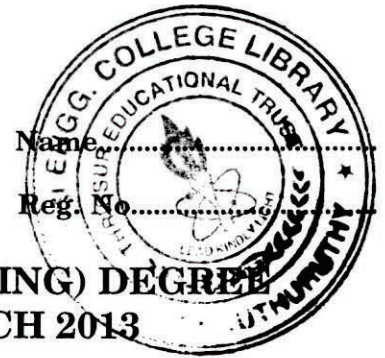


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Name
Reg. No.

**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE
(2K SCHEME) EXAMINATION, MARCH 2013**

EE 2K 404 – ELECTRONICS – II

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

1. (a) Obtain expression for gain of an amplifier with :
 - (i) Negative feedback.
 - (ii) Positive feedback.
- (b) Draw current series and voltage shunt topology with all parameters.
- (c) List the properties of ideal Op-Amp.
- (d) Draw an Op-Amp differentiator and give the output voltage expression. Sketch the output waveform for square wave input.
- (e) Define Slew rate. State the effect of slew rate on waveform generation.
- (f) Draw a multiplier circuit using log and antilog amplifier with expression.
- (g) Compare weighted resistor and R-2R DAC.
- (h) Explain analog switch circuit.

(8 × 5 = 40 marks)

Part B

2. (a) With expression, explain the effect of negative feedback on gain stability, bandwidth, input and output impedance, distortion of amplifier.

Or
- (b) Discuss the problem of stability in amplifiers and the various methods of compensation.
3. (a) Explain the following applications of Op-Amp with circuit and relevant expression.
 - (i) Antilog amplifier.
 - (ii) Practical Integrator.
 - (iii) V to I converter with floating load.

(5 + 5 + 5 = 15 marks)

Or

- (b) (i) Explain the working of an Instrumentation amplifier and obtain expression for gain.

Turn over

(ii) What are its salient features and applications?

(10 + 5 = 15 marks)

4. (a) Construct a Regenerative comparator using Op-Amp and explain its application to generate ramp waveform.

Or

(b) Discuss the operation of PLL and explain any *two* applications of the same.

5. (a) Design and draw a 4th order Butterworth Low Pass filter having cut-off frequency of 3 kHz.

Or

(b) (i) Explain the current switching DAC operation.

(ii) Discuss the operation of Tracking ADC.

(8 + 7 = 15 marks)

[4 × 15 = 60 marks]