

- c) Three-bytes
d) None of the above
- g)** The Boolean algebra is given by _____ (1)
a) Ronald J Tocci
b) Pascal
c) George Boole
d) None of the above
- h)** What is the base of octal? (1)
a) 2
b) 8
c) 12
d) 10
- i)** What are the basic gates? (1)
a) AND
b) NOT
c) OR
d) All of the above
- j)** How many bits does one nibble have _____ (1)
a) 1-bit
b) 4-bits
c) 3-bits
d) 2-bits
- k)** _____ gate is a universal gate (1)
a) NOT
b) NOR
c) AND
d) Exclusive OR
- l)** The parity is used to _____ (1)
a) Increase the switching operation
b) Reduce switching operation
c) Detect errors
d) None of the above
- m)** How many bits does one word have? (1)
a) 4 bits
b) 8 bits
c) 16 bits
d) 32 bits
- n)** The counter is used to count the number of _____ (1)
a) Digits
b) Bits
c) Pulses
d) None of the above

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt all questions (14)**
- a)** Explain OR, NOR, Ex OR and Ex NOR gate with truth table. (7)
- b)** What are the advantages of digital system over analog system? (7)



- Q-3 Attempt all questions (14)**
a) Convert decimal to binary system: (7)
(1) 105.15 (2) 52
b) Convert octal to hexadecimal system: (7)
(1) 756.603 (2) B9F.AE
- Q-4 Attempt all questions (14)**
a) Reduce the expression $A+B[AC+(B+C)D]$. (7)
b) Write short note on full subtractor. (7)
- Q-5 Attempt all questions (14)**
a) Briefly describe the following: (7)
(1) Parallel adder (2) Serial adder.
b) Explain De Morgan's theorem with truth table. (7)
- Q-6 Attempt all questions (14)**
a) What are different application of flip-flop? (7)
b) What is flip-flop? Explain S-R flip-flop. (7)
- Q-7 Attempt all questions (14)**
a) Explain 3 to 8 line decoder circuit. (7)
b) Distinguish between combinational and sequential switching circuits. (7)
- Q-8 Attempt all questions (14)**
a) Explain difference between MUX and a DEMUX. (7)
b) What is the advantages of a synchronous counter over an asynchronous counter? What
is its disadvantages? (7)

