GURUDAS COLLEGE
DEPARTMENT OF COMPUTER SCIENCE
SEM – I
PAPER –CMS-G-CC1-TH

Time: 1 hour **Full marks:30**

Answer Question 1 and any four from Question 2 to 9

1. **ANSWER ANY FOUR .** 1.5 X 4 = 6
   a. Define data and Information.
   b. What are the full forms of ASCII and EBCDIC?
   c. What are combinational circuits?
   d. What are Minterm.
   e. Define weighted code
   f. Define Virus.
   g. Difference between Level trigger and Edge trigger.
   h. State two differences between latch and a Flip flop.

2. What is Gray code? Design a convertor circuit. 2+4

3. Prove NAND as universal gate. 6

4. State the main characteristic of machine language, assembly language and high level language. 6

5. Simplify the following Boolean function using K-Map

   $F(A,B,C,D)= \Sigma m(1,3,4,9,10)+d(2,7,12)$ 6

6. State and Prove De Morgan's Theorem 6
7. Subtract 37H from 3FH. Design Half adder using NAND gates 6
8. Implement 4 to 1 Mux using two 2 to 1 Muxes 6
9. Design a JK Flip flop 6