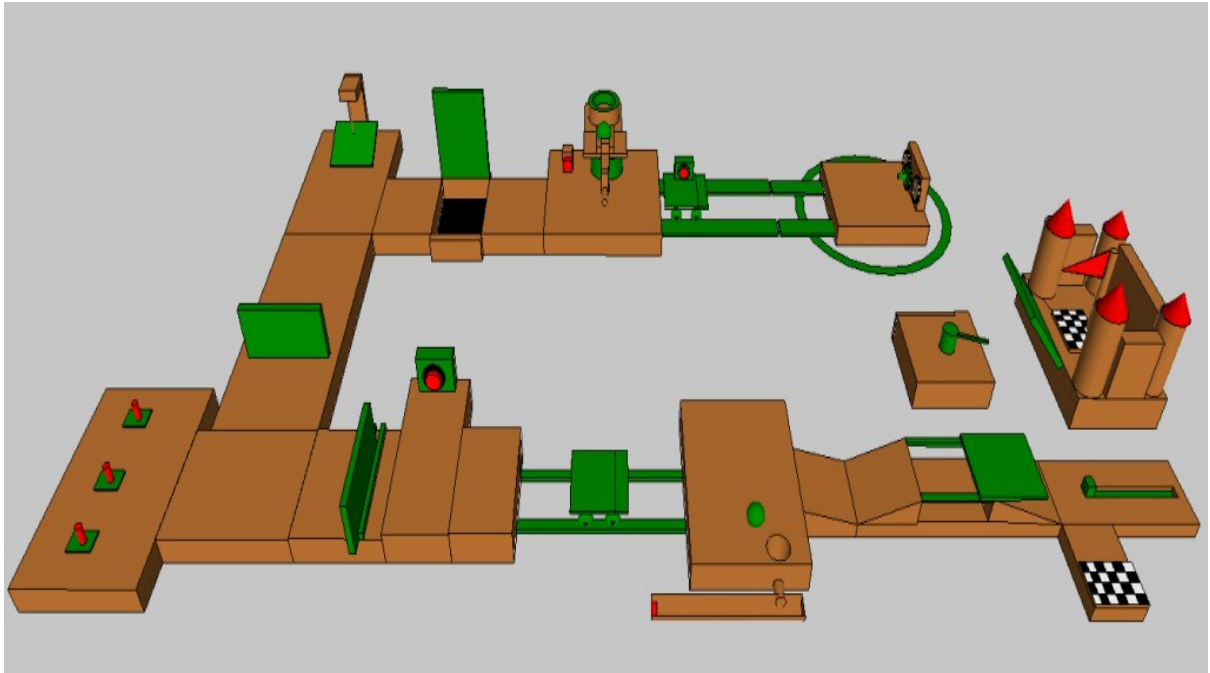


Cursed Castle



Introduction :

The castle has eight curses. You must break all the curses consecutively to conquer the castle. You must finish the pursuit in least time to win.

Problem Statement :

Build a manually controlled (wired or wireless) robot having the capability to overcome hurdles and obstacles based on forces and torques like inclinations, moving bridges and rotating platforms that will necessarily try to hamper the momentum of the robots.

Robot Specification :

- The robot can be either wired or wireless.
- The maximum dimension of the bot must be 30cm x 30cm x 30cm, which will be checked before the event and violation of which will lead to the disqualification of the bot.
- The weight of the bot must not exceed 3kg.
- The wires (in case of wired robot) should be at least 4m long and should remain slack throughout the game.
- No part of the robot must damage the arena; violation of this could lead to disqualification

Tasks :

- Hinged Bridge : Cross over the chequered plank to enter the arena, the first challenge would be to open a hinged bridge. In order to open the bridge you need to push a lever backwards.
- Mechanically Driven Traversing Cart : Pushing the ball into the hole will trigger the to and fro movement of Mechanically Driven Traversing Cart over the rails. You must get on the Cart and get down on the other side to go to the next level.
- Sliding Door : Pushing a vertically placed switch will open a sliding door, you have a time window of few seconds to cross over, as soon as you release the switch, the recoil will slowly and steadily close the door.
- Luck Switching : You will come across three switches. Pushing only a certain switch will open the doors to the next level. The key decisive lever which will open the door will change randomly in every level. So it's your luck that will drive your time.
- See-Saw : Alight on the see-saw and cross over it to the other side. When the plank falls down by your weight it will trigger the opening of the door to the next level. Put on the reverse gear and come back on the same plank to get down from the see-saw to go to the next level.
- Slido : You have to move a lever which is fixed horizontally on an axle to make two guides meet. Once matched, you can go ahead and release the ball from the mounted structure. The ball must travel from the matched guides to trigger the motion of doors to the next level.
- The Cart Engine : The bot must get on the engine and push a vertically placed switch; this will in turn move the Cart Engine forward on the rails as long as you keep the switch pressed. Once the Cart Engine reaches the other side, get down off the Cart Engine. The place where you get down, there is a set of two disengaged gears. Pushing the driven gear inwards will engage the adjacent driving gear. This engagement of gears will initiate a major transmission of motion and the entire unit will rotate by an angle of 90 degrees to engage with a different set of rails. Get on the Cart Engine again push the button as you did previously to drive the Cart Engine forward towards the next level.
- The Castle : Rotate a lever to bring down the drawbridge. Once the drawbridge is down you may move over it to enter the Castle. The Castle is yours and so is the Queen.

Rounds :

It is a single lap race. There will be no specific rounds. If you fail to accomplish with the best time you can try it again through re-entry into the event. The bot with the best time shall be declared winners at the end of the event.

Rules :

- The permissible team size is between 2 to 4 members
- All students with a valid identity card of their respective educational institutes are eligible to participate.
- Number of robot handlings allowed: 3 (when robots get stuck/fall, wires tangle etc)
- Hopping, jumping and destruction inside the arena will not be tolerated.
- 220V AC Power supply will be provided. The participating teams must bring own extension board, adaptors/eliminators of the required voltage rating.
- The bot is required to stay within the arena borders.
- The Game rules are subject to change by organizers as and when required. Any change in rules will be notified to the participants.
- All the judgments by the judges/referees will be final and binding.

Video :

Link to the video : <https://www.youtube.com/watch?v=GQ6CX46EfOQ>