NPTEL Video Course - Electronics and Communication Engineering - Circuits for Analog System Design

Subject Co-ordinator - Prof. M.K. Gunasekaran

Co-ordinating Institute - IISc - Bangalore

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Transistor Amplifier
Lecture 2 - Transistor Op-amp and Transistor Based Voltage Regulator
Lecture 3 - Some applications of transistor - I
Lecture 4 - Some applications of transistor - II
Lecture 5 - Transformer design & Heat sink design
Lecture 6 - Op-amp Based Linear Voltage Regulator
Lecture 7 - Short circuit protection for linear power supply
Lecture 8 - Temperature indicator design using Op-amp
Lecture 9 - On & off Temperature controller design
Lecture 10 - Proportional Temperature Controller Design
Lecture 11 - PID - Temperature Controller Design
Lecture 12 - Heater Drive for Various Temperature Controllers
Lecture 13 - Short Circuit Protection of Power MOSFET
Lecture 14 - Error budgeting for temperature Indicator
Lecture 15 - PID Temperature Controllers with Error Budgeting
Lecture 16 - Error Budgeting for Constant Current Sources
Lecture 17 - Error Budgeting for Thermo Couple Amplifier
Lecture 18 - Error Budgeting for Op amp Circuits
Lecture 19 - Gain Error Calculation in Op amp Circuits
Lecture 20 - Input Resistance Calculations for Op amp
Lecture 21 - Output Resistance Calculations for Op amp
Lecture 22 - Error Budgeting for Different Circuits
Lecture 23 - 4-20 mA current Transmitter design
Lecture 24 - Error budgeting for 4-20mA Current Transmitters
Lecture 25 - LVDT Based Current Transmitters
Lecture 26 - Constant Current Source Design
Lecture 27 - 4-20 MA Based Temperature Transmitter
Lecture 28 - 3-Wire Current Transmitter
Lecture 29 - Various Resistance Measurement Techniques

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Lecture 30 - Ratio Transformer Technique to Measure Resistance and capacitance
Lecture 31 - Capacitive Sensor Circuit Design Examples
Lecture 32 - Capacitive Sensor Circuit With High Impedance Amplifier
Lecture 33 - AC- applications of the Op-Amp and Lock in Amplifier Design
Lecture 34 - Design of lock in Amplifier Circuit with example
Lecture 35 - Dual Slopes ADC â   Design Examples
Lecture 36 - Dual Slope ADC and Successor approximation ADC
Lecture 37 - MC based ADC
Lecture 38 - Digital to analog Converter design and working, Flash ADC
Lecture 39 - Flash ADC and ADC Converter errors
Lecture 40 - Sigma delta ADC working Principle
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