FOURTH SEMESTER B.TECH. (ENGINEERING) EXAMINATION, APRIL 2013

AI 09 405 - ELECTRONIC CIRCUITS - II

(Regular/Supplementary/Improvement)

(2009 Scheme)

Time: Three Hours

Maximum: 70 Marks

Part A

- 1. Draw a first order RC low pass and high pass circuits.
- 2. Define the term sweep-speed error.
- 3. Draw the schematic of a voltage series feedback and voltage shunt feedback circuits.
- 4. Define efficiency of a power amplifier.
- 5. What is the criteria for oscillation?

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

Part B

- 1. Discuss the response of a low pass RC circuit to a ramp input.
- 2. Discuss about the slope error and sweep speed of Miller and Bootstrap circuits.
- 3. Discuss the effect of negative feedback on input resistance of a voltage series feedback circuit.
- 4. Discuss the efficiency of various power amplifiers.
- 5. Explain briefly the working of a transistor constant-current sweep circuit.
- 6. Explain an application of PLL.

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

Part C

1. (a) Explain the working of a schmitt trigger circuit.

Or

(b) Explain the working of a MOS logic inverter.

2. (a) Explain the working of a transistor Miller time-base generator.

Or

- (b) Explain the working of 555 timer as monostable multivibrator.
- 3. (a) Analyse the effect of negative feedback on voltage shunt and current shunt feedback circuits.

Or

- (a) Explain the working of Wien bridge oscillator.
- 4. (a) Discuss the working of a Transformer coupled Class A amplifier.

Or

(b) Discuss the working of a Class B push pull amplifier with complementary symmetry.

 $[4 \times 10 = 40 \text{ marks}]$