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THIRD SEMESTER B.TECH. (ENGINEERING) [14 SCHEME] DEGREE EXAMINATION, NOVEMBER 2015

CS/IT 14 305—ELECTRONIC CIRCUITS

Time : Three Hours

Maximum : 100 Marks
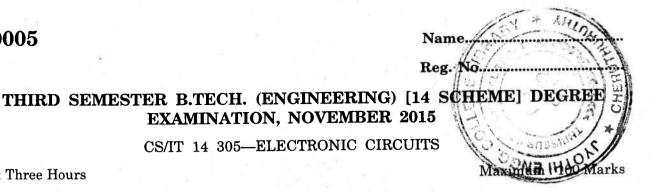
Part A

Answer any **eight** *questions.*

I. 1 State the characteristics of a tunnel diode.

2 Mention the advantages of using transistors.

3 What is an integrator ?

4 Bring out the characteristics of E-MOSFET.

5 What is ECL ?

6 Write about the use of flip-flop.

7 Write the characteristics of Read Only Memory.

8 When is the magnetic bubble memory used ?

9 Mention the working principle of a Schmitt trigger.

10 What are the advantages of using depletion mode MOSFET amplifiers ?

(8 × 5 = 40 marks)

Part B

II. (a) With a neat sketch, explain in detail about working of light-emitting diodes and photo diode.

Or

(b) Discuss in detail about the working mechanism of monostable and astable multi vibrator.

III. (a) Distinguish between comparators with non-zero references and comparators with hysteresis.

Or

(b) Elaborate in detail about the generation of waveforms using Operational Amplifiers.

IV. (a) Explain in detail about the working of the CMOS Circuit.

Or

(b) Compare and contrast logic families.

V. (a) Explain in detail about static and dynamic random access memories.

Or

(b) Discuss in detail about working of A/D and D/A convertors.

(4 × 15 = 60 marks)