DPP-2950
First Year B. Sc. (Sem. II) Examination
March / April - 2016
Electronics for Computer Science : Paper - I
(Electronics Switching Circuits)

Time : 2 Hours] [Total Marks : 50

Instructions :
(1) Fill up strictly the details of signs on your answer book.
Name of the Examination : First Year B. Sc. (Sem. II)
Name of the Subject : Electronics for Computer Science : Paper - I
Subject Code No. : 2950 Seat No. :
Section No. (1, 2,...) : NIL

(2) All questions are compulsory.
(3) Question - 1 carry 10 marks.
(4) Questions - 2 and 3 carry 15 marks.
(5) Question - 4 carry 10 marks.

1 Write short answers :

(1) Draw the RC circuit to response to square wave. 2
(2) What will be the value of the time constant RC if 
R = 680 kΩ and C = 0.01 µF ? 2
(3) What is timer IC ? Why such name is given to it ? 2
(4) Draw neat and clean circuit diagram for diode OR Gate. 2
(5) What is TTL ? 2

2 (1) What is integration ? Draw and discuss it in detail. 10
(2) Draw the “Negative Series Clamper” and explain it briefly. 5

OR

2 (1) Draw and discuss the Diode as Switch in detail. 10
(2) Draw the “Positive Series clamper” and explain it briefly. 5

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3 (1) Draw and discuss the Collector-coupled Monostable multivibrator. 10

(2) Draw the neat and clean circuit diagram for "Triggering Bistable Multivibrator" and explain its working briefly. 5

OR

3 (1) Discuss the practical Transistor Switch in detail. 10

(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." 5

4 Write short notes: (any two) 10

(1) Transistor switching times. 5

(2) Capacitor-coupled inverter. 5

(3) Diode NAND Gate. 5

(4) N-MOS NAND gate. 5