



Relay Race

Pool, Open-To-All

Points: 30

TASKS

- EACH TEAM WILL BE REQUIRED TO MAKE 2 LINE FOLLOWING BOTS: ONE USING ATMEGA AND OTHER USING ARDUINO AS MICROPROCESSORS.
- THESE TWO BOTS WILL TAKE PARTICIPATE IN A RELAY RACE.

BOT SPECIFICATIONS

- *Each team will made two line following bot one using arduino and other one using atmega. (Bots are completely autonomous)
- *Dimension of bot should not exceed by 20cm *20cm *20cm.
- *Motors and wheels will provided by club. Except them no other motors and wheels will allowed.
- Bot must be started individually by only one on board switch. However you may have a separate switch for restart. These switches should be shown to the judges/organizers before starting the game.
- *Potential difference between any two points on the bot should not exceed 12V.
- External power will be given to the bot.
- Violation of the specifications marked with a '*' will lead to direct disqualification of the team.
- Violation of any other specification will lead to deduction of 50 points from the score of each trial.



GAME RULES

- Each team will be given a dry run before the game.
- This is a pool event so only one team will allow from each pool.
- Identical arena will be given to all teams.
- Bot will be placed on starting point and will start after signal is given.
- You can run any of the bots(Arduino or Atmega) earlier.
- At a time only one team will perform in a relay race.
- Total three trials will be given to each team. The best of them will be taken into consideration.
- After the start of the trial, no team will be allowed to touch the bot.
- Dimension of arena is given arena snap attached below.
- All dimension given in snap is in mm.
- You can change order of your bots in each trial.
- There will be a checkpoint system in relay race (as shown in arena snap).

RULES OF RELAY RACING (BOTH BOTS):

- Both bot will start from starting line.
- Initially only first bot will present at starting line, and few second after race start second bot will be placed by any one of team member at starting position.
- It means in a successful race two rounds of arena will be covered by bots.
- Second bot should be move after physical touch of first bot.
- In a complete round of arena by a bot it will cover total 6 check points. It means when both bots complete their given path they cross total 12 checkpoints.
- Two checkpoints on straight path and 4 will be on curved path. (As shown in arena)

MARKING SCHEME

- After successful completion of checkpoint which come in straight path bot will get +20 points, and which come in curved path bot will get +30 points.



- If communication between both bots happen successfully then that pool awarded by +30 points.
- After communication(starting point), 1st bot can travel a maximum of 1m from the starting point. After 1m, 1st bot will be removed from the track.
- Any manual interruption will lead to a deduction of 20 points.The bot will start from the last checkpoint covered.
- Whole body of bots should be in given lane, any deviation from lane deduct 20 points. After that bot can again start from the last checkpoint.
- Manual intervention is allowed maximum (total of both bots) 5 times. After that trial will be expired. And points in that trial will be points earned by bots before trial expired.Time count will not stop during intervention.
- Any kind of manual intervention is to be informed earlier to the co-ordinators.
- If communication is not successfully done, and second bot started manually with no extra points of communication.
- Pools will be ranked from one to four according to maximum points gain in their best trial.
- In case if points are same then pool which cover arena in less time (of the best trial) will get better position.
- In case of any controversy judges decision will be final.

CONTACTS

Abhishek Attal

attalab@iitk.ac.in

8009961678

Harshad Sawhney

harshads@iitk.ac.in

9651761480

Sakshi Sinha

sakshis@iitk.ac.in

8765696066

Arjun Bhasin

9793564030



All dimension is in mm.

ARENA:

