C 6068 (Pages 2) Name.....

Reg. No.....

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2010

EE 04 404—ELECTRONICS II

(2004 Admissions)

Time : Three Hours Maximum : 100 Marks

I. (a) What are the types of feedback ? Explain them in detail.

(b) Draw a neat diagram of crystal oscillator using BJT and explain its principle in detail.

(c) Draw op-amp Buffer and explain its principle in detail. Obtain voltage gain.

(d) Draw a neat sketch of LM 311 IC and explain its applications.

(e) Explain the principles of PLL with a neat diagram.

(f) Differential Bufferworth from Chebysheff filter.

(g) Give an account on Analog switches.

(h) What are wave shaping circuits ? Explain. Give examples.

(8 × 5 = 40 marks)

II. (a) (i) Explain in detail the advantages of negative feedback with examples. (7 marks)

(ii) Give an account on Stability Of Oscillators'. (8 marks)

Or

(b) (i) Explain about internally compensated and externally compensated and externally compensated op-amps. (7 marks)

(ii) Explain the principle of op-amp differentiator. (8 marks)

III. (a) (i) Draw a BJT crystal oscillator and explain its principle of operation.

(ii) Draw the equivalent circuit. Explain its advantages and applications.

Or

(b) Draw op-amp square wave generator and explain its principle of operation.

IV. (a) (i) Explain the principle of VCO with a neat block diagram. (7 marks)

(ii) Give an account on 'Loop filter'. (8 marks)

Or

Turn over

(b) (i) Explain the principle of FM demodulator with a neat diagram. (7 marks)

(ii) Explain the op-amp LPF specifications. (8 marks)

V. (a) Explain in detail the principles of single slope dual slope ADC with neat diagrams.

Or

(b) Write short notes on :

(i) Multiplying DAC. (5 marks)

(ii) Simultaneous ADC. (5 marks)

(iii) Quantiser characteristics. (5 marks)

[4 × 15 = 40 marks]