AC-2950
First Year B. Sc. (Sem. II) Examination
April / May - 2015
Electronics for Computer Science : Paper - I
(Electronics Switching Circuits)

Time : 2 Hours] [Total Marks : 50

Instructions :

(1) Fillup strictly the details of signs on your answer book.

(2) Question no. 1 is compulsory.
(3) Symbols and terminology used here their usual meanings.

Q-1 Write short answers [08]

1. Draw the RC circuit to response the Square wave.
2. What will be the value of the time constant RC if R=680kΩ and C=0.01μF.
3. What is IC - 555? Why such name is given to this device?
4. Draw neat and clean circuit diagram of diode NOR Gate.

Q-2 1. What is Differentiation? Draw & discuss the differentiation for Pulse wave forms. 10
2. Draw the “Negative Series clipper” and explain it briefly. 04

Q-2 1. Draw & discuss the Diode as Switch in detail. 10
2. Draw the “Positive series clipper” and explain it briefly. 04

Q-3 1. Draw & discuss the Collector-coupled Monostable multivibrator. 10
2. Draw the neat & clean circuit diagram for “Triggering Monostable multivibrator” & explain its working briefly. 04

OR
Q-3  1. Discuss the "Practical Transistor Switch" with suitable graph and circuit diagrams.
    2. Draw the Time relationship between Base current and Collector current in a transistor switching circuit. Clearly indicate the "delay time, rise time, turn-off time, and storage time."

Q-4  Write short notes (Any Two)
1. Transistor switching times
2. Capacitor-coupled inverter.
3. Diode NAND Gate
4. N-MOS NAND gate