

C 61594

(Pages : 2)

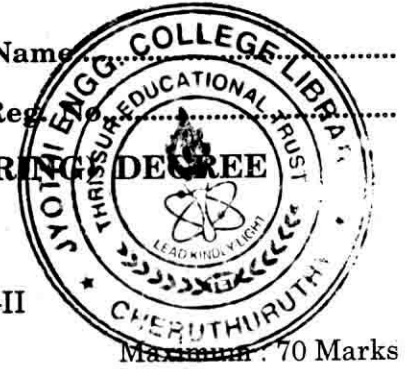
Name .....

Reg. No. ....

**FOURTH SEMESTER B.TECH. (ENGINEERING)  
EXAMINATION, APRIL 2014**

(2009 Scheme)

AI 09 405—ELECTRONIC CIRCUITS—II



Maximum : 70 Marks

Time : Three Hours

**Part A**

*Answer all questions.  
Each question carries 2 marks.*

1. What is the role of commutating capacitors in multivibrator circuit ?
2. Design a delay of 5 m-sec using 555 timer.
3. Design a RC phase-shift oscillator for frequency of operation of 4 kHz.
4. Define harmonic distortion in power amplifiers.
5. If the rise time of a transistor is 25 microseconds, determine its bandwidth ?

(5 × 2 = 10 marks)

**Part B**

*Answer any four questions.  
Each question carries 5 marks.*

6. Explain the response of RC high-pass filter to a square wave input.
7. Explain the principle of operation of miller sweep circuit.
8. With suitable circuit diagram explain about transconductance and current amplifiers.
9. Explain the advantages and disadvantages of tuned amplifiers.
10. Describe the operation of class A, class B, class C and class AB with the help of V-I curves.
11. Explain the working of unsymmetrical triggering circuit.

(4 × 5 = 20 marks)

**Part C**

*Answer all questions.*

12. Discuss the working of astable multivibrator with suitable circuit and waveforms.

Or

13. Describe the operation of CMOS inverter and response of RC low-pass filter to a ramp input.

Turn over

14. Explain the operation of current time base generator.

*Or*

15. Explain the astable mode of operation of 555 timer.

16. Derive the expression for input and output resistance of current shunt feedback.

*Or*

17. Derive the expression for the frequency of operation of Wien bridge and Colpitt's oscillator.

18. Explain the operation of class B push-pull amplifier and compare its performance with other amplifiers.

*Or*

19. Explain the operation of stagger tuned circuit and biasing of class C amplifiers.

(4 × 10 = 40 marks)