Code No: 54056 **R09**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year II Semester Examinations, November/December - 2015
COMPUTER ORGANIZATION
(Computer Science and Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks

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1.a) Explain various functional units of a computer.
b) Show the value of all bits of a 12-bit register that hold the number equivalent to decimal 215 in (i) binary; (ii) binary-coded octal; (iii) binary-coded hexadecimal; (iv) binary-coded decimal (BCD). [7+8]

2.a) Explain various addressing modes with examples.
b) Give a note on reduced instruction set computer. [7+8]

3. Explain about micro programmed control in detail. [15]

4.a) Draw the flowchart for floating point multiplication. Explain with an example.
b) Perform the operation (-9) + (-6) = -15 with binary numbers in signed-1's complement representation using only five bits to represent each number (including the sign). Describe the overflow detection in this case. [7+8]

5.a) Explain the associative memory with a neat block diagram.
b) The logical address space in a computer system consists of 128 segments. Each segment can have up to 32 pages of 4K words in each. Physical memory consists of 4K blocks of 4K words in each. Formulate the logical and physical address formats. [7+8]

6. Explain the DMA mode data transfer. [15]

7. With the help of a flowchart, explain the working of pipeline for floating-point addition and subtraction. [15]

8. Explain about various interconnection structures. [15]

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