

# Wings 2023

## Competition Title : Nitro-Race

### Rulebook

## OVERVIEW

**Our engineering team is back in the spotlight! Creating an amazing track to test the speed and precision of the expert drivers who have come to Aurangabad to participate in this breathtaking event. It's about a remote, a car, and a lot more action and emotion filling the air as these die-hard controllers compete to win..**

- 1.** This is a team event open to both college and high school students.
- 2.** Each team can have a maximum of two members. Members of the team may come from different colleges.
- 3.** This is a four-round competition. All rounds will be held at GECA on the 3rd, 4th, and 5th of February 2023.
- 4.** Once the Race starts, only the marshals (volunteers) have the rights to re-position the car, none of the team members should enter the track
- 5.** The Coordinators reserve the right to dis-qualify any team indulged in mis-behavior.

## Car Specifications

1. 3 sets of durable gear differentials
2. Eight-spoke chrome wheels & high grip tires.
3. Enclosed radio box enables to install 4 aa size batteries.
4. 150c.c. large capacity fuel tank with large fuel splash guard
5. 4 machined aluminum oil-filled shocks with 3.5mm shafts, maximum for 8 shocks installed possibly
6. Tuned pillow ball front suspensions system for ease of camber tuning.
7. Aluminum tuned pipe & header o High torque 8.0 kg metal gear steering & throttle/brake servos included.
8. Composite 3-shoe clutch o Dual oil-resistant fiber disc brakes.

## Engine specification:

Displacement:	4.6 cc.
RPM:	3,000 ~ 35,000
Output:	2.40 BHP / 30,000 RPM
Weight:	460 g. without muffler

The fuel use in this engine for transmission must be NITRO fuel, whose components must be Nitro Methane( $\text{CH}_3\text{NO}_2$ ), Methanol( $\text{CH}_3\text{OH}$ ) and Castor Oil. This radio-controlled car (RC car) must be a powered model car driven from a distance using a radio-control system. Inputs from a wheel and a trigger on a Transmitter (2.4 GHz) are supposed to be sent to the car's onboard receiver. This receiver must interpret the radio signals and sends electrical pulses to the servo and electronic speed controller, making the model turn its wheels and the motor run.

## About Cars:

1. Ready-To-Run kits are accepted .
2. If the team's equipment is deemed unsafe on the track, the coordinator has the authority to disqualify the team.
3. Due to the track's numerous jumps and bumps, only Off-Road RC Nitro cars are permitted to race.

**Transmitter:**

1. Both pistol and stick transmitters are permitted.
2. Teams should register their radio frequencies at the venue's registration desk.
3. All teams competing in the race are expected to have two crystal transmitters; in the event of a frequency clash, the team must change their crystals to a different frequency.
4. The organisers will not provide any crystals.

## **Tasks**

1. The events consist of 4 rounds that are supposed to be raced over the three days of Wings 2023.
2. For the first round, the Preliminary Round, participants must run their cars for 8-10 laps to become acquainted with the track limits. This round will not feature any eliminations.
3. In the second round, the quarter-final round, teams will race for several laps, with 4-4 teams qualifying for the next round.( 2 teams from each set will be eliminated )
4. In the semi-final round, teams that qualified in the previous round will race for several laps, with the top 4 teams advancing to the finals.
5. Teams advancing to the finals will race in a nail-biting thriller final on the final day of the event.

### **Judging Parameters**

- 1.Once the Race starts, only the marshals ( volunteers ) have the rights to re-position the car, none of the team members should enter the track**
- 2.The Coordinators reserve the right to dis-qualify any team indulged in mis-behaviour.**

**The top 2 teams will be awarded with cash prizes worth 25,000/ rupees (First Price 20,000/- And Second Price 5,000 /-) and the Certificates of Excellence. The remaining teams has to complete the task, if they fail to complete the task, they will not be eligible for the certificate.**

## **Participation Fees:**

For College/University Students

- Participation Fees For Individual 500/
- Each Member must carry his college ID Card.

For Club Members

- Participation Fees For Individual or a team of 2 - 1000/

**Accommodation:**

Accommodation will be provided in campus for free of cost.

**Registration Link:**

<https://forms.gle/tqedJgDR6JeMh9Rc6>

Online and offline both entries are allowed

**Venue: Government College of Engineering , Aurangabad**

Visit: <http://www.gecawings.com/>

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