AMEE16 ANALOG INTEGRATED ELECTRONICS

UNIT-1 FREQUENCY RESPONSE & STABILITY OF AN OP-AMP

1.1 Frequency response,
1.2 Compensating Networks,
1.3 Frequency response of internally compensated and uncompensated Op-Amps,
1.4 High frequency Op-Amps.
1.5 Equivalent circuit, stability in constant GBP Op- Amp. Circuits.

UNIT-2 OP-AMP CIRCUITS

2.1 Applications Current to voltage converters,
2.2 V to I converters,
2.3 Current amplifier, difference Amplifiers,
2.4 Instrumentation Amplifiers,
2.5 Integrators and differentiators.

UNIT-3 ACTIVE FILTERS & CONVERTERS:

3.1 First and second order low pass & High pass filters,
3.2 Band Pass & Band-Reject filters,
3.3 All-Pass filter, Filter using MATLAB. .
3.4 Voltage to Frequency and Frequency to voltage Converters,
3.5 Analog to Digital and Digital to Analog Converters.

UNIT-4 NON LINEAR CIRCUITS & REGULATORS

4.1 Voltage Comparators,
4.2 Precision Rectifiers, Schmitt Triggers,
4.3 Analog Switches, Peak detectors,
4.4 Sample and Hold circuit, Square and Triangular Wave Generators,
4.5 Linear Regulators, Switching Regulators.

UNIT-5 NON LINEAR AMPLIFIERS & PHASE-LOCKED LOOPS

5.1 Log/Antilog Amplifiers, Analog Multipliers,
5.2 Operational Trans conductance Amplifiers,
5.3 Phase-Locked loops,
5.4 Monolithic PLLs,
5.5 Noise in integrated circuits.

Reference Books:

1. James M. Fiore,"Op-Amps and Linear Integrated Circuits: Theory and Applications" Thomson Asia Pvt. Ltd. Singapore
2. Millman J. & Halkias C.C., "Integrated Electronics Analog and Digital Circuits & Systems" McGraw Hill.
3. Soclof, S., "Application of Analog Integrated Circuits" Prentice Hall of India.