



TECHNOVANZA

Taking technology to society

Fast n Furious

INTRODUCTION:

"Ask any racer. Any real racer. It doesn't matter if you win by an inch or a mile. Winning's a winning." - Dom Toretto (The Fast and The Furious 2001)

Agility of the car is not the only touchstone when there are barricades which the car has to tackle. It completely depends on how efficaciously the person maneuvering the car deals with speed and accuracy.

VJTI's Technovanza brings to you another thrilling real time all-terrain racing competition, race The Fast and Furious from across the nation! Get ready, put your car-designing abilities, strength, power and efficiency to the test.

Team Specifications:

A team may consist of a maximum of 5 participants. Students from different educational institutes can form a team.

Certificate Policy:

1. Certificate of Appreciation/Participation will be awarded to all teams.
2. Certificate of Excellence will be given to top three teams.
3. Disqualified teams will not be considered for any certificates.

Gameplay:

Make a wireless remotely controlled car, powered by only an IC engine, which can race against other opponents on an off-road dirt track with many obstacles.

There will be different types of races in qualification round:

A.Time Trial

B.Drag

A. Time Trial:

Each team will get two trials. Each trial consists of two laps. The fastest trial will be considered. Not more than two team members will be allowed in the arena at a time. Checkpoints will be placed throughout the arena. If a car is stuck or falls off the arena, that team will be allowed to pick it up and place it at a checkpoint behind that point, the time for which will be added to the total lap time. If a car disintegrates in the arena leaving behind loose parts then the team will be disqualified. Once the race begins, if the team members are found touching their or opponent's car then they will be immediately disqualified. If any car starts off before the flag is waved, the counter would be restarted and the team will get a second chance. However, if any car starts off before the waving of flag (or countdown) for a second time, it will be disqualified. Once disqualified, the team can't participate again in the event. If any member of a team is found purposely damaging other team's car, then the team will be disqualified.

B. Drag:

Each team will get two laps. The fastest lap will be considered. There will be no obstacles in this race type. The teams just have to accelerate on a straight path. Once the race begins the car is not allowed to stop until it crosses the finishing line. If the car stops in between the race then that lap will not be considered. The car is not allowed to touch the boundary tires. Extra time will be added if the car touches any boundary tires.

Total = A + B.

Top teams in qualifying round will make it to the second round.

In case of any disputes/discrepancies, the organizer's decision will be final and binding.



Rules:

1. The car should fit in a box of dimensions 700mm x 500mm x 600mm throughout the race, excluding the external device which is used to control the car.
2. The teams must design a purely wireless remote controlled car.
3. The car parts can be roughly classified into structural and functional parts:
Functional parts - Ready-made versions of Gears, differential gear, engine, springs, shock absorbers, servo motors (non-propulsion purposes only), batteries, wheels can be used.
Structural parts - Chassis, steering mechanism, shock towers and suspension (excluding the upper suspension arm, suspension spring and shock absorbers) have to be built by the participants themselves.
4. Judging for the same will be strict and the participant will be immediately disqualified if any of the above structural components are found to be ready-made.
5. After a thorough inspection, cars which seem dangerous will be disqualified. This decision of the judges and the organizers will be ultimate.
6. Minimum thickness of tyres is 3 inch. Selection of a good width will ensure better performance in dirt tracks.
7. Brake Mechanism - It is compulsory to incorporate a braking mechanism in the car. Participants have to fabricate the brake pad as a part of the braking mechanism. Any other part used in braking mechanism (including the brake disk) can be readymade.
8. Wheel Hub - Any part rigidly attached to the wheel hub will be considered as a part of it and hence can be ready-made. E.g.:- ball stud.
9. Steering Mechanism - Any part which is connected to steering rod rigidly i.e. has no degrees of freedom with respect to steering rod will be considered as part of steering rod and thus has to be fabricated by participants.
10. Suspension mechanism - Any part rigidly connected to suspension arms or one with no degrees of freedom with respect to suspension arm will be considered as its part and has to be fabricated by the participants, except the upper suspension arm. For example, both the helm joint for the upper suspension arm and the stud rigidly connected to the wheel hub can be bought from the market.

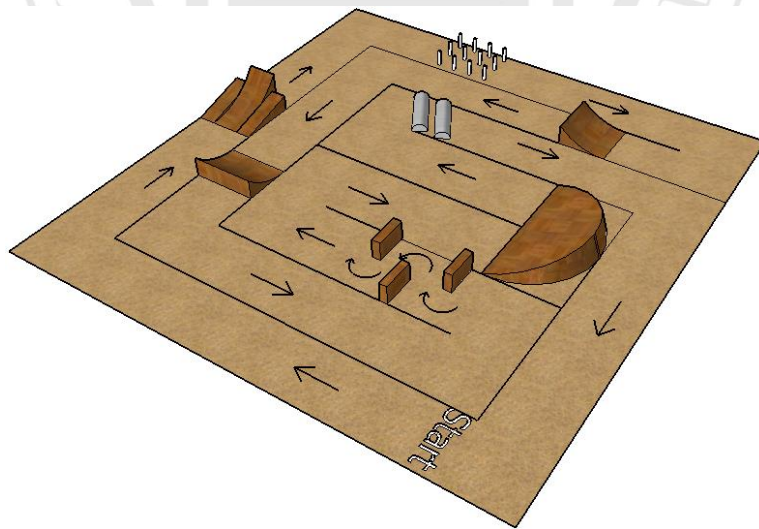


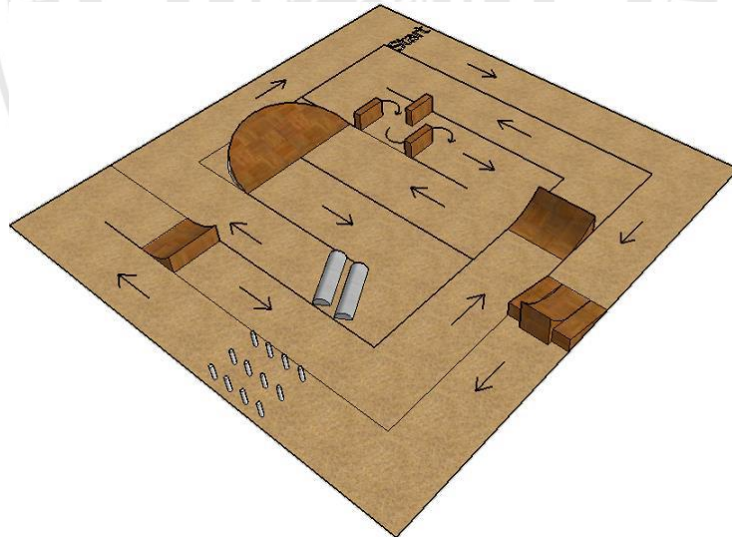
- 11.If there are parts used in the concerned joint which are neither rigidly connected with suspension or the hub, steering system or hub; they can be taken ready-made from the market.
- 12.The Car must be propelled by only mechanical power generated by an internal combustion (IC) engine for propulsion. Only one IC engine should be used in the car. Use of any other sources such as chemicals, compressed gas, rockets etc. is not allowed.
- 13.The maximum allowed capacity of IC engine to be used is 4.6 cc (i.e. Participants can also use 2.5 cc, 3 cc, 3.5 cc or any other IC engine lower in capacity).
- 14.The electric voltage anywhere in the car should not exceed 12V at any point of time.

Arena:

The following pictures depict the track for the time trial round. The tracks for the further rounds will be revealed on the day itself.

Track width will be 8' 6".







Abstract Submission

Teams have to send their abstract of their cars on fastnfurious@technovanza.org on or before 11th December, 2017 with following information :-

Name of the team.

Name of the caption

Number of members in the team

Length of the car.

Width of the car.

Weight of the car.

Diameter of tyres.

Height of car from top to ground

Ground Clearance.

Engine CC.

Number of fabrications & their description.

Picture of car is compulsory and video if possible.

Contact Us:

Sunny Sharma: +91 9920037123

Yash Hule: +91 9769635590

Kalpesh Kotwal: +91 7756890565