A-2991

Second Year B. Sc. (Sem. III) Examination
March/April – 2015
Electronics : Paper - IV
(Advance Digital Electronics & Circuit Design)

Time : **2** Hours]   [Total Marks : **50**

Instructions :

(1)

(2)   Figures on the right indicate full marks

(3)   All symbols and abbreviations have their usual meaning.

(4)   Non-programmable calculators are allowed.

(5)   Q.1 is compulsory.

(6)   Assume data if necessary.

1   Answer in short (4×2) :   8
   (a)   State the main limitations of the S-R Flip Flop
   (b)   Compare RAM and ROM
   (c)   Why we use buffer register?
   (d)   State the various applications of the counters

2   (a)   Draw the circuit diagram of D- Flip Flop and explain   7
          the truth table of it.
   (b)   Explain the working of the clocked RS flip flop   7

OR

   (a)   Explain how we use flip flop in register and explain   7
          Bidirectional register in brief.
   (b)   Explain serial in, serial out Shift register with circuit   7
          diagram.

3   (a)   Explain MOD-08 Counter in detail with all counting   **7**
                sequences.

        (b)   Explain working of the Ripple Counter in detail.   **7**

OR

        (a)   Explain working of 4-bit binary parallel adder in detail. **8**

        (b)   Discuss the working of Digital Comparator   **6**

4   Write Short Notes : (Any Two)   **14**
     (1)   J –K Flip Flop
     (2)   Semiconductor memory
     (3)   Serial In Parallel Out Register
     (4)   BCD adder.

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