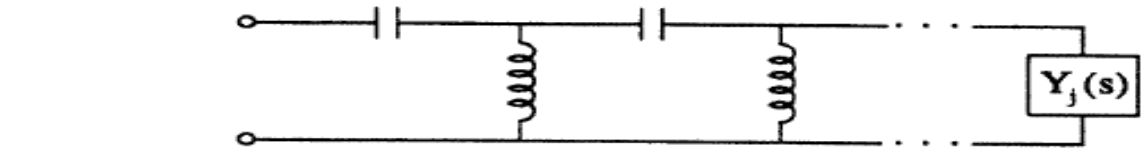
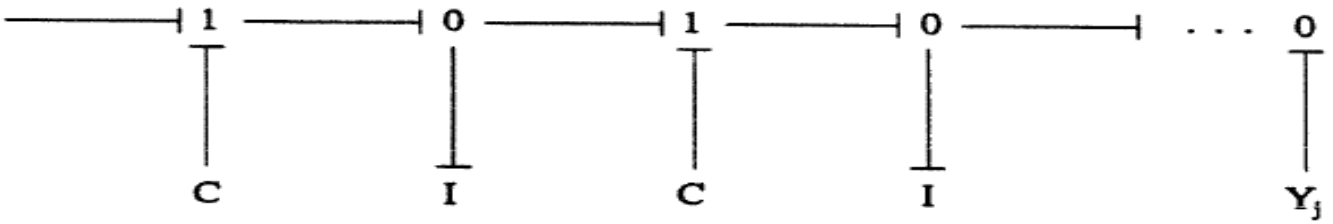
NETWORK ANALYSIS AND SYNTHESIS

Cauer First Form





$$Z(s) = \frac{1}{C_1 s} + \cfrac{1}{\cfrac{1}{L_2 s} + \cfrac{1}{\cfrac{1}{C_3 s} + \cfrac{1}{\cfrac{1}{L_4 s} + \ddots}}}$$

Unit 5 (b) Filters

- Image parameters and characteristics impedance, Passive and active filter fundamentals, Low pass filters, High pass (constant K type) filters, Introduction to active filters. (4)

Frequency Characteristics of AC Circuits

- Introduction
- A High-Pass *RC* Network
- A Low-Pass *RC* Network
- A Low-Pass *RL* Network
- A High-Pass *RL* Network
- A Comparison of *RC* and *RL* Networks
- Bode Diagrams
- Combining the Effects of Several Stages
- *RLC* Circuits and Resonance
- Filters
- Stray Capacitance and Inductance

Introduction

- Earlier we looked at the **bandwidth** and **frequency response** of amplifiers
- Having now looked at the AC behaviour of components we can consider these in more detail
- The reactance of both inductors and capacitance is **frequency dependent** and we know that

$$X_L = \omega L$$

$$X_C = \frac{1}{\omega C}$$

THANKS….

Queries Please…