



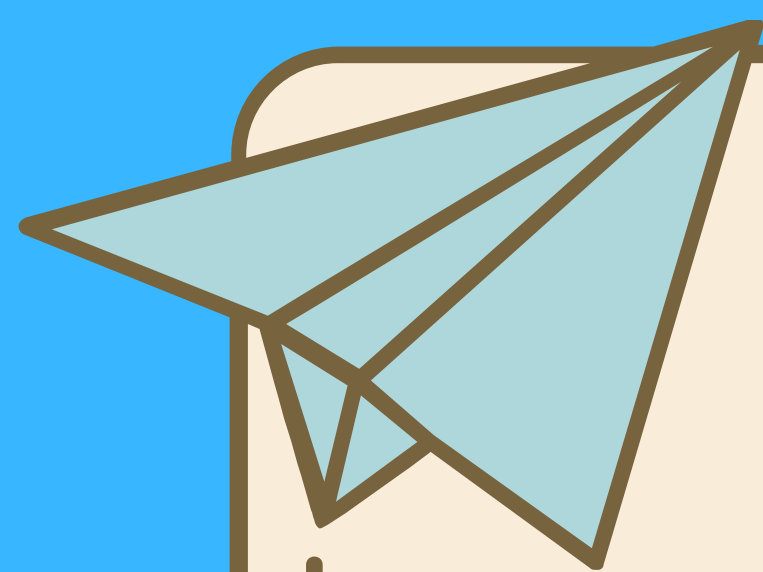
**KLE Technological
University** | Creating Value,
Leveraging Knowledge

Dr. M. S. Sheshgiri Campus, Belagavi

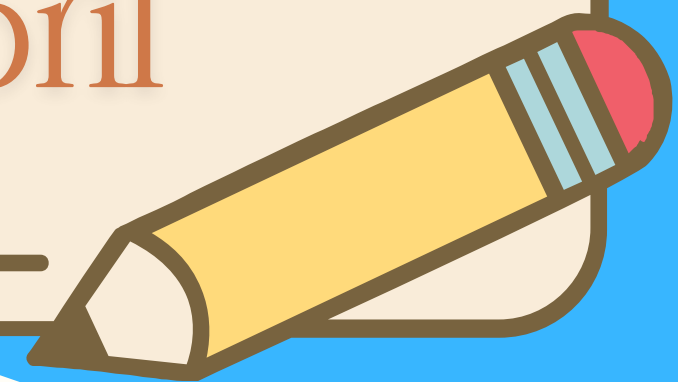
DEPARTMENT OF ELECTRONICS AND
COMMUNICATION
PRESENTS

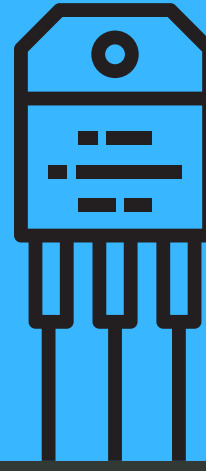
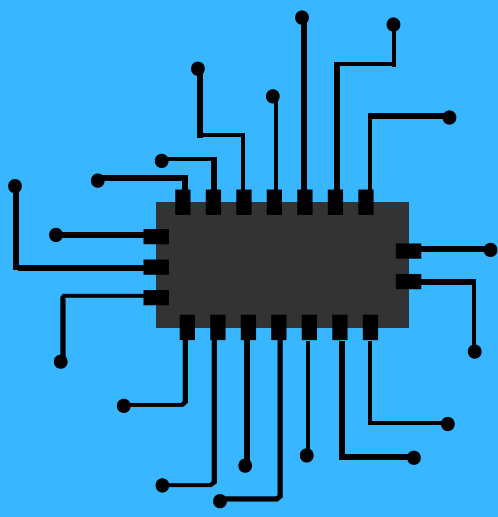
RESONANCE 2.0

TRANSISTRON RULE BOOK

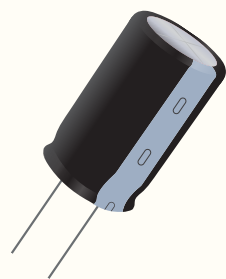


Date: 16th &
17th April





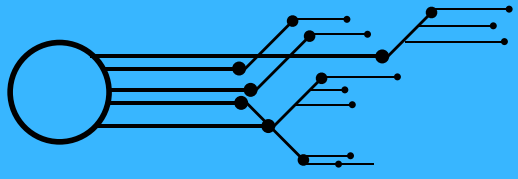
TRANSISTRON IS A HANDS-ON ELECTRONICS DESIGN CHALLENGE UNDER RESONANCE 2.0. PARTICIPANTS ARE REQUIRED TO DESIGN, SIMULATE, AND IMPLEMENT A USEFUL ELECTRONIC CIRCUIT THAT CAN BENEFIT ELECTRONICS AND COMMUNICATION (ENC) STUDENTS IN PRACTICAL APPLICATIONS. THE EVENT EVALUATES PARTICIPANTS BASED ON CIRCUIT DESIGN ABILITY, DEBUGGING SKILLS, COMPONENT SELECTION, AND TECHNICAL EXPLANATION.



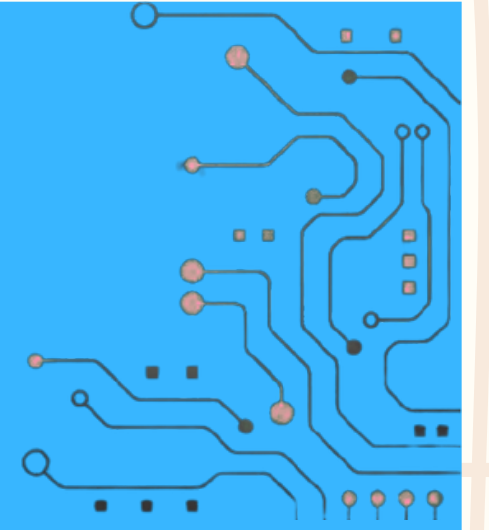
1. TEAM COMPOSITION



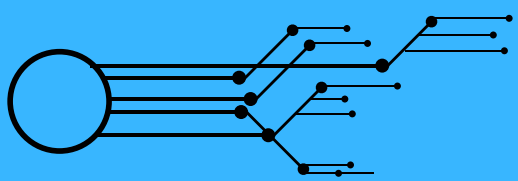
- **Each team may consist of 1 to 4 members.**
- **Individual participation is allowed.**
- **Teams exceeding four members will be disqualified.**



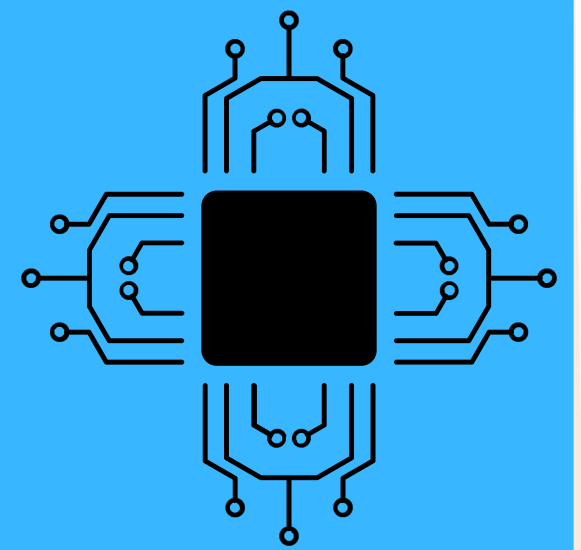
2. REGISTRATION



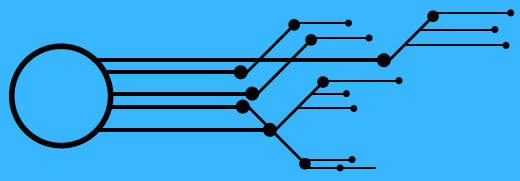
- **Open to students from all branches.**
- **Open to all Engineering / Diploma / BSC Electronics**
- **Registration Fee: ₹ 400 per team.**
- **Maximum 2 teams per problem statement.**
- **Registration will be confirmed only after successful payment.**



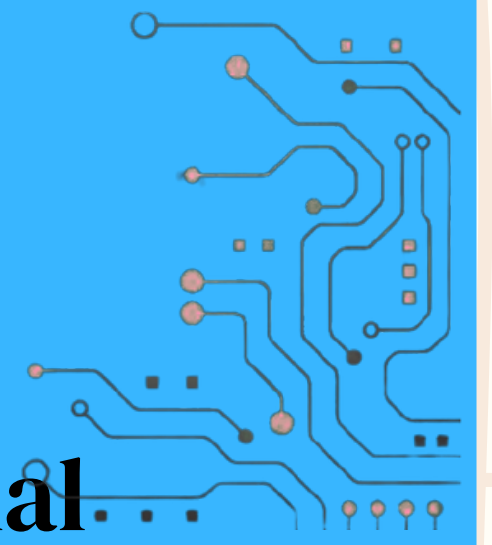
3. DESIGN AND TECHNICAL CONSTRAINTS



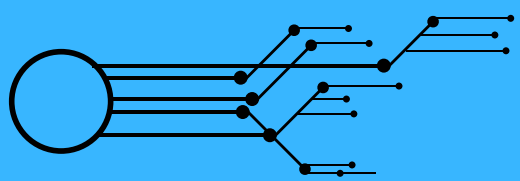
- **Use of microcontrollers is strictly prohibited.**
- **Projects must be implemented using only discrete electronic components.**
- **All circuits must be implemented strictly on a breadboard.**



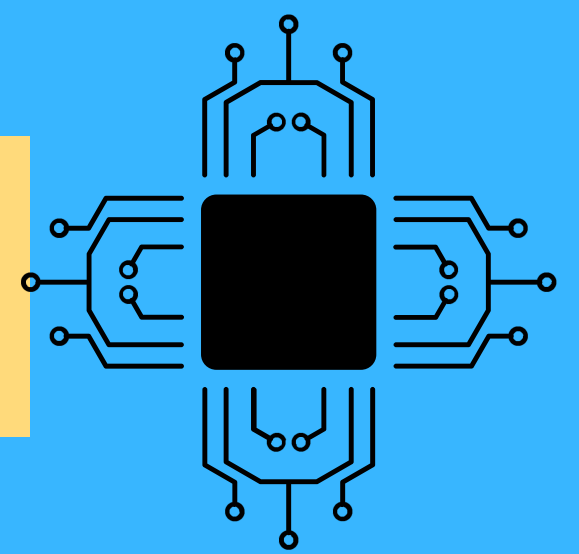
4. ALLOWED ELECTRONIC COMPONENTS



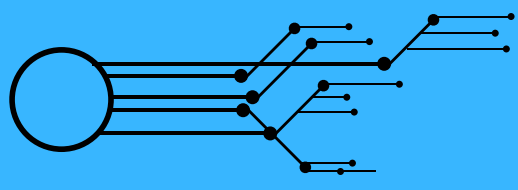
- ICs (Logic ICs, Timer ICs, Operational Amplifiers, etc.)
- Resistors
- Capacitors
- Diodes
- BJT Transistors
- MOSFETs
- General Transistors
- Other passive and active electronic components



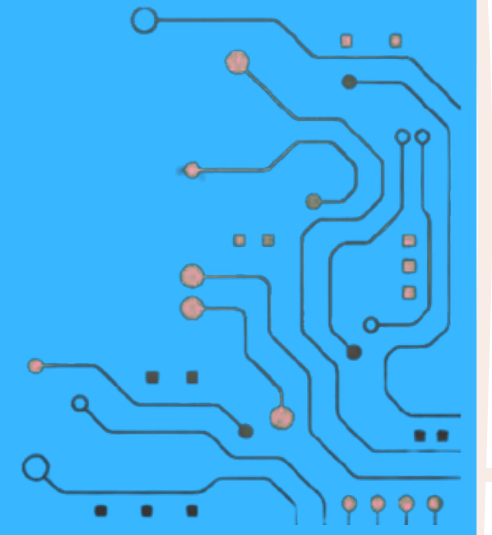
5. SIMULATION ROUND



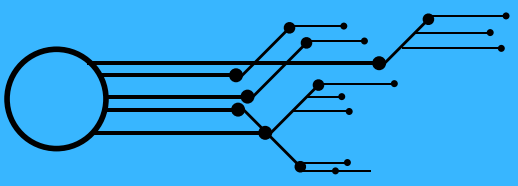
- Allowed Simulation Software
- LTspice
- Proteus
- Falstad
- Circuit.io
- Multisim
- **Note: Participants need to bring their own Laptops for Simulation.**



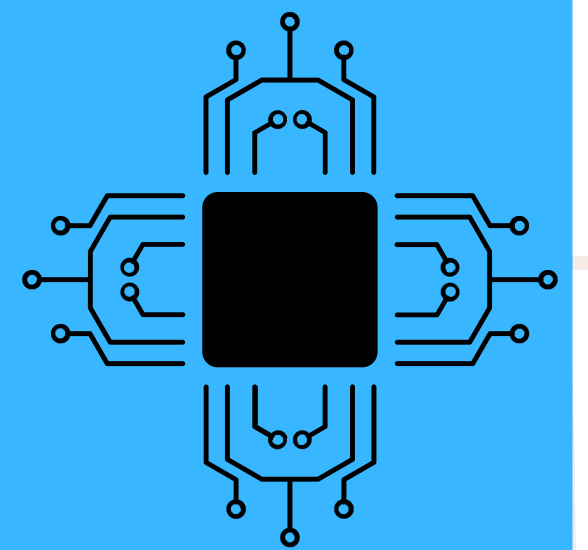
6. BREADBOARD IMPLEMENTATION



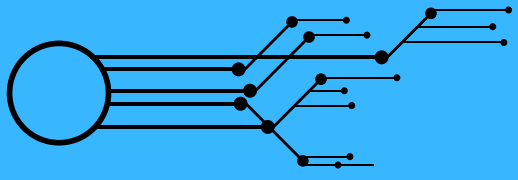
- **The complete project must be designed and built from scratch at the venue.**
- **Pre-built circuits, modules, or pre-soldered systems are strictly prohibited.**
- **Any violation will result in immediate disqualification.**
- **All connections must be implemented using a breadboard.**



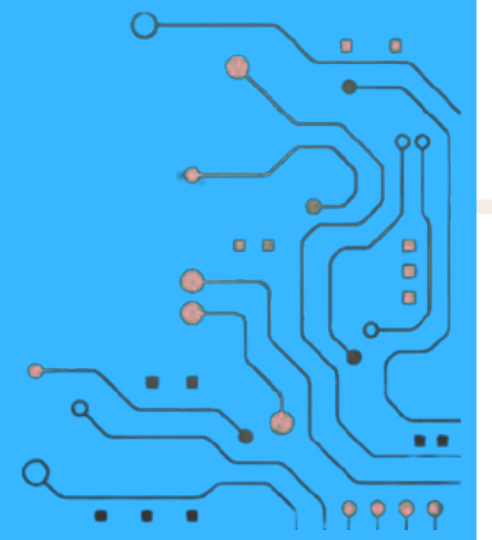
7. COMPONENTS RESPONSIBILITY



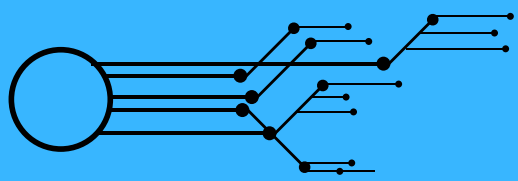
- **Teams must bring the specific components required for their chosen project.**
- **Participants should bring breadboards, jumper wires, cutters, and any special ICs required.**



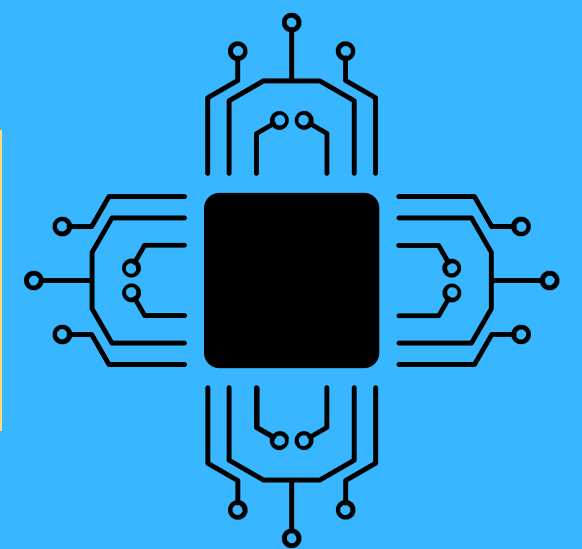
8. INFRASTRUCTURE PROVIDED BY ORGANIZERS



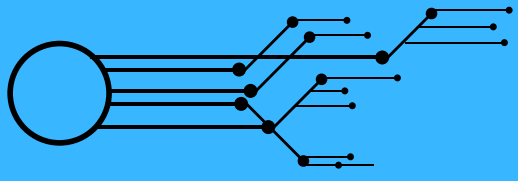
- **Power Supply, Tables and workspace**
- **CRO (Cathode Ray Oscilloscope)**
- **Signal Generator**
- **Basic electronic components**
- **Basic testing devices**
- **The above infrastructure will be available only for testing and debugging purposes.**



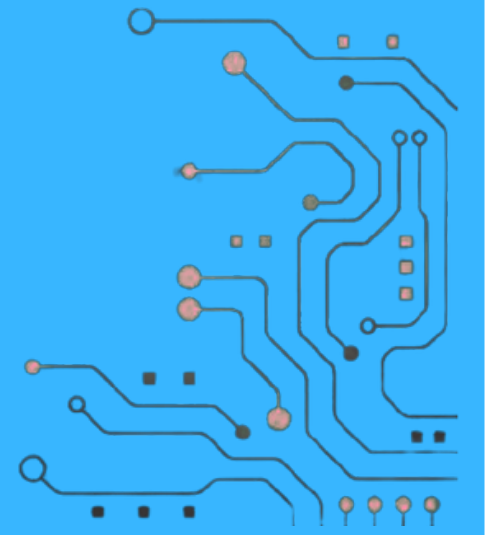
9. MODIFICATION ROUND



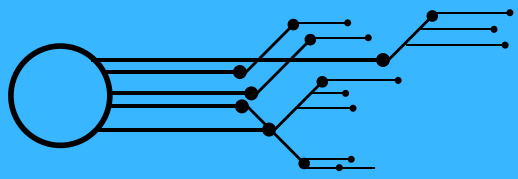
- **After completion of the circuit, each team will be given a minimum of two modification tasks. Participants must modify their circuit according to the given requirements within the allotted time.**



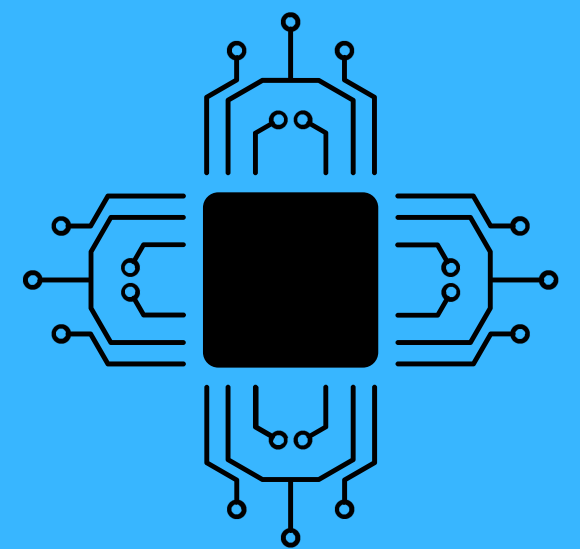
10. EVENT FACILITIES



- **Lunch will be provided to all registered participants.**
- **Accommodation arrangements will be provided for participants as per event guidelines.**



11. GENERAL CONDUCT



- **Participants must adhere to event discipline and safety rules.**
- **Any form of cheating, misconduct, or violation of rules will result in disqualification.**
- **Participants must follow the instructions of the organizing committee at all times.**