(old course)

VCD- 08/10/14 F.Y.B.S.C(I.T.)-DC.-I-SEMESTER A.T.K.T 100- MARKS- 3 -HRS

NOTE: ALL QUESTIONS ARE COMPULSORY.
DRAW A NEAT AND LABELED DIAGRAM WHEREVER NECESSARY.

Q1] Solve the Following.

A Draw and explain symbol and truth table for EX-OR gate. [5]

B. Explain S-R Flip-Flop. [5]

Q2] Attempt any 3 from the following.

A. Solve the following. [5]
$(ABC.12)_{16} = (?)_2$

B. Perform $(12-6)_{10}$ using 2's compliment method. [5]

C. $(0101111)_2 + (0111001)_2 + (1010111)_2 = (?)_2$ [5]

D. $(1011)_2 * (1110)_2 = (?)_2$ [5]

Q3] Attempt any 3 from the following.

A. Construct Basic Gates using NAND gates. [5]

B Explain De'Morgons 1st law. [5]

C. Realize the equation, Draw the K-Map & circuit diagram by using SOP method. [5]
$F(A,B,C,D) = \sum m\ (0,1,2,3,,8,9,10,11,12,13)$

D. Write short note on basic Gates. [5]

Q4] Attempt any 3 from the following.

A. Write short note on Half Adder. [5]

B Explain Binary To Gray Code Convertor. [5]

C Write short note on Encoder. [5]

D. Draw 8:1 Multiplexer for the following. [5]
$y = \sum m\ (1, 2, 4, 5, 6, 7)$

Q5] Attempt any 3 from the following.

A. Write short note on Shift Registers. [5]

B. Write short note on J-K Flip-Flop. [5]

C. Write short note on D-type and T-type Flip-Flop. [5]

D. Write short note on Counters. [5]

Q6] Attempt any 3 from the following.

A. Write short note on I/O Devices. [5]

B. Write short note on Hard Disk. [5]

C. Write short note on Optical Disk. [5]

D. Write short note on Secondary Memory. [5]

Q7] Attempt any 3 from the following.

A. Write short note on Single User/Single tasking Operating System. [5]

B. Write short note on Multi User/Multitasking Operating System. [5]

C. Write short note on Real Time Operating System. [5]

D. Write short note on Linux Operating System. [5]