II BE Mid Semester Test II 2021 (CS A&B) Engineering (CER3C4): (DIGITAL ELECTRONICS)

Duration: 70 min Maximum Marks: 20

Note: Attempt any four questions. All questions are of equal marks.

- **Q.1**) Design BCD to gray code converter for decimal numbers. Determine all the Boolean expressions and draw logic diagram also.
- Q.2) Implement a full Subtractor using two half Subtractor and OR gates.
- Q.3) Simplify the Boolean function using tabulation method

$$F(A,B,C,D) = \sum (0,1,2,5,8,9,10)$$

- Q.4) Explain NAND and NOR implementation using one example for each.
- Q.5) What is decoder? Explain 4x16 decoder with proper logic diagram.