Subject code: PC234EC Semester: 2nd

Subject name: Computer Organisation & Architecture ACY: 2019-2020

**Assignment Questions**

1. Explain with neat flow chart for addition and subtraction of floating-point   
   numbers. [CO1]
2. Explain flow chart of Booth's multiplication algorithm in detail. Also compute 7X (-8)   
   using Booth's Algorithm. [CO1]
3. Explain Non-restoring division algorithm with an example. [CO1]
4. Draw flowchart for instruction cycle of computer and explain. [C02]
5. Differentiate between Horizontal and Vertical microinstruction format for   
   microprogrammed Control unit. [C02]
6. Convert the following arithmetic expression from infix to reverse polish notation. [C02]

A \*B+C\*D

A \*(B\*D+C\*E)

1. What are the differences between RISC and CISC? [C03]
2. Draw a space time diagram for four-segment pipeline showing the time it takes to   
   process each task. [C03]
3. What are various addressing modes? Explain any five with help of suitable example. [C03]
4. Which interrupt is used for which hardware automatically transfers the program to a   
   specific memory location? Explain how it works? [C04]
5. Write short notes on DMA data transfer. [C04]
6. Write short notes on Handshaking method of data transfer. [C04]
7. Give the hardware organization of associative memory. Why associative memory is   
   faster than other memories. Deduce the logic equation used to find the match in the   
   associative memory. Explain how four-bit argument register is realized. [C05]
8. Distinguish control memory and main memory used in digital computer. Why control   
    memory is necessary? [C05]
9. What is a cache memory? Explain the various mapping techniques of cache memory. [C05]