SURENDRANATH COLLEGE

INTERNAL ASSESSMENT

SEMESTER-1, 2018-19

SUBJECT-Computer Science General (CMS-G)

CC-1-1-TH (Computer Fundamentals and Digital Logic Design)

Time- 01 Hr. **Full Marks-30**

CU Reg. No.-	**SECTION-**	**ROLL NO.-**

MARKS OBTAINED	Signature of Examiner- With date
MARKS CONVERTED TO 10	Approved by HOD- With date

Your answer must fit within the provided space
You may use the last page of your answer booklet for ROUGH work

Question Booklet < Total pages=12>

Answer question no. Q1 and any 4 from the rest (Q2 to Q9)

Q1. Answer any 4 questions out of 7 [Q1(a) to Q1(g)] . ***4x1.5***

(a) Write two important features of 3rd generation computer.

(b) Draw the truth table and logic diagram of a half adder.

(c) What is cache memory?

(d) Convert: $(435.25)_{10} = (?)_2$

(e) Define seek time and latency time.

(f) Define combinational circuit and sequential circuits.

(g) Differentiate between static and dynamic RAM.

Q2. Answer any 4 questions out of 8 (Q2 to Q9)

Q2. (a)Compare between First and Second generation of computer. (b) What are impact printer and non impact printer? (4+2)

Q3. (a)Define System software and Application software with example. (b) Compare between Machine Language and Assembly language. (4+2)

Q4. Write short note on Any three of the following:(a) Memory Hierarchy (b) Von Neumann Architecture (c) CPU (d)Booting (e) BIOS ***(3X2)***

***Q5. (a) Find 1001100 – (1100101 using* i.1's complement method. ii. 2's complement method.**
(b)Find the dual of F =xy'z' + xyz' then draw the logic diagrams of its dual. (4+2)

Q6. (a)What are the universal gates? (b) Prove that NAND gate is a Universal Gate. (2+4)

Q7. (a)What is multiplexer? (b) Design a 4×1 MUX and explain its working principle. (2+4)

Q8. (a) Draw the circuit Diagram of S-R flip-flop and state the truth table and excitation table of S-R flip-flop. (b) What is Race around condition? (4+2)

Q9. (a) Design a MOD 6 up counter using J-K flip-flop. (b) Differentiate between synchronous and asynchronous counter. (4+2)

Rough-work