CETPA INFOTECH PVT. LTD.
CURRICULUM OF PSPICE

- ➢ Introduction to PSPICE
  - Outline of PSPICE
  - Simulation Hierarchy
  - Feature
  - Types of SPICE
    - o PSPICE
    - o 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
    - o Bias Point Analysis
    - o DC Sweep Analysis
    - o AC Sweep/Noise
    - o Transient/Time domain

- ➢ Error Messages of PSPICE
  - Analysis and solutions of Errors in PSPICE
    - o Nodes with less than two connections
    - o Unspecified component model libraries
    - o Floating nodes
    - o 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
    - o Multiplexers
    - o De-Multiplexer
    - o Decoders
    - o Encoders
    - o Comparators
    - o Arithmetic and Logic operations

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

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