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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION NOVEMBER 2011

Third Semester

Branch—Electrical and Electronics Engineering

EE 010 305—ELECTRONICS CIRCUITS (EE)

(Regular)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

Each question carries 3 marks.

1. Plot and explain the output characteristics of BJT in common emitter configuration.
2. Name and mathematically express different h-parameters of a BJT in CE model.
3. Explain the drawbacks of a class A power amplifier.
4. What is feedback in amplifiers? Classify List advantages and disadvantages of both.
5. What is regulation? What is the need of voltage regulation?

(5 × 3 = 15 marks)

Part B

Each question carries 5 marks.

6. Sketch a combination clipper circuit. Explain its working.
7. What are the advantages of cascading amplifier stages? If each of two cascades stages has a voltage gain of 30, find the overall gain of a two stage amplifier.
8. What is a tuned amplifier? Classify. Sketch frequency responses of both. Mention uses of tuned amplifiers.
9. What are crystal oscillators? Explain its working principle. Explain any one crystal oscillator. List advantages of using crystal oscillators.
10. With diagram, explain the working of a Miller sweep generator circuit.

(5 × 5 = 25 marks)

Part C

Each full question carries 12 marks.

11. (a) Explain the stability factor and thermal runaway in transistor biasing.
- (b) With diagram, explain the working of collector to base bias transistor circuit in common emitter configuration. Discuss its merits and demerits over other biasing schemes.

Or

Turn over