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Finalterm Exam (Fall 2022)

Paper: CSE-304 Computer Organization and Architecture

Time: 2 Hours

Marks: 50

Note: Attempt all questions briefly and precisely on the answer sheet.

Question No. 1 (Marks=5+5)

- How does the carry bit extend to the Arithmetic and Logic Unit (ALU)? Give an example.
- How can the carry bit be used to make any loop's programming decisions? Give an example.

Question No. 2 (Marks=2+2+2+2+2)

What are the features of 64K x 16 bits RAM vs 256 x 32 bits RAM in terms of;

- Address bus width *16 / 8*
- Data bus width
- Registers size
- Program counter register size
- The number of memory locations.

Question No. 3 (Marks=5+5)

- What are the parts of an instruction? Give an example.
- What are the extended register instructions? Give an example.

Question No. 4 (Marks=5+5)

- What is the difference between ADD B and ADC B instructions? Give an example.
- What is the sign bit connected with ALU? How does it work? Give an example.

Question No. 5 (Marks=5+5)

- What are register-register instructions as compared to immediate instructions in any computer architecture? Give an example.
- What is the difference between macro instructions and micro instructions? Give an example.

ADC : ADD Complement
OR
ADD carry

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