

C 15234

Name.....

Reg. No.....

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION  
DECEMBER 2010

AI 04 404—ANALOG ELECTRONICS AND PULSE CIRCUITS

(2004 admissions)

Time : Three Hours

Maximum : 100 Marks

*Answer all questions of I.  
Each question carries 5 marks.  
Answer one question each of II-V.  
Each question carries 15 marks.*

- I. (a) Explain the principle of BJT tuned amplifier.  
(b) What is meant by harmonic distortion ? Explain.  
(c) Write the principle of crystal oscillator.  
(d) Discuss the advantages of negative feedback.  
(e) Write the concepts of high pass and low pass circuits.  
(f) Write the operation of bistable multivibrator.  
(g) Explain any *one* application of the PLL in detail.  
(h) Discuss the applications of IC 555.

(8 × 5 = 40 marks)

- II. (a) Explain the principle of class-B push-pull amplifier.

*Or*

- (b) Explain the working principle of transformer coupled class A power amplifier.

(15 marks)

- III. (a) Explain the principle of voltage series and current series feedback circuits.

*Or*

- (b) Draw the circuit of Wienbridge oscillator and explain.

(15 marks)

- IV. (a) Explain the working principle of astable multivibrator with BJT.

*Or*

- (b) Explain the working principle of monostable multivibrator using BJT.

(15 marks)

- V. (a) Explain the principle of Miller and Bootstrap time base generators.

*Or*

- (b) Explain the operation of PLL with its internal blocks.

(15 marks)

[4 × 15 = 60 marks]