Galactic Grand Prix

1. Event Overview:

The Robot Racing event challenges teams to design, build, and race robots on a dynamic track filled with obstacles The competition is divided into multiple rounds where the goal is to complete the racecourse as fast as possible Teams will need to demonstrate both speed and precision, as well as adaptability to varying challenges The final showdown will test not only the robots speed but also the teams coordination in a relay style race

2. Rules:

- Robot Specifications:
  - Remote controlled robot, only wireless bot is permitted.
  - Maximum dimensions: **200mm (length) x 200mm (width) x 100mm (height)**
  - Maximum weight: **5 Kg**
  - Battery: Robots must use a **12-volt battery**.
- Course Navigation:
  - Each team will have a **3:00 min time limit** to complete the course.
  - Robots must pass through all **checkpoint**s and obstacles to be eligible for a win.
  - In case the robot leaves track boundaries, the robot will start from its latest check point.
- Penalties:
  - **Track Exiting**: If the robot leaves the track more than twice during a race, it will receive a **5-second time penalty** per occurrence after the second time..
  - **Manual Help**: If a team manually intervenes to help or adjust their robot during the race (such as placing it back on track or making physical adjustments), **3 seconds will be added** to their race time for each occurrence.
- Team Conduct:
  - Teams must arrive before time for their scheduled race slots.
- Disqualification Conditions:

- Tampering with another team's robot or controller.
- Exceeding the size, weight, or battery limits.
- Persistent misconduct or violations of event rules.
- Unsportsmanlike behaviour will result in disqualification.

3. Eligibility Criteria:

- Teams must consist of **minimum 2** and **maximum 3 participants**.
- All participants must be from grades **6th to 12th**.
- Only one robot per team is allowed.
- Robots must adhere to the event specifications

4. Expected Items:

- Participants must bring:
  - Their own robot and remote controller
  - Any spare parts for the robot
  - Personal laptops (if needed for programming or controls)

5. Event Rounds Details:

- ***Round 1: Time Trials***
  - Objective: Teams will compete individually.Each team will be allowed one attempt to race their robot through the entire track as fast as possible. The time taken to complete the track will be recorded.
  - How it Works: The round begins with the first team, and robots are timed from the moment they start until they cross the finish line. Teams must complete the course in one continuous motion; any stoppages or manual interventions will result in penalties. The teams with the fastest times will proceed to Round 2
- ***Round 2: Knockout Race***
  - Objective: The top 8 teams will race head-to-head on the same track. Both robots will be positioned at the starting line, and the race begins simultaneously for both teams.
  - How it Works: The race will be a direct competition. Teams must navigate their robots through the course without

interference, and the first robot to cross the finish line wins. During this round, if a robot goes off the track or stops, penalties will apply for any manual help (3-second penalty per instance).

- ***Round 3: Team Relay***
    - Objective: In this final round, top 2 teams will race in a relay-style event where one team member must hand over the controller to another member after each lap through the race.
    - How it Works: The race begins with one team member controlling the robot. At a designated point on the track (One complete Lap), the controller must be handed to the second team member, who will continue the race. The team to complete the track first will be declared the winner.
    - **Note- Time will keep on running during the exchange of controllers.**

6. Other Information:

- Teams should ensure their robots are fully functional before arriving at the venue. A techcheck will not be provided
- Participants are encouraged to arrive 30 minutes early for any preparations or clarifications
- Track Description—
    - The track will consist of ramps, sharp turns and a curved ramp on the race course
    - 3 to 4 checkpoints will be given at random places.

7. Judgement Criteria:

- Time - Fastest lap times with minimal penalties.
- Completion of Race

Good luck, and may the fastest robot win!!