



# ABHYUDAYA

Chasing the Singularity of Excellence

रुद्र  
बॉक्स

# RC CAR

## Description :

The RC Bot Car Competition challenges participants to design, build, and operate a remote-controlled robotic car capable of completing a predefined track with obstacles in the shortest possible time while following all technical and safety regulations.

## Team Structure :

- A team may consist of 1-4 members.
- All team members must be students of a recognized institution.
- One team can participate with only one bot.
- A participant cannot be part of multiple teams



# **Robo-Soccer Bot Specification :**

## **Control :**

- The bot must be manually controlled using:  
Wireless remote (RF / Bluetooth)
- Autonomous bots are NOT allowed

## **Dimensions :**

- Maximum size: 30 cm × 30 cm × 30 cm (L × B × H)
- The bot must fit within this limit at all times.

## **Weight :**

- Maximum weight: 5 kg (including battery).

## **Power Supply :**

- Only on-board power supply allowed.
- Permitted batteries:
- Li-ion / Li-Po
- NiMH
- Lead-acid (sealed)
- Maximum voltage: 12V DC
- AC power supply is strictly prohibited

## **Components & Materials :**

- Readymade RC car chassis are not allowed.
- Use of explosive, corrosive, or hazardous materials is strictly prohibited.
- Sharp edges or exposed wiring are not allowed.



## **Robo-Soccer Arena :**

### **Arena & Track:**

- The arena will consist of:
- Straight paths
- Turns
- Speed breakers
- Ramps / Inclines
- Obstacles (sand, stones, barriers, zig-zag)
- The exact arena layout will be disclosed on the event day.
- Arena surface may be wood, concrete, or synthetic material.

### **Gameplay Rules :**

- Each team gets two official runs .
- Timing starts when the bot crosses the start line.
- Timing stops when the bot crosses the finish line.
- The bot must follow the track path strictly

### **Penalties :**

- Bot going off track: +15 seconds
- Hitting obstacles: +5 seconds
- Manual touch by team member: +15 seconds
- Restarting bot: +5 seconds
- Skipping obstacle: will be decided on that day only



## **Robo-Soccer Arena :**

### **Scoring & Winning Criteria :**

- Least completion time (including penalties) wins.
- In case of a tie:
  1. Fewer penalties
  2. Faster obstacle completion
  3. Judges' decision (final)

### **Disqualification Rules :**

A team may be disqualified if:

- The bot exceeds size or voltage limits.
- Unsafe design or behavior is observed.
- Team violates instructions or shows misconduct.
- Any rule is intentionally ignored

### **Safety Rules :**

- Batteries must be properly insulated.
- No loose wires or exposed terminals.
- Organizers are not responsible for damage to bots.
- Participants are responsible for their own safety.

### **General Rules :**

- Judges' and organizers' decisions are final and binding.
- Organizers reserve the right to:
  - Modify rules
  - Change arena design
  - Disqualify teams for safety reasons
  - Rules may be updated until the event day



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“Design smart. Drive safe. Race within the rules.”

