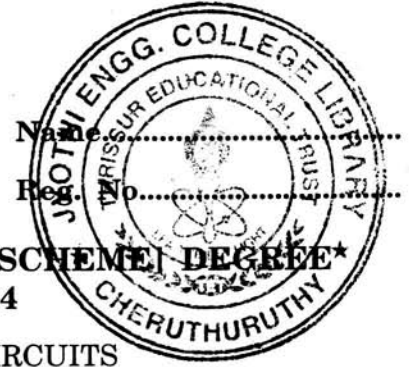


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**THIRD SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE
EXAMINATION, NOVEMBER 2014**

IT/CS 09 305/PTCS 09 304—ELECTRONIC CIRCUITS

Time : Three Hours

Maximum : 70 Marks

Part A

*Answer all questions.
Each question carries 2 marks.*

1. What is meant by diode switch ?
2. Define E-MOSFET.
3. What is varicap ?
4. What is a synchronously tuned amplifier ?
5. Mention the advantages of volatile memory.

(5 × 2 = 10 marks)

Part B

*Answer any four questions.
Each question carries 5 marks.*

6. Explain the operation of transistors.
7. Draw CMOS logic inverter.
8. Explain the advantages of digital switching.
9. Discuss the features of MSI.
10. State the applications of A/D converters.
11. Define timing circuits.

(4 × 5 = 20 marks)

Part C

*Answer all questions.
Each question carries 10 marks.*

12. (a) Draw the circuit diagrams and waveforms of a collector coupled monostable and astable multivibrators with characteristics in detail.

Or

- (b) Explain the following in detail with neat diagrams :

(i) Schottky diode ; (ii) Step recovery diode.

Turn over

13. (a) Explain the principles of operation of non-linear op-amp circuits.

Or

(b) Draw the circuit of D-MOSFETs and explain its operation with frequency response characteristics curve.

14. (a) Draw the circuit diagram of MOS flip-flops. Explain its principle of operation.

Or

(b) Explain the following in detail with neat diagrams :

(i) LSI ; (ii) ECL.

15. (a) Explain the basic concepts of ROM with neat diagrams in detail.

Or

(b) Explain the following in detail with its principle of operations :

(i) SRAM ; (ii) DRAM.

(4 × 10 = 40 marks)