



**Program: BC (CS)**  
**Subject: Computer Architecture**  
**Assignment Number: 05**  
**Course Code: CSC-208**  
**EDP Code: 102002092**  
**Semester: Spring 2020**

**Q.1 Give detail answer to each of the following:**

- (a) Discuss different types of semiconductor memories in detail.
- (b) Explain the read and write operation for the SRAM cell using diagram.
- (c) Explain the read and write operation for the DRAM cell using diagram.
- (d) Discuss 16-Mbit DRAM (4M × 4) organization using diagram.
- (e) Discuss 1 MB (256k × 4 × 8 bit) memory organization using diagram.
- (f) Explain Hamming SEC-DEC Code using Venn diagrams.
- (g) How is the syndrome for the Hamming code interpreted?

**Q.2 Differentiate each of the following:**

- (a) DRAM and SRAM
- (b) EEPROM and flash memory
- (c) Hard failure and soft error in Semiconductor memories

**Q.3** Suppose an 8-bit data word stored in memory is 10101010. Using the Hamming algorithm, determine what check bits would be stored in memory with the data word. Show how you got your answer.