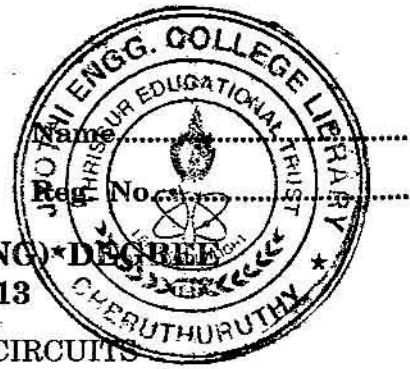


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THIRD SEMESTER B.TECH. (ENGINEERING) *DEGREE*
EXAMINATION, NOVEMBER 2013

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

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

1. What is opto coupler ?
2. Define bistable multivibrator.
3. What is meant by MESFET ?
4. What is a synchronously tuned amplifier ?
5. Define flip-flop.

(5 × 2 = 10 marks)

Part B

Answer any four questions.

6. Explain a diode clipper circuit.
7. Discuss the effects of negative feedback on current series feedback circuit on output resistance.
8. Draw CMOS logic inverter.
9. Discuss the features of MOS flip-flop.
10. Mention the applications of blocking oscillators.
11. Define memory expansion.

(4 × 5 = 20 marks)

Part C

Answer question either (a) or (b) of each question.

12. (a) Explain the principle of operations of different types of diodes with characteristics in detail.

Or

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

(i) Varactor diode.

(ii) Laser diode.

13. (a) Explain MOSFETs differential amplifier at low frequency.

Or

Turn over

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

14. (a) Draw the circuit diagram of ECL. Explain its principle of operation.

Or

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

(i) MOS flip-flop.

(ii) TTL.

15. (a) Explain D/A converters 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)