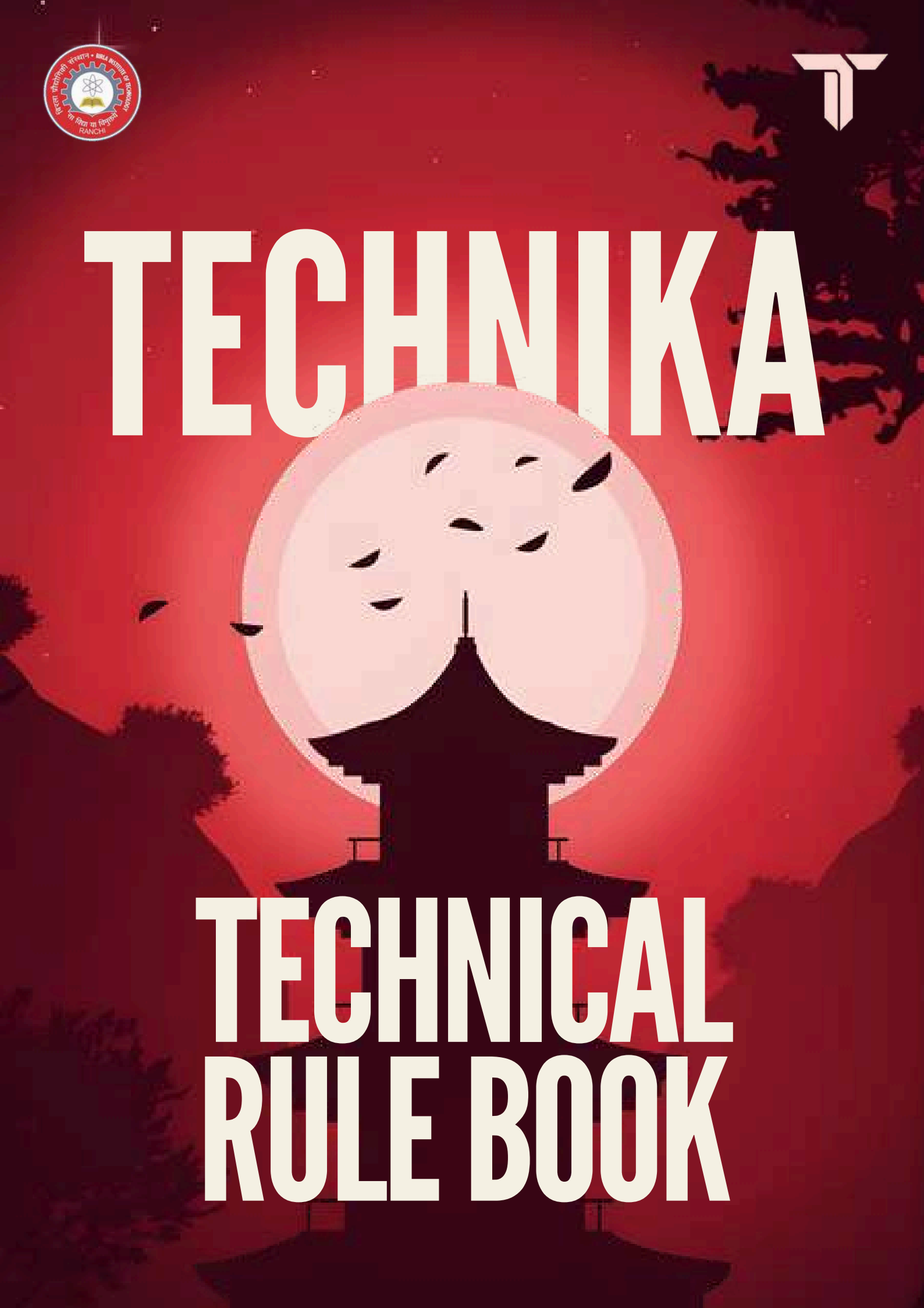
TECHNIKA
TECHNICAL
RULE BOOK

DEV CONTEST (HACKATHON))

OBJECTIVE

PARTICIPANTS WILL BUILD A FULLY FUNCTIONAL PROTOTYPE OR APPLICATION BASED ON PROBLEM STATEMENTS PROVIDED AT THE START OF THE EVENT

RULES

1. PROBLEM STATEMENTS: TEAMS WILL CHOOSE FROM A SET OF REAL-WORLD PROBLEM STATEMENTS (E.G., SUSTAINABILITY, SMART TECHNOLOGY)
2. PROGRAMMING LANGUAGE & TOOLS: PARTICIPANTS CAN USE ANY PROGRAMMING LANGUAGE OR SOFTWARE TOOLS.
3. DOCUMENTATION: A README FILE DETAILING THE PROJECT AND INSTRUCTIONS FOR SETUP MUST BE SUBMITTED.
4. PRESENTATION: A LIVE DEMO IS MANDATORY.

JUDGING CRITERIA

* INNOVATION (30%): ORIGINALITY AND CREATIVITY IN SOLVING THE PROBLEM.
* FUNCTIONALITY (30%): HOW WELL THE APPLICATION WORKS.
* USABILITY (20%): USER EXPERIENCE AND INTERFACE DESIGN.
* TECHNICAL COMPLEXITY (10%): CODE SOPHISTICATION AND CHALLENGES OVERCOME.
*PRESENTATION (10%): CLARITY IN PRESENTING THE SOLUTION

ALGO APEX

OBJECTIVE

PARTICIPANTS WILL SOLVE ALGORITHMIC PROBLEMS TESTING THEIR KNOWLEDGE OF DATA STRUCTURES, ALGORITHMS, AND PROBLEM-SOLVING.

RULES

1. PARTICIPANTS MUST SUBMIT THEIR SOLUTIONS ELECTRONICALLY THROUGH THE EVENT'S SUBMISSION SYSTEM.
2. SOLUTIONS WILL BE EVALUATED BASED ON CORRECTNESS AND EFFICIENCY.

JUDGING CRITERIA

*PROBLEM SOLVING (50%): NUMBER OF PROBLEMS SOLVED CORRECTLY.
* EFFICIENCY (30%): TIME COMPLEXITY OF SOLUTIONS. .
*CORRECTNESS (20%): ACCURACY OF SOLUTIONS.

AMPERE ASSEMBLE

OBJECTIVE

PARTICIPANTS MUST DESIGN A FUNCTIONAL CIRCUIT BASED ON PROVIDED SPECIFICATIONS, USING NO SOFTWARE TOOLS.

RULES

1. CIRCUITS MUST BE DESIGNED MANUALLY, WITH ALL CALCULATIONS DONE BY HAND.
2. NO USE OF SOFTWARE TOOLS LIKE MULTISIM IS ALLOWED.

JUDGING CRITERIA

*DESIGN ACCURACY (40%): HOW WELL THE DESIGN MEETS THE SPECIFICATIONS.
* CREATIVITY (30%): INNOVATION IN THE DESIGN.
*CALCULATIONS (20%): CORRECTNESS OF THE MANUAL CALCULATIONS.
*PRESENTATION (10%): CLARITY IN EXPLAINING THE DESIGN PROCESS.

ROBO GLADIATORS (ROBO WAR)

OBJECTIVE

PARTICIPANTS WILL DESIGN COMBAT ROBOTS TO COMPETE AGAINST OTHERS IN AN ARENA.

RULES

1. ROBOTS MUST BE BUILT TO DAMAGE OR IMMOBILIZE OPPONENTS.
2. NO FLAME-THROWERS, EXPLOSIVES, OR PROJECTILES ARE ALLOWED.

JUDGING CRITERIA

*COMBAT PERFORMANCE (50%): ABILITY TO DISABLE THE OPPONENT.
* ROBOT DURABILITY (30%): RESISTANCE TO DAMAGE.
*ROBOT DURABILITY (30%): RESISTANCE TO DAMAGE.

ROBO SOCCER

OBJECTIVE

PARTICIPANTS WILL DESIGN AND OPERATE ROBOTS TO COMPETE IN A SOCCER-STYLE MATCH. THE GOAL IS TO SCORE BY PUSHING OR GUIDING THE BALL INTO THE OPPONENT'S GOAL, TESTING CONTROL, STRATEGY, AND MECHANICAL DESIGN.

RULES

1. EACH TEAM CONSISTS OF 2–4 MEMBERS WITH ONE ROBOT.
2. ROBOTS MUST FIT WITHIN 30CM X 30CM X 30CM AND BE BATTERY-POWERED ONLY.
3. ROBOTS MAY PUSH OR GUIDE THE BALL BUT MAY NOT LIFT OR HOLD IT COMPLETELY.
4. MINOR CONTACT BETWEEN ROBOTS IS ALLOWED; INTENTIONAL DAMAGE OR RAMMING IS PROHIBITED.
5. IF A ROBOT GETS STUCK OR FLIPS, THE REFEREE MAY ALLOW ONE RESET.
6. MATCH DURATION AND ARENA SIZE WILL BE DECLARED BY ORGANIZERS.

JUDGING CRITERIA

*GOALS SCORED (50%): NUMBER OF VALID GOALS MADE DURING THE MATCH.

* CONTROL & STABILITY (30%): SMOOTH MOVEMENT, BALANCED STRUCTURE, AND HANDLING..

*FAIR PLAY & CONDUCT (20%): CLEAN GAMEPLAY AND ADHERENCE TO RULES.

DIRT RACE (ROBO RACE)

OBJECTIVE

PARTICIPANTS WILL NAVIGATE THEIR ROBOTS THROUGH AN OBSTACLE-BASED RACE TRACK. THE AIM IS TO COMPLETE THE COURSE IN THE SHORTEST TIME WHILE MAINTAINING CONTROL, STABILITY, AND AVOIDING PENALTIES. THIS EVENT TESTS DESIGN DURABILITY, SPEED, AND PRECISE MANEUVERING.

RULES

1. EACH TEAM MAY HAVE 2–4 MEMBERS WITH ONE ROBOT. .
2. ROBOT DIMENSIONS MUST NOT EXCEED 30CM X 30CM X 30CM; BATTERY-POWERED ONLY.
3. THE TRACK WILL INCLUDE RAMPS, BUMPS, TURNS, SAND/DIRT PATCHES, AND SPEED BREAKERS.
4. ROBOTS MUST REMAIN WITHIN THE TRACK BOUNDARIES; GOING OFF-TRACK INCURS TIME PENALTIES
5. NO DRAGGING, PUSHING, OR DAMAGING THE TRACK IS ALLOWED.
6. IF THE ROBOT STOPS, A SINGLE RESET MAY BE ALLOWED (TIME RUNS CONTINUOUSLY).

JUDGING CRITERIA

*COMPLETION TIME (60%): FASTEST VALID RUN.
*STABILITY & CONTROL (25%): SMOOTH HANDLING AND MINIMAL RESETS.
*TRACK DISCIPLINE (15%): AVOIDING OFF-TRACK PENALTIES AND MAINTAINING FAIR PLAY.