

# **ELECTRONICS**

## **PAPER I**

### **ELECTRONICS DEVICE:**

Device physics, Diodes, BJTS and MOSFETS, Integrated Circuits Fabrication techniques. Diffusion related processes, ion implantation, photolithography, metallization and crystal growth. Circuit layout on silicon.

### **ELECTRONIC CIRCUITS:**

Design and analysis of bipolar circuits. VLSI design – stick diagrams and  $\eta$  based rules for layout.

### **MICROPROCESSOR :**

Architecture of some common Ps. Memory interfacing, interrupts and timing. Flow charts and pseudo codes. Study of common peripheral chips. Assembly language programming, I/O programming and applications.

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## **PAPER II**

### **SIGNAL PROCESSING:**

Discrete Fourier Transform, FFT, Discrete Cosine and sine Transforms, Circular Convolution.

Classification of signals & system, Casualty, stability, Linear Time Invariant (LTI) systems.

Image parameters, edge detection, image segmentation, fuzzy logic, image compression, JPEG and MPEG.

Prefix coding, Huffman coding, lempel- Ziv coding Run- Length code, Block codes.

### **ANTENNA AND WAVE PROPAGATION:**

Antenna and waveguides. Satellite communication and mobile communication.