Exam.Code:0921
Sub. Code: 6835

1129

B.E. (Information Technology)
Third Semester
ITE-303: Digital Electronics

Time allowed: 3 Hours **Max. Marks: 50**

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I. Answer the following:-

a) Explain Demorgan's Law.

b) What do you mean by terms "Fan-in" and "Fan-out"[9]

c) What are the applications of Multiplexer?

d) What is Race round condition? What is its solution?

e) Compare PLA and PAL. (5x2)

UNIT – I

II. A process is defined by the logical expression, Z = AB + BC + CD + BD + BC. Reduce the above expression to minimum no. of literals using:

a) Boolean algebra
b) K-map (2x5)

III. What is a ring counter? What type of Flip-Flop is used in such counters? Write one application of this counter. (10)

IV. Explain error correcting codes in detail. (10)

UNIT – II

V. Write notes on following:-

a) ECL and DTL logic families
b) Shift Registers (2x5)

VI. What is a dual slope A/D converter? Draw its circuit and explain its working. (10)

VII. What is the difference between ROM and RAM? Draw the basic structure of RAM cell. Compare static and dynamic RAM cells. (10)

x-x-x