SATHYABAMA UNIVERSITY
(Established under section 3 of UGC Act,1956)

Course & Branch :B.E - EEE

Title of the Paper :Digital Systems   Max. Marks :80

Sub. Code :6C0038   Time : 3 Hours

Date :07/11/2009   Session :AN

PART - A   (10 x 2 = 20)

Answer ALL the Questions

1. Convert decimal 1000 to hexadecimal.

2. Mention three examples for unweighted codes.

3. State De-Morgan's Theorem.

4. Write any two applications of EX-OR gate.

5. Distinguish between PLS and PAL.

6. Draw the encoder and decoder logic diagram.

7. What are the draw backs of SR flip flop?

8. For what input condition toggle occur in T flip flop.

9. What is the difference between volatile and non volatile memory.

10. Mention the types of ROM.

11. Explain how a single bit error is detected and corrected with an example.

(or)

12. Write short note on Gray code, excess-3 code and ASCII code.

13. Simplify $f(A,B,C,D) = \Sigma m\ (0,2,3,4,8,10,11,14,15) + d\ (5,7,9)$ using karnaugh map and implement using NAND gates only.

(or)

14. What are the universal gates? Why it is called so? Construct all basic gates using universal gate only.

15. With neat diagram explain the operation of decoder and demultiplexer.

(or)

16. With neat diagram explain the operation of comparator.

17. With neat diagram explain the operation of master slave JK flip flop. Derive D and T flip flop from JK flip flop.

(or)

18. Explain the operation 4-bit universal shift register.

19. Explain the operation basic ROM cell and construct a small memory.

(or)

20. Write short note on static RAM, dynamic RAM and EPROM.