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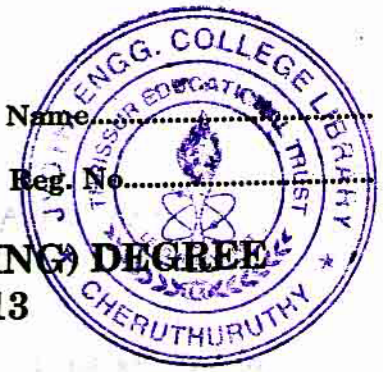
Name.....

Reg. No.....

**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, FEBRUARY 2013**

EE 04 404 – ELECTRONICS – II

(2004 Admissions)



Time : Three Hours

Maximum : 100 Marks

Answer all questions.

- I. (a) Explain the potential applications of crystal oscillator.
(b) Explain the concept and types of feedback in detail.
(c) Explain the properties of practical op-amp circuits.
(d) Explain about comparator IC LM 311 and its applications.
(e) Define and explain :
(i) Lock Range.
(ii) Capture Range.
(f) Define and explain :
(i) CMRR.
(ii) SURR.
(iii) Slew rate.
(g) Explain the fundamentals of DAC and ADC.
(h) Explain the advantages and applications of Linear Wave shaping circuits with examples.
(8 × 5 = 40 marks)
- II. (a) Draw a BJT Wein-bridge Oscillator. Explain its principle of operation in detail.
Or
(b) Draw a BJT current shunt feedback circuit and explain. Derive expressions for A_I and A_V .
- III. (a) Draw Op-amp V-I and I-V converters. Explain their principles in detail.
Or
(b) (i) Explain about regenerative comparator circuit using Op-amp.
(ii) Explain the principle of VCO circuit with a neat diagram.

(7 + 8 = 15 marks)

Turn over

IV. (a) Draw Op-amp Astable and Monostable multivibrator circuits. Explain their principle of operation.

Or

- (b) (i) Explain the potential applications of 555 Timer.
(ii) Explain the gain adjustment in Butterworth LP filters.

(7 + 8 = 15 marks)

V. (a) (i) Explain Op-amp sample and hold amplifier with a neat circuit diagram.
(ii) Give an account on 'Flash ADC'.

(7 + 8 = 15 marks)

Or

- (b) (i) Explain the principle of successive approximation ADC, with a neat diagram.
(ii) Write short notes on current switching DAC.

(7 + 8 = 15 marks)

[4 × 15 = 60 marks]