

M 23189

Reg. No. : .....

Name : .....

**Fourth Semester B.Tech. Degree (Reg./Sup./Imp. – Including Part Time)  
Examination, May 2013  
(2007 Admn. Onwards)  
PT 2K6/2K6 EC/AEI 405 : ELECTRONIC CIRCUITS – II**

Time: 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions.

1. a) Draw and explain transistor switch with output waveforms. 5
- b) Explain the principle of pulse transformer. 5
- c) Design a astable multivibrator with equal ON-OFF period using IC 555. 5
- d) Explain the concept of collector coupled monoshot. 5
- e) Explain lock range and capture range in PLL. 5
- f) Explain one application of PLL. 5
- g) Explain the following terms :
  - i) Accuracy
  - ii) Resolution. 5
- h) Explain the principle of binary weighted DAC. 5

**PART – B**

2. a) Construct a RC integrator and explain. 7
- b) Construct a differentiator with RC circuit and explain. 8

OR

3. Draw the circuit of CMOS inverter and explain the operation. Also discuss the dynamic power dissipation. 15

P.T.O.



- 4. Explain astable and bistable operations using a current controlled negative resistance device. 15  
OR
  - 5. Draw and explain collector coupled astable multivibrator with necessary waveforms. 15
  - 6. Explain the concepts of voltage and current time base generators. 15  
OR
  - 7. Draw a current starved VCO and explain its operation. What are its limitations ? 15
  - 8. Explain the operation of cyclic and pipeline DACs. 15  
OR
  - 9. Explain the successive approximation ADC with an example. 15
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