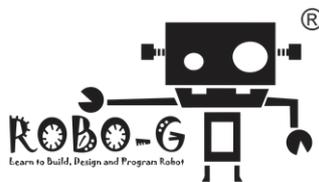# General Rules

## ROBO Adventures

### EXPLORERS | INNOVATORS | TECHIES

**SEASON 2026**

## IN-PERSON MODE

Organized By

# Indian Robotics Olympiad 2026

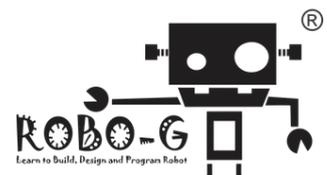# General Rules



# ROBO Adventures

## EXPLORERS | INNOVATORS | TECHIES
## SEASON 2026

# IN-PERSON MODE

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# 1. Team and age groups definitions

1.1  Students can participate individually or in teams of two.
1.2  Each student or team must be guided by a coach.
1.3  A team can consist of one student and one coach.
1.4  A student may only participate in one of the IRO categories and modes during a season.
1.5  A student may only be a part of one team.
1.6  The minimum age for a coach is 18 years old.
1.7  Coaches are allowed to work with more than one team.


**Explorers:** students 5-7 years old in season 2025: born years 2019-2021

**Innovators:** students 7-10 years old in season 2025: born years 2016-2019

**Techies:** students 10-15 years old in season 2025: born years 2011-2016


# 2. Responsibilities and team's own work

2.1  Students should play fair and show respect towards other teams, coaches, judges, and competition organizers.
2.2  The construction and coding of the robot must be done solely by the team members.
2.3  Students are not allowed to communicate in any way with people outside of the competition area while the competition is running. If communication is necessary, a judge may permit team members to communicate with others under the supervision of a judge.
2.4  Students are not allowed to bring or use mobile phones or any other communication devices in the competition area.
2.5  The judge on competition day has the final say in all decisions.

# 3. Robot material & regulations

## 3.1 Explorers category

3.1.1  Each team uses one KUBO robot to solve the missions on the field.

3.1.2  Students are allowed to use only one KUBO robot and coding TagTile® pieces from the **KUBO Coding Starter Set.**

3.1.3  Any number and combination of KUBO TagTile® pieces may be used to program the KUBO robot.

3.1.4  **Teams may enhance their KUBO robots with themed decorations or paper/cardboard attachments, as needed for the challenges.**

3.1.5  Teams are allowed to bring and use only one KUBO robot and sufficient TagTile® pieces during practice time or robot runs.

3.1.6  Students or teams are not allowed to perform any actions or movements to interfere with or assist the robot after it has started its run.

3.1.7  Since students must do on-spot coding, one KUBO robot may be shared among multiple teams.

3.1.8  Challenge mat and objects will be provided on the competition day. You need to bring your own Kubo coding starter set.

## 3.2 Innovators category

3.2.1   Each team builds **one robot** to solve the challenges on the field.

3.2.2   The maximum dimensions of the robot before it starts a run are **250 mm x 250 mm x 250 mm**. After the robot has started, its dimensions are no longer restricted.

3.2.3   Teams must use only the **Arduino Alvik kit** for building their robots.

3.2.4   **A maximum of two servo motors are allowed to use with the Alvik. No additional electronic components are allowed.**

3.2.5   Students must work exclusively with the built-in **sensors, motors, and wheels** provided in the Arduino Alvik kit.

3.2.6   Students are allowed to use only **LEGO®-branded,** non-electric elements to build attachments and chassis for the robot used in the missions.

3.2.7   Students may use glue or tape, if required, to attach the servo motors to the Alvik.

3.2.8   A team is allowed to bring and use only one controller during practice time or robot runs.

3.2.9   The robot must be **autonomous or semi-autonomous** and must complete the missions by itself.

3.2.10  Any form of radio communication, remote control, or wired control systems is not allowed while the robot is running.

3.2.11  In case of semi-autonomous robots, teams are not allowed to use a **laptop, tablet, or any other device to transfer code** once the robot run has started. All programs must be uploaded to the robot beforehand. Programs must be executed using the buttons on top of the Alvik.

3.2.12  During an attempt, the team is allowed to touch or grab the robot only when any part of it—such as a wheel—touches (top view) the **Home Area**. If a team touches a robot that is not in contact with a Home Area, the judge will place the robot in the nearest home Area.

3.2.13  Teams are allowed to move the robot from **one Home Area to another**, but only the robot may be moved—not any challenge objects.

3.2.14  During an attempt, team members are not allowed to touch any **challenge object** outside the Home Areas. If a team touches a challenge object outside a Home Area, the judge will place the touched item at its original location on the field, in the state it was in when touched.

3.2.15  When placing the robot in the Home Area to begin a challenge, the robot must be **completely inside** the Home Area. At the end of the task, if the robot's top-view projection is completely or partially inside the home area, it will be considered inside.

3.2.16  Only **mBlock software** may be used to code the Alvik robot. Teams can prepare the code in advance before the competition day.

3.2.17  Challenge mat and objects will be provided on the competition day. You need to bring your own robot and parts to build and program it.

3.2.18  Teams can bring the robots **assembled** to the competition. They do not need to re-build the robots on the competition day. Sharing of robots and laptops/tablets is not allowed.

3.2.19  The maximum time allowed for the robot run is **3 minutes**.

3.2.20  A team should prepare and bring all the equipment, sufficient spare parts, software, and portable computers it needs during the tournament.

## 3.3 Techies category

3.3.1 Each team builds **one robot** to solve the challenges on the field.

3.3.2 The maximum dimensions of the robot before it starts a run are **250 mm x 250 mm x 250 mm**, including cables. After the robot has started, its dimensions are no longer restricted.

3.3.3 Teams are allowed to use only the **LEGO® Education NXT kit, LEGO® Education EV3 kit, LEGO® Education SPIKE Prime kit**, and **LEGO Mindstorms Robot Inventor kit** along with their official motors, sensors, and batteries to build the robot.

3.3.4 Only **LEGO®-branded** elements are allowed in the construction of the robot.

3.3.5 The number of motors and sensors that can be used is not restricted.

3.3.6 A team is allowed to bring and use only **one controller** during practice time or robot runs.

3.3.7 The robot must be **autonomous** and complete the missions by itself.

3.3.8 Any form of radio communication, remote control, or wired control systems is not allowed while the robot is running.

3.3.9 A team is not allowed to perform any actions or movements to interfere with or assist the robot after it has started its run.

3.3.10 Any software may be used to code the robot, and teams can prepare the code before the competition day.

3.3.11 Challenge mat and objects will be provided on the competition day. You need to bring your own robot and parts to build and program it.

3.3.12 Teams can bring the robots assembled to the competition. They do not need to re build the robots on the competition day. Sharing of robots and laptops/tablets is not allowed.

3.3.13 The maximum time allowed for the robot run is **2 minutes and 30 seconds**.

3.3.14 A team should prepare and bring all the equipment, sufficient spare parts, software, and portable computers it needs during the tournament.

# 4. Challenge mat and equipment

4.1   In this category, the robot solves missions on a field. Each age group has its own mat, as the missions vary by age group.

4.2   The dimension of the IRO **Explorers category** mat is 1200 mm x 1200 mm and the IRO **Innovators and Techies categories** mats are 2362 mm x 1143 mm each.

4.3   The challenge objects are built from the LEGO Bricks.

4.4   It is not allowed to damage challenge objects. If challenge object is damaged, a potential score of the challenge object does not count.

4.5   **On competition day, the challenge mat will be placed on a flat surface and may be enclosed by walls approximately 7 cm in height. (Final details will be confirmed closer to the competition date.)**

4.6   **Explorers category:**  The robot should start from the start area (flag icon) for each mission.

4.7   **Innovators category:** The robot should start from one of the two home areas and must be completely inside the home area at the start.

4.8   **Techies category:** The robot should start from the start and finish area and must be completely inside this area at the start.

# 5. Robot attempt

## 5.1 Explorers category

5.1.1   On the competition day, each team will have **two** robot attempts.
- In Round 1, either Mission 1 or Mission 2.
- In Round 2, either Mission 3 or Mission 4.
- Before each round, the mission will be randomly selected by picking a chit.

5.1.2   Teams will be given one practice run before each actual attempt.

5.1.3   Teams will have **10 minutes** to solve each mission.

5.1.4   Each robot attempt will be 10 minutes, which includes:
- Writing the code by placing the TagTiles
- Running the robot

5.1.5   Time begins when the judge gives the signal to start.

5.1.6   **The ranking of the teams is based on the combined score of both missions. If competing teams have the same score, the ranking will be decided by the record of time.**

5.1.7   Sometimes the KUBO robot may move diagonally. Students are allowed to adjust the robot while it is running to ensure it moves in a straight line.

5.1.8   A robot attempt will end when either time limit has expired, or a team member shouts "STOP" and the robot ceases to move. If the robot is still moving, the attempt will end once the robot stops by itself or is stopped by the team or judge.

5.1.9   Once the robot attempt has ended, time is stopped, and the judge scores the attempt.

5.1.10 The scores are recorded on a score sheet, which the team must sign to confirm the score.

## 5.2 Innovators & Techies category

5.2.1 On the competition day, each team will have **two** robot attempts.

5.2.2 Before each actual attempt, teams will be given one practice run.

5.2.3 Each robot attempt lasts **3 minutes for the Innovators category** and **2 minutes and 30 seconds for the Techies category** during the **first and second attempts**. Time begins when the judge signals to start.

5.2.4 **Team ranking will be based on the best score from the two robot attempts. If teams have the same total score, the ranking will be determined by the time taken.**

5.2.5 A robot attempt will end when the time limit is reached, or a team member shouts "STOP" and the robot ceases movement. If the robot continues moving, the attempt ends once the robot stops on its own or is stopped by the team or the judge.

5.2.6 After the robot attempt ends, the judge will stop the timer and score the attempt.

5.2.7 The score is recorded on a score sheet, which the team must review and sign to confirm the result.

# 6. Awards

6.1 All participants will receive participation certificates.

6.2 All participants will receive a medal based on the percentage of total points scored in their best robot attempt.

| Percentage of Total Points | Medal Awarded |
| --- | --- |
| 25% to <50% | Bronze Medal |
| 50% to <75% | Silver Medal |
| 75% and above | Gold Medal |

6.3 In addition, in each category of the Indian Robotics Olympiad—Explorers, Innovators, and Techies—the teams placing first, second, and third will receive trophies and ranking certificates.

# Indian Robotics Olympiad 2026 Theme