (iii) Register indirect.
        (iv) Index with R_1 as the index register.

3 (a) Explain with the help of diagram the selection of address for control memory.
   (b) Discuss in brief about the applications of microprogramming.

4 (a) Explain the Booth's algorithm with flow chart.
   (b) Show the contents of register A, E, Q and SC during the process of multiplication of two signed binary numbers 11111 (multiplicand) and 10101 (multiplier).

5 (a) What is the difference between RAM and ROM?
   (b) Describe working of any three auxiliary memory devices.

6   What is the advantage of priority interrupt over non priority interrupt? Explain the use of mask register.

7 (a) List differences between pipeline processing and vector processing.
   (b) What is a cross bar switch? Explain.

8 (a) Give a short note on SISD and SIMD multiprocessing.
   (b) List out the types of multiprocessing. Explain.

*****