**COMP 315**

**Assignment-I**

**Weightage: 3 marks**

**Chapter 3**

1. Discuss the difference between fixed point representation and floating point representation. Illustrate their uses with an example.
2. Explain the process of converting a floating point quantity into normal form (normalization) in floating point representation.
3. Discuss a 5-bit parity bit generator and parity checker.
4. How can you check overflow in Signed magnitude, Signed 1’s Complement and Signed 2’s complement representation? Illustrate with example.
5. Discuss self-complementary code.

**Chapter 4**

1. Discuss the working principle of 1 bit ALU.
2. Discuss arithmetic circuit and its importance.
3. In what way arithmetic shift is different than other shifting?
4. Discuss the importance of Common BUS System (CBS). Design a CBS for 4 registers having eight bits each.
5. Discuss application of shift micro-operations.

**Chapter 5**

1. Discuss the instruction cycle of any MRI instruction.
2. What is interrupt cycle? Elaborate this concept with the help of RTL language.
3. Discuss control unit of a basic computer.
4. Discuss instruction format of a typical instruction of a basic computer with reference to RRI, MRI and IOI.
5. How LDA instruction is processed in a basic computer?
6. Illustrate the instruction format of MRI, RRI and IoI instructions.