FOURTH SEMESTER B.TECH. (ENGINEER) EXAMINATION, JUNE 2011

AI 09 405—ELECTRONIC CIRCUITS H

(2009 admissions)

Time: Three Hours

Part A

- 1. State any two applications of transistor as a switch.
- 2. What is a Miller circuit?
- 3. Classify feedback amplifiers.
- 4. What are harmonics?
- 5. What is a negative resistance device? Give an example.

 $(5 \times 2 = 10 \text{ marks})$

Part B

Answer any four questions.

- 1. Explain the need and use of commutating capacitors in a bistable multivibrator circuit.
- 2. Explain the working of a 555 timer IC.
- 3. (a) What are the advantages of negative feedback?
 - (b) What is the criteria for oscillation?
- 4. Explain the applications of various power amplifiers.
- 5. Explain the response of a high pass RC circuit to a step input.
- 6. State the general features of a time base generator.

 $(4 \times 5 = 20 \text{ marks})$

Part C

1. (a) Explain the working of a monostable multivibrator using transistors.

Or

- (b) Explain the working of UJT sweep circuit.
- 2. (a) Explain the working of a Bootstrap time base generator.

Or

- (b) Explain any two applications of PLL.
- 3. (a) Explain the working of a Hartley oscillator.

Or

- (b) Explain the effect of feedback on voltage series, current series, voltage shunt and current shunt feedback.
- 4. (a) Explain the working of class C amplifiers.

Or

(b) Explain the working of a class B push-pull amplifier.

 $(4 \times 10 = 40 \text{ marks})$

Maximum: 70 Marks

Name