Register Number:
Date:
20/8/18

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE-27

BCA – I SEMESTER

MID SEMESTER TEST: AUGUST-2018

CA-1418 -DIGITAL FUNDAMENTALS AND LOGIC DESIGN

Time- 1 hour **Max Marks-30**

Answer any five of the following questions **5*6=30**

1. What are positional number systems? Mention the different types of number systems with an example of each.
2. Solve the following:
   a. 1101110 – 0110111
   b. 1101010 + 1010101
   c. 110011*101
   d. 110101 / 101
3. Convert FACE (16) to decimal, binary and octal numbers
4. Subtract 84 from 37 using two's complement method
5. State and prove the De- Morgan's theorems
6. Prove the following theorems
   a) (x+y) (x+y') = x
   b) x + x'y = x+y
7. Realize AND, OR and NOT gate using NAND gates.