## CETPA INFOTECH PVT. LTD. CURRICULUM OF PSPICE

- Introduction to PSPICE
- Outline of PSPICE
- Simulation Hierarchy
- Feature
- Types of SPICE
  - o PSPICE
  - HSPICE
- Need , Scope and History of PSPICE
- Advantage of PSPICE
- Installation of tool
- Design Structure
- Flat Design
- Hierarchical Design
- Introduction to the Libraries
- Description of Libraries
  - o abm.slb
  - o analog.slb
  - o breakout.slb
  - o connect.slb
  - o port.slb
  - o source.slb
- Adding of Libraries
- > File structure of PSPICE
- .dsn file
- .obj file
- .net file
- .sch file
- .out file
- Introduction to Analysis
- Types of analysis
  - Bias Point Analysis
  - DC Sweep Analysis
  - o AC Sweep/Noise
  - Transient/Time domain

- Error Messages of PSPICE
- Analysis and solutions of Errors in PSPICE
  - Nodes with less than two connections
  - Unspecified component model libraries
  - Floating nodes
  - Missing model statements
- Description of inbuilt Components
  - Digital component descriptions
  - Analog component descriptions(AC/DC)
- Drawing of Circuits
- Getting the parts
- Placing the parts
- Connecting the circuits
- Changing the name of the parts
- Changing the value of the parts
- Analysis and Simulation of Digital Logic Circuits
  - Logic Gates
  - Combinational Circuits
    - Multiplexers
    - De-Multiplexer
    - o Decoders
    - Encoders
    - Comparators
    - Arithmetic and Logic operations

- Sequential Circuits
  - Flip Flops (RS,D,JK,T)
  - Counters
  - Registers
- Digital Wave form generations
- Modifying digital model Parameters
- Explanation of Bias Point analysis
  - Examples
    - o Filter Design
- Explanation of DC Sweep analysis
  - Examples
    - Analysis of PMOS
    - o Analysis of NMOS
    - Analysis of CMOS
- Explanation of AC Sweep/Noise analysis
  - Examples
    - AC Circuit Design & analysis
- Explanation of Transient/Time domain analysis
  - Examples
    - o Diode and Register
    - Logic Gates
    - Digital Design
    - Analog Design
- Project Work

Project List mentioned on – http://www.cetpainfotech.com

HEAD OFFICE: 200 Purwavali , 2nd Floor, (Opp. Railway Ticket Agency), Railway Road , Ganeshpur ,

247667, Ph.No.: 09219602769, 01332-270218 Fax - 1332 - 274960

CORPORATE OFFICE: D-58, Sector-2, Near Red FM. Noida -201301, Uttar Pradesh

Contact Us: +91-9212172602, 0120-4535353

BRANCH OFFICE: 401 A, 4<sup>th</sup> Floor, Lekhraj Khazana, Faizabad Road, Indira Nagar,

Lucknow-220616 (U.P.) Ph. No: +91-522-6590802, +91-9258017974

BRANCH OFFICE: 105, Mohit Vihar, Near Kamla Palace, GMS Road, Dehradun-248001, UK Contact: +91-9219602771, 0135-6006070

Toll Free- 1800-8333-999 (from any network)

