

**SARDAR PATEL UNIVERSITY**  
**Programme: B.Sc**  
**Semester: IV**  
**Syllabus with effect from: November - 2012**

<b>Paper Code: US04CELE01</b>	<b>Total Credit: 3</b>
<b>Title of Paper: Electronics Devices &amp; Application</b>	

<b>Unit</b>	<b>Description in detail</b>	<b>Weightage (%)</b>
<b>I</b>	<b>Field Effect transistor &amp; FET Biasing Circuits :-</b> Decibel and frequency response, N & P channel JEFT, Characteristics of JEFT, Parameters of JEFT, DC Load line & bias point, fixed voltage bias circuit	25%
<b>II</b>	<b>MOSFET &amp; FET:-</b> Self bias, Potential divider bias circuits, JFET Voltage amplifier, FET Amplification, enhancement MOSFET, Depletion - enhancement -MOSFET , biasing MOSFETS.	25%
<b>III</b>	<b>FET Circuits :-</b> Common source circuit and its as equivalent circuit, complete ac equivalent circuit, Common drain circuit and its as equivalent circuit, complete ac equivalent circuit, Common gate circuit and its ac equivalent circuit, complete ac equivalent circuit.	25%
<b>IV</b>	<b>Opto-electronics Devices 1 :-</b> Light units, Photo multiplier tube, Photo conductive cell, Light emitting diode, Photo diode, solar cell, Photo-transistors, photo Darlington, Liquid crystal display, Opto electronics couplers, seven segment display.	25%

**Basic Text & Reference Books :-**

- Electric engineering fundamentals, Vincent Deltore (2nd Edition)
- Electronics devices and circuit, David Bell
- Digital integrated electronics, Herbert Taub, Donald Schelling
- Basic Electronics by Bhargava

