

**M 27082**

Reg. No. : .....

Name : .....

**IV Semester B.Tech. Degree (Reg./Sup./Imp. – Including Part Time)  
Examination, May 2015  
(2007 Admn. Onwards)  
PT2K6/2K6 EC/AEI 405 : ELECTRONICS CIRCUITS – II**

Time : 3 Hours

Max. Marks : 100

**PART – A**

1. a) Explain the principle of compensated attenuator.
- b) Explain the operation of MOS inverter.
- c) What is a Multivibrator ? What are the applications of bistable multivibrator ?
- d) Explain the working of 555 astable multivibrator.
- e) Explain the operation of PLL.
- f) Explain miller and bootstrap configurations.
- g) Explain the operation of binary weighted resistor DAC.
- h) State the advantages and disadvantages of successive approximation ADC.  
(8×5=40)

**PART – B**

2. Explain the switching characteristics of BJT with capacitive and inductive loads. 15  
OR
3. Briefly explain about CMOS inverter and discuss the dynamic power dissipation. 15
4. With neat circuit diagram and waveforms, explain the operation of collector coupled astable multivibrator. Derive the expression for pulse width. 15  
OR
5. a) Draw and explain functional block diagram of 555 timer IC. 7  
b) Explain 555 timer Astable Multivibrator. 8

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6. With a neat functional diagram, explain the operation of VCO. Also derive an expression for  $f_o$ . 15

OR

7. In detail discuss the applications of PLL. 15

8. Explain the various types of digital to analog converters. 15

OR

9. What is integrating type converter ? Explain the operation of dual slope ADC. 15