

# QUINCE – THE RESCUE BOT



Quince is a rescue robot equipped with four sets of tracked wheels, some of which can move up and down to allow the robot to negotiate obstacles. It can carry pay load as well for resue of survivors trapped under the influence of strong tsunami.

# QUINCE – THE RESCUE BOT

There are two villages Red and Green inbetween there is a Lake.Due to a stong tsunami the belongings of villagers flew away with the wind into the lake.Now the villagers are asking for help to rescue their belongings which are precious to them.

You are the person with your **Electronic Robotic Machine** only who is capable of completing the task.Now grab your boots to get into the aqua to prove yourself and stand their hope.Be responsible to rescue the respective belongings to the respective villagers.Be careful as a lake is not an easy place to be and be quick so that you dont let their belonging get damaged.

Prove Yourself to be the fastest of all other resuers that will make you **The Bot Resuer**.

## **Gameplay**

### **Pre-Game Setup**

The participants will get 5 minutes of setup time for calibration and testing prior to the competition according to a schedule that will be made available at the start of the event. In the setup time, participants cannot drop their bot in water.

### **Game Procedure**

The competition will be divided into 2 rounds.

#### **Round 1 - Elimination Round**

In this round, the rescue bot will have to collect the ball from the arena and deposit them in the collection pit in minimum possible time.

#### **Round 2 - Knockouts**

Top teams from round 1 which deposit the balls in the minimum time will qualify for round 2. And the Final Competition will be played among the selected teams.

## Arena

The arena consists of the following zones –

- Red Village zone (indicated by red colour square in figure )

- Green Village zone (indicated by green colour square in figure )

- Lake zone (indicated by water in figure )

Figure 1 and figure 2 shows the 3D and top view of arena respectively.

The surface of both the villages consists of a timber(plywood).

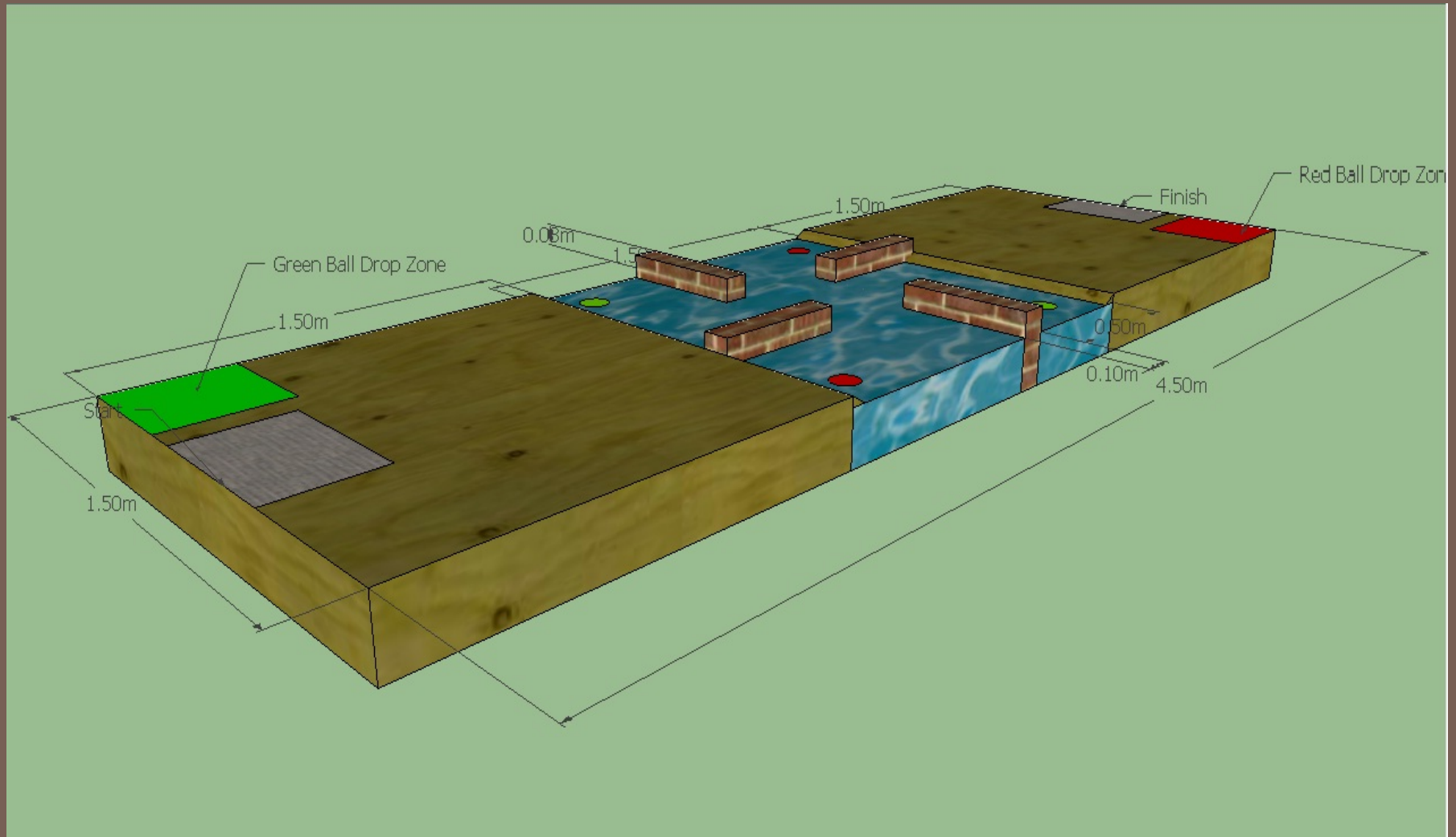
The lake will be formed of fresh water and bricks would be used as the obstacle.

*Note:*

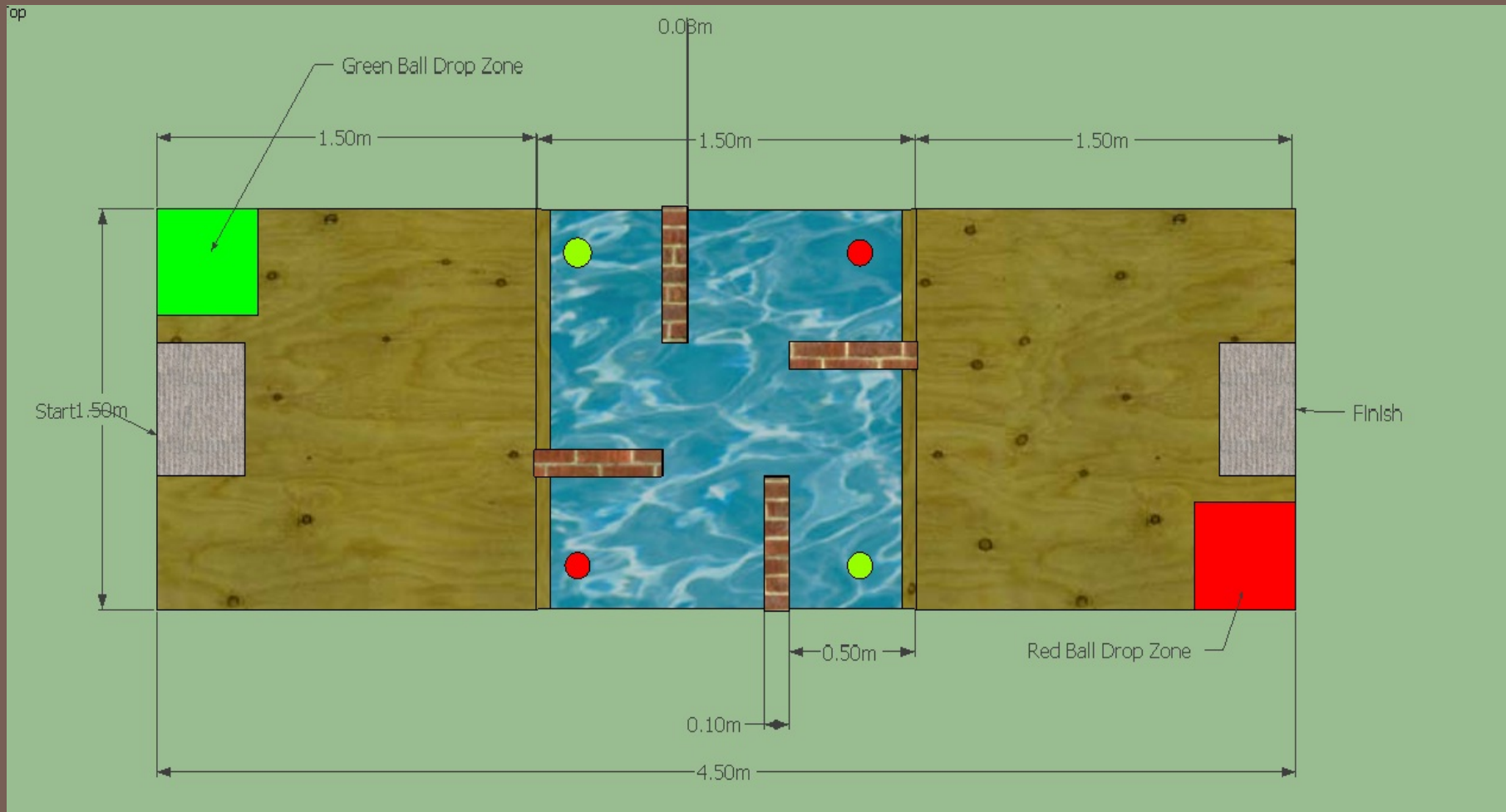
*Figure has been coloured just to distinguish the various zones in the arena.*

*All dimensions are approximate to within a 5% margin of error.*

## Isometric View :



## Top View :



## Specifications

### Ball Specifications

The balls would be red and green in colour. The balls would be standard TT ball.

### Robot Specifications

The robot must be manually controlled and made by the contestant itself.

Use of lego kits is not allowed.

Maximum operating voltage must not exceed 24V DC.

Every innovative designs will be entertained. The dimension of the bot must be decided considering the arena itself.

However the bot must fit into a cube of **300 mm x 300 mm x 350 mm (lxbxh)** at all times

The power supply may or may not be provided on arena.

It can communicate only with the operator using wired/wireless data transfer.

A bot is allowed to collect only one ball at a time before depositing.

## **Rules**

### **Game Rules**

While starting, the rescue bot will be placed in the starting zone marked in figure .  
The timer will start, as soon as the field coordinator gives the start signal.  
The rescue bot should collect and deposit the balls in the collection zone.  
The bot will be awarded points only after the ball has touched the collection zone.  
If a ball drops in between it will be taken back and launched again.  
If there is any circuit failure few minutes can be granted.  
The timer will be stopped during this procedure.  
The teams can take a restart during that time.

The organisers reserve the right to change any or all of the above rules as they deem fit. Change in rules, if any, will be highlighted on the website and notified to the registered participants.

### **Team Specification**

A team may consist of a maximum of 4 members. Students from different educational institutes can form a team.



## **Eligibility**

All students with a valid identity card of their respective educational institutes are eligible to participate.

**NOTE: ONLY FIRST YEAR STUDENTS ARE ALLOWED TO PARTICIPATE.**

## **Certificate Policy**

Certificate of excellence will be awarded to the top 3 winners. Certificate of participation will be awarded to the teams that deposit a minimum of 1 balls in the elimination round.

Disqualified teams will not be considered for any certificates.

## **Contacts:**

Ramesh Agarwal , Patel-50, Ph: +91-8604064330, [rameshdigitech@gmail.com](mailto:rameshdigitech@gmail.com)

Ashim Lal Joshi , Patel -51, Ph: +91-9005322044, [joshiashim@gmail.com](mailto:joshiashim@gmail.com)

Kumar Gaurav, Patel-19, Ph: +91-8081317843 , [k.gaurav4u2007@gmail.com](mailto:k.gaurav4u2007@gmail.com)