C 15230

Name.....

Reg. No.....

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
DECEMBER 2010

CS 04 406—ELECTRONIC CIRCUITS AND SYSTEMS

(2004 admissions)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions of Q. I.*
Each question carries 5 *marks.*
Answer **one** *question each of II–V.*
Each question carries 15 *marks.*

I. (a) Explain how transistor is used as a switch.

(b) Write the principle of clamping circuits.

(c) Explain the concepts of CMOS logic.

(d) Explain the operation of ECL.

(e) Write short notes on magnetic surface storage devices.

(f) Write the basic concepts of read only memories.

(g) Explain the external and internal noise in modulation systems.

(h) Write short notes on the propagation of electromagnetic waves.

(8 × 5 = 40 marks)

II. (a) Draw the circuit of bootstrap sweep generator and explain the operation.

Or

(b) Construct a monostable mutlivibrator and explain.

III. (a) Compare the concepts of SSI, MSI, LSI and VLSI.

Or

(b) Explain the principle and applications of TTL logic.

(15 marks)

IV. (a) Discuss the concepts of static and dynamic random access memories.

Or

(b) Explain the working principle of dual rope A/D converter with neat diagram.

V. (a) Explain the concepts of AM modulation and demodulation with Mathematical expressions.

Or

(b) Draw the block diagram of superheterodyne receiver and explain the operation.

(15 marks)

[4 × 15 = 60 marks]