S.B. Roll No.....

DIGITAL ELECTRONICS

3rd Exam/ECE/ETV/ECE-II/CSE/Comp/IT/EEE/0620/May'19

Duration: 3Hrs. **M.Marks:75**

SECTION-A

Q1. Fill in the blanks. **15x1=15**

a. Two's compliment of 110101 is_____.
b. Hexadecimal system uses digits from_____.
c. Hamming code is a one type of _____ code.
d. BCD stands for _____.
e. Boolean rule (A+B) (A+C)=_____
f. Half adder is also known as _____.
g. Flip flop is not a _____ circuit.
h. Race around condition do not occur in _____FF.
i. Data is said to be in serial form if the bits are available _____
j. Analog to digital conversion is _____ complex than digital to analog conversion.
k. LCD consumes _____ power than LED display.
l. RAM stands for_____.
m. A _____ signal varies continuously with time.
n. For decade counter no. of Flip-Flop required will be_____.
o. A NAND gate acts as a _____ OR gate.

SECTION-B

Q2. Attempt any five questions. **5x6=30**

i. Explain the Laws related to Boolean algebra.
ii. What do you mean by BCD codes? Explain.
iii. Explain operation of seven segment display.
iv. Explain various characteristics of standard TTL family.
v. Explain RAM and ROM.
vi. Differentiate between a multiplexer and a Demultiplexer.
vii. Write down the application of A/D and D/A converter.
viii. Explain briefly the functioning of a serial in parallel out shift register.

SECTION-C

Q3. Attempt any three questions. **3x10=30**

a. Explain the working and construction of dual slope ADC.
b. Discuss the OR, AND, NOT, NAND, NOR gates with their symbols and truth tables.
c. What is latch? Explain working principle of J-K master/slave flip flop and draw its truth table.
d. Write short note on the following. **(any two)** i) Hamming Code ii)Parity iii) Ring counter
e. Minimize and realize following logic functions using K-map
   f (A,B,C,D) = ∑m (0,1,2,5,8,9,10)