PMRF-ISSS Teaching Programme

Prime Minister Research Fellowship students' teaching requirement facilitated by the Institute of Smart Structures and Systems

# Module PMRF-ISSS033/2024 Network Theory & Analog Circuit Design

#### Name of the PMRF student

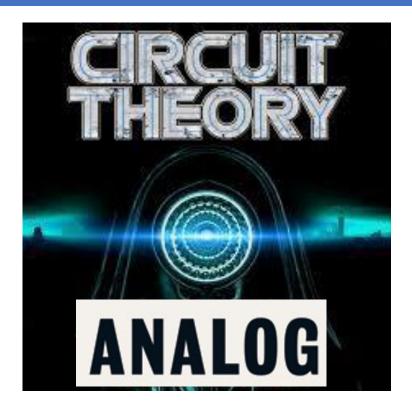
## Pritam Pal

#### **Required background of the students taught**

Electrical Engineering (EE),

Electrical and Electronics Engineering (EEE)

Electronics and Communication Engineering (ECE)



### Details of the content of the module

NETWORK THEORY (12 Class)

#### Module 1 (2 class) :

Basic Laws of Electric Circuits, Nodal and Mesh analysis, Circuit Theorems, Capacitors and Inductors.

#### Module 2 (5 class) :

Laplace Transform of the Circuits, First Order Circuits, Second Order Circuits, Steady-State analysis of Circuits.

Module 3 (2 class) : AC Power analysis, Magnetically Coupled Circuits.

#### Module 4 (3 class) :

Frequency Response Network.

#### ANALOG CIRCUIT DESIGN (12 Class)

#### Module 5 (1 class) :

Basics of Field Effect Transistor (FET) and DC Analysis

Module 6 (5 class) :

Amplifiers : Common-Source, Common-Drain, FET Common-Gate, Cascode Amplifiers. Frequency Response of Amplifiers.

Module 7 (5 class) :

Current Mirror and Differential Amplifier, Feedback Amplifiers and Noise Analysis

Module 8 (1 class) : Summary



#### Start Date: February 20, 2024

End Date: May 9, 2024

**Total Duration:** 36 hours

**Class Schedule:** Every Tuesday and Thursday

Class Timings: 7 pm to 8:30 pm

#### Meeting link : Will be shared later

#### Contact email ID: isss.forum@gmail.com

**Registration link:** 

#### https://forms.gle/eN6yYuSasXo3o8vU9