National Institute of Technical Teachers' Training and Research, Bhopal

PROGRAMME BRIEF

- **Title of the Programme:-** Circuit design and simulation using Multisim
- **Programme code:**- EEE-06
- **Programme duration: 19 to 23 June 2023**
- **Venue: - DEEE, NITTTR Bhopal**

1. **Rationale:** Electronics components and circuits are the backbone of every electronic system. Electronics circuits are comprised of analog and digital components. Design, simulation, and testing of various analog and digital circuits/systems using an electronic design and automation tool/software is an essential need of the present time to work in the electronics industry. The aim of this FDP is to develop skills to use MULTISIM Software to develop prototype designs containing analog and digital components, a printed circuit board of the given circuit, and test the circuit's functionality virtually.

2. **Programme Outcomes:**

   After attending this programming the participants will be able to:

- Develop skills to use MULTISIM and Ultiboard software.

- Test Analog and Digital circuits using MULTISIM software.

- Develop analog and digital application circuits.

- Develop applications related Electrical and Electronic Engineering field.

3. **Programme Content:**

   Introduction to MULTISIM Software, design and test Electrical and Electronic Circuits using MULTISIM software, Analog, and Digital circuit design simulation and test the functionality, develop and test simple applications circuits, Component wizard, Introduction to Ultiboard software, small project on circuit design and simulation.

4. **Instructional Strategy: -**

   Interactive Lectures, Input-cum-Discussions, analogies, e-learning, hands on practices on software, individual assignments, Group discussion, Internet-based syndicate work and presentation, quiz, and tests.

5. **Target Group: -**

   Faculty of AICTE approved Degree/ Diploma level technical institutions, Government/aided/self-financed/Government funded Science, Polytechnic

and Engineering faculty.

6. Coordinator & Faculty details:

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7. Tentative Programme Schedule:

Day	Session 1 10.00 AM- 11.30 AM	Session 2 11.45 AM - 13.15 PM	Lunch 13.30 PM - 2.00 PM	Session 3 2.15 PM - 3.45 PM	Session 4 4.00 PM - 5.30 PM
Day-1 Monday	Registration	Overview of Multisim Software		Practice Session	Assignment-1 and feedback on assignment
Day-2 Tuesday	Building and Testing Analog Circuits	Building and Testing Analog Circuits		Practice and Assignments on Analog circuits	Assignment-2 and feedback on assignment
Day-3 Wednesday	Building and Testing Digital Circuits	Building and Testing Digital Circuits		Practice and Assignments based Digital Circuit	Assignment-3 and feedback on assignment
Day-4 Thursday	Component Wizard	Introduction to Ultiboard and other open source software		Project Assignments and Practice	Project Assignments and Practice
Day-5 Friday	Project submission and feedback	Presentations by Participants		Achievement Test	Valedictory Session