General Rules

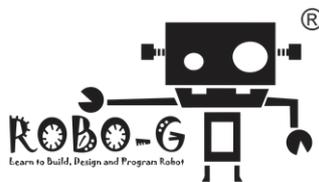## ROBO Adventures

EXPLORERS | INNOVATORS | TECHIES

ONLINE MODE

Organized By

Indian Robotics Olympiad 2026

General Rules

ROBO Adventures
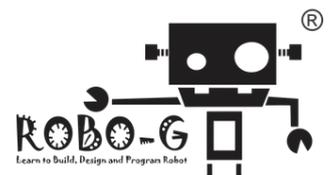
EXPLORERS | INNOVATORS | TECHIES
SEASON 2026

ONLINE 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.

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 The judge has the final say in all decisions.

3. Robot material & regulations

3.1 Innovators category

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

3.1.2   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.

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

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

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

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

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

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

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

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

3.1.11   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.

3.1.12   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.

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

3.1.14   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.

3.1.15   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.

3.1.16   Only **mBlock software** may be used to code the Alvik robot. Teams can prepare the code in advance before recording the final robot run.

3.1.17   Teams can assemble the robot and keep it ready before the recording. **They do not need to re-build the robot during the video recording.**

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

3.2 Techies 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**, including cables. After the robot has started, its dimensions are no longer restricted.

3.2.3 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.

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

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

3.2.6 A team is allowed to use only **one controller** during the robot runs.

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

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

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

3.2.10 Any software may be used to code the robot, and teams can prepare the code before recording the robot run.

3.2.11 Teams can assemble the robot and keep it ready before the recording. They do not need to re-build the robot during the video recording.

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

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 **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   Students may place the challenge mat on any flat surface to record their robot run.

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

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

5. How to create my video for IRO

5.1 General

5.1.1   **Team Members Only:** Ensure that only team members are visible in the video—no coaches or parents.

5.1.2   **Landscape Mode:** Record the video in landscape orientation (16:9) for the best viewing experience.

5.1.3   **Stable Camera:** Keep the camera steady. Use a tripod if possible to avoid any shaking.

5.1.4   **Sound Quality:** Perform a sound check before recording to ensure that your voices are clear and audible.

5.1.5   **Lighting:** Check the lighting to ensure that all team members are well-lit and clearly visible.

5.1.6   **Natural Speed:** Record at normal speed—do not adjust the video speed during recording or editing.

5.2 Innovators and Techies Category

5.2.1 **Setup Preparation:** Ensure the challenge mat and all objects are set up before beginning the video recording.

5.2.2 **Randomization (Techies Category):** Complete any required randomization before you start recording.

5.2.3 **Time Limit:** The entire video, including the team introduction and robot run, must not exceed 5 minutes. Start by introducing the team members (they can state their names).

5.2.4 **Visible Timer:** Place a timer, such as a tablet or smartphone, in view of the camera. Ensure it is clearly visible throughout the video.

5.2.5 **Team Visibility:** All team members should remain visible throughout the entire video.

5.2.6 **Simultaneous Start:** Begin the robot run and the timer simultaneously. The maximum time allowed for the robot run is 3 minutes for Innovators category and 2 minutes and 30 seconds for Techies category.

5.2.7 **Single Member Teams:** If there is only one student in the team, a coach or parent can assist in starting the timer.

5.2.8 **Continuous Recording:** Record the video in one continuous sequence without any editing.

5.2.9 **Challenge Objects Visibility:** At the end of the robot run, ensure that the final positions of all challenge objects are clearly visible. You may move the camera closer for better visibility.

5.2.10 **Score Sheet:** Have a printed score sheet ready. Fill it out based on the final positions of the challenge objects. Show the completed score sheet at the end of the video.

6. How to submit my video for IRO

6.1 **Ensure Compliance:** Before posting, double-check that your video meets all the requirements outlined in "How to Create My Video for IRO."

6.2 **Upload to Google Drive:** Upload your video to Google Drive. Make sure the video is set to public, as private videos cannot be judged. **(Please note that the video you submit will be published on the official IRO YouTube channel, allowing all participants to view it and ensuring complete transparency.)**

6.3 **Submit Your Video:**

- Click the "Submit Video" button on IRO website (online mode) to access the Google Form.
- Fill in the required information in the form.
- Copy and paste the link to your Google Drive video. Please share only one video link.
- Upload the scanned copy of the score sheet
- Submit the form.

7. Awards

7.1 All participants will receive a medal certificate (softcopy) based on the percentage of total points scored in their robot run video.

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

7.2 Soft copies of the medal certificates will be sent to the registered email ID. The results will be published on the IRO website.

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