

## **National Level Senior Championship:-**

Objective: **Building and Designing of the Robot in such a manner that it completes the allotted task, accomplishing all the hurdles in the shortest period of time with most efficiency.**

**Workshop Included:** Robotics, Home Automation, Embedded, IOT, Arduino Robotics, Solar Panel

### **Theme:-**

- Build and Design a Fast Grid Navigating Line Follower Robot which is Autonomous in Nature.
- Your robot should start from the START point and should stop at the center of the HOME.
- Robot should navigate the diversified Black line and should reach the home point.
- Robot should complete the whole path with minimum time.

### **Game Rules and Regulation:-**

- Background color of the game arena will be white in color.
- All the lines are Black in color.
- The Dimensions of the Arena are specified before hand, under Task specification.
- External Power Supply is not allowed.
- Every team will get only one attempt.
- All teams will be given preparation time before starting of the competition.
- Four teams will compete at a time.
- Selected teams will qualify to the next round.
- Participants are not allowed to touch the machine or the Arena during the task.
- Eligibility Criteria:-
- All the Participants who have achieved 1st, 2nd, 3rd, 4th, 5th, 6th position and have merit Certificate in the Zonal Rounds of TECHRADIANCE championships held all over India are eligible to register for the Closed Rounds of the TECHRADIANCE Final Round.
- All the Participants who participated in the Zonal Rounds (have participation Certificate) are eligible to participate in the open rounds of the competition.
- All the interested and keen participants can register for the open round.

### **Stages of the Competition:-**

- **League Matches:-** All the winners of the zonal round TECHRADIANCE-17 will be participating in the prelims round from which 25 teams will be selected to participate in the quarter finale.

- **Quarter Finals:** - Winners of the prelims round will be competing with each other in the Quarter finals and the eligible 10 teams will qualify to the next level that is the Semi finals.
- **Semi Finals:-** Winners of the quarter finals will compete in the second last stage of the competition and the judges will be selecting the 4 teams to compete in the Grand Finale
- **Final Round :** - Grand finale will be the last stage of the whole competition, from which winning team will be selected as the winners of the TECHRADIANCE National Level Championship-17.

#### **General Rules:-**

#### **Team Specification:-**

- **Participating team should consist of 1-5 members; team size should not increase more than 5 members.**
- Participating team should have their own Robotic Kit, (provided during the workshop)
- Participants from different institutions can form a team.
- Participants can be from different Batches, Branch, or Year.
- Kits provided and purchased from HARBOUR TECHNOLOGIES will only be allowed in the competition, kit manufactured or purchased from any other company will be disqualified.

Game Arena will be shown during the event. An appropriate time will be given to configure the robot according to the game arena

Note: Black line width is mm

#### **Terms and condition of the competition:-**

- During the game, team members are not allowed to touch the Robot, failure in doing so can lead to Disqualification.
- Robot should only be build according to the robot specification mentioned above; any innovation and creativity within the limits will be considered.
- Dimension marks will not be there in the final setup of the completion arena.
- The machine must not contain any combustible, corrosive, or otherwise dangerous materials for safety reasons.
- The machines you have built will be first checked for size and safety.
- Any kind of damage to the arena will lead to disqualification.
- Judges have the right to disqualify any team if they feel the team is not playing with the fair interest.
- Participants should not dismantle their robots before the completion of the whole completion as the machines might be checked by the organizers at the later stage to ensure that the participants have not violated any of the rules.
- Judges hold the right to disqualify a team whose conduct is found unfair.
- The organizers have the right to change any or all the above rules as they feel fit.

Any changes in the rules regulation will be updated on the website.

## 1 : National Level Junior Championship:-

Objective: **Building and Designing of the Robot in such a manner that it completes the allotted task**

Rules and rounds for National Level Robotics/Solar Panel:-

All winning teams of zonal and open rounds can take part in National Level Junior Competition

### Stages for Competition:

- **1 ROUND(select & get selected round):** All Questions will be of MCQ format. Negative Marking (-0.25 for each wrong attempt).  
Time Allowed =45 Min.  
One question paper for one group.  
Question papers will have 2 or 3 sets.  
30% Questions from Current Affairs Related to Science and Technology.  
70% Questions from topics covered by trainer during Zonal round.  
No use of mobile/internet is allowed.  
Teachers are not allowed to be with teams during this round.  
Selected teams will Qualify for next (Quarter final) Round.
- **2 ROUND : Quarter Final Round**  
Specifications of the arena/Track for this round will be on official website of techradiance  
Adapter is not allowed for this round.  
Each team will have only one attempt  
Appropriate time(5 min) will given to teams before starting this round.  
Time taken for different check points will be factor of judgment for next round.  
Participants are not allowed to touch robot/car in between task.  
If machine goes out of track, restarting from beginning is not allowed.  
Winners of this round will selected for next level
- **3 ROUND : Semi Final Round**  
There will be two rounds in semi-final.  
round 1--> a quiz asking 3 questions for each team getting equal chance to score  
round 2--> buzzer round having questions equal to the total number for teams in semi final round equivalent scores from these two rounds will calculated and 4 teams will qualify for Final round
- **4 ROUND: Final Round**  
Arena will be given to teams on the spot and 30-45 min will be allot to teams for programming According to timing and check points one out of these teams will be selected as champion

## **General Rules:-**

### **Team Specification:-**

- **Participating team should consist of 1-5 members; team size should not increase more than 5 members.**
- Participating team should have their own Robotic Kit, (provided during the workshop)
- Participants from different institutions can form a team.
- Participants can be from different Batches, Branch, or Year.
- **Kit Specifications:-**
- Kits provided and purchased from HARBOUR TECHNOLOGIES will only be allowed in the competition, kit manufactured or purchased from any other company will be disqualified.

Game Arena will be shown during the event. An appropriate time will be given to configure the robot according to the game arena

Note: Black line width is mm

### **Terms and condition of the competition:-**

- During the game, team members are not allowed to touch the Robot, failure in doing so can lead to Disqualification.
- Robot should only be build according to the robot specification mentioned above; any innovation and creativity within the limits will be considered.
- Dimension marks will not be there in the final setup of the completion arena.
- The machine must not contain any combustible, corrosive, or otherwise dangerous materials for safety reasons.
- The machines you have built will be first checked for size and safety.
- Any kind of damage to the arena will lead to disqualification.
- Judges have the right to disqualify any team if they feel the team is not playing with the fair interest.
- Participants should not dismantle their robots before the completion of the whole completion as the machines might be checked by the organizers at the later stage to ensure that the participants have not violated any of the rules.
- Judges hold the right to disqualify a team whose conduct is found unfair.
- The organizers have the right to change any or all the above rules as they feel fit.

Any changes in the rules regulation will be updated on the website.

## **3: National Level Championship for Mech/Civil :-**

**The Objective of this whole competition is to judge the knowledge and skills of the all the participants, on the basis of which the winners of the Championship will be declared**

**Theme:-**

- Quiz Competition :-

All teams will have to participate in the first round of the competition which will be a Quiz format; all the teams will have to complete a questionnaire which will be testing the knowledge and skills of the teams on particular topic on which they did the workshop.

The winners of this stage will be selected on the basis of highest correct answers given by a team.

- Task Competition:-

Top 10 teams will be selected from the Quiz competition; will qualify to the next Round which is 'Task Completion'.

Teams will be allotted a Task to complete.

The team who will be able to complete the task the in minimum time and most efficiency will be will be the Winner of the Competition.

### **Game Rules and Regulation:-**

- The Final Round Problem statement will be announced by the Techradiance Team on the day of the Competition.
- Participating teams will be asked to complete a task in a specified period of time.
- Participating teams need to present the anatomy of their task with a small presentation round..

### **General Rules:-**

#### **Team Specification:-**

- **Participating team should consist of 4-5 members; team size should not increase more than 5 members.**
- Participants from different institutions can form a team.
- Participants can be from different Class,Batches,Branch, or Year.

#### **Task Specifications:-**

- The Task for the competition will be announced at the time of competition, specified time period will be provided to prepare for the task.

Any changes in the rules regulation will be updated on the website.

## **4: National Level Championship for CS/IT**

**The Objective of this whole competition is to judge the knowledge and skills of the all the participants, on the basis of which the winners of the Championship will be declared**  
**Theme:-**

- Quiz Competition :-

All teams will have to participate in the first round of the competition which will be a Quiz format; all the teams will have to complete a questionnaire which will be testing the knowledge and skills of the teams on particular topic on which they did the workshop.

The winners of this stage will be selected on the basis of highest correct answers given by a team.

- Task Competition:-

Top 10 teams will be selected from the Quiz competition; will qualify to the next Round which is 'Task Completion'.

Teams will be allotted a Task to complete.

The team who will be able to complete the task the in minimum time and most efficiency will be will be the Winner of the Competition.

#### **Game Rules and Regulation:-**

- The Final Round Problem statement will be announced by the Techradiance Team on the day of the Competition.
- Participating teams will be asked to complete a task in a specified period of time.
- Participating teams need to present the anatomy of their task with a small presentation round..

#### **General Rules:-**

##### **Team Specification:-**

- **Participating team should consist of 4-5 members; team size should not increase more than 5 members.**
- Participants from different institutions can form a team.
- Participants can be from different Class,Batches,Branch, or Year.

##### **Task Specifications:-**

- The Task for the competition will be announced at the time of competition, specified time period will be provided to prepare for the task.

Any changes in the rules regulation will be updated on the website.

