Paper: MJ-PH (TH) – 404 (2 Credits)

UNIT 1 JFETs and MOSFETs

Basic Ideas (11.1), drain curves (11.2), the transconductance curve (11.3), biasing in the ohmic region (11.4), biasing in the active region (11.5,) transconductance (11.6), JFET amplifiers (11.7), the JFET analog switch (11.8).

The Depletion-Mode MOSFET (12.1), D-MOSFET curves (12.2), Depletion-Mode MOSFET Amplifiers (12.3), the Enhancement-Mode MOSFET (12.4), the ohmic region (12.5), digital switching (12.6), CMOS (12.7).

UNIT 2 Aberrations

Introduction (6.1), Chromatic aberration (6.2), The achromatic doublet (6.2.1), Removal of chromatic aberration of a spherical doublet (6.2.2), Monochromatic aberrations (6.3), Spherical aberration (6.3.1), Coma (6.3.2), astigmatism and curvature of field (6.3.3), Distortion (6.4).

Reference books:

1. Electronics Principles by A. P. Malvino, 8th Ed., Tata McGraw Hill Publishing Co. Ltd., New Delhi, 1999.
2. Optics by Ajoy Ghatak 6th Ed., McGraw Hill Education (India) Pvt. Ltd., New Delhi, 2017.

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