

\* These rules are not final and may be updated up until the day before the competition.



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| Creative Category | Division     | Team          | Production method |
|-------------------|--------------|---------------|-------------------|
|                   | Junior L / H | 1 to 3 people | On-site           |
|                   | Senior L / H |               | production        |

## 1. Description

It is an event in which participants design, build, and present a robot based on a production plan in line with the proposed theme. There are no restrictions on materials or size, and it is possible to improve participants' problem-solving skills and creativity by building on-site on the day.

| Sectors                          |                    |
|----------------------------------|--------------------|
| <b>Elementary L</b> (Grades 1-3) | Junior Low         |
| <b>Elementary H</b> (Grades 4-6) | Junior Low         |
| <b>Middle School</b>             | <b>Senior Low</b>  |
| <b>High School</b>               | <b>Senior High</b> |

## 2. Robots

### 2.1 Robot model

There are no restrictions on the type of robot, and materials can be used as long as they fit the intended purpose. However, the use of materials that pose a threat to others is prohibited.

### 2.2 Robot specifications

The robot must be built to the size that can be built within the given space, and any problems caused by the size of the robot when building and presenting it are the responsibility of the user.

### 2.3 Production and publication conditions

All hardware and software parts of the robot must be built on site, except for the robot's controller. No pre-made robot parts will be accepted.

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## 2.4 Powering the Robot

**2.4.1 Power source configuration:** The power source used to power the robot can be any independent source, combustion engines are not allowed.

**2.4.2 Amount of power:** Not limited.

## 2.5 Driving the robot

**2.5.1** The built robot must demonstrate consistency with the production plan.

**2.5.2** The built robot must function as intended and effectively perform the assigned task, but technical details of hardware manipulation will not be penalized.

# 3. Stadium rules

There is no separate playing field, but a table of 180 cm x 60 cm is provided, and you can utilize the space around the table without disturbing other teams. The size of the table is subject to change depending on the availability of the venue.

# 4. How to play

**4.1** Participants must select an event at the registration stage.

**1) Creative Technic:** Assessment on technical understanding and demonstration

**2) Creative Idea:** Assessment on idea

**4.2** Participants may not compete in two events at the same time due to different team compositions.

**4.3** On the day of the competition, players will write a production plan and produce a robot by distributing subtopics related to the year's grand theme.

**4.4** The competition will be held over two days at the venue, with robots built on-site being presented and evaluated by judges through a Q&A session. If preliminary rounds are held, the number of competition days may vary and will be announced separately to the participants.

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#### 4.5 Preliminary Round

These events will be assessed over the course of a single day, with four hours of production time for the assigned questionnaire. Depending on the technique/idea category, the evaluation will be based on technical skills in the creative technique category and creativity in the creative idea category. The production plan and Q/A will be conducted in English.

**4.6 Production time:** The production time for the project plan and the robot is given two days, with the project plan being written first on the first day and the robot being built after lunch.

- 1) **Production plan:** Participants will be given a basic 2 hours to design a robot based on the topic presented on the day. Participants should document their ideas and technical details for their robots according to the given topics.
- 2) **Build robot:** Will be allowed 2.5 hours per day to build your robot, excluding lunch breaks. Prepare the same robot as in the plan.
- 3) **Presentation:** Contestants will be given 2-5 minutes to present their robot with questions and answers from the judges.

**4.7 Time limit:** Contestants are allowed to produce and complete and supplement within the allotted time, but will be penalized for exceeding the time limit by 5 minutes and will be penalized immediately after the end of the time limit. Contestants will be disqualified if they do not submit their work within 30 minutes after the end of the competition.

| Time   | 5 minutes | 10 minutes | 15 minutes | 20 minutes | 25 minutes | More than 30 minutes |
|--------|-----------|------------|------------|------------|------------|----------------------|
| Scores | -1 point  | -2 points  | -3 points  | -4 points  | -5 points  | Disqualification     |

<Deduction points for submission overtime>

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## 5. Evaluation methodology

| Separation                   | Detailed criteria            | Topic Understanding | Scorecard    |
|------------------------------|------------------------------|---------------------|--------------|
| Creativity (40)              | Production plan(10)          | O/X                 | 2/4/6/8/10   |
|                              | Problem Solving (10)         |                     | 2/4/6/8/10   |
|                              | Robotics Creativity(10)      |                     | 2/4/6/8/10   |
|                              | Social Contribution(10)      |                     | 2/4/6/8/10   |
| Technical understanding (30) | Technical Understanding (20) |                     | 4/8/12/16/20 |
|                              | Completeness(10)             |                     | 2/4/6/8/10   |
| Announcements(30)            | Demonstration(10)            |                     | 2/4/6/8/10   |
|                              | Questions and Answers (20)   |                     | 4/8/12/16/20 |

**5.1 Judging Criteria:** The judges will evaluate based on the judging criteria below and will compare the total scores to determine the ranking.

### 1) Creative Techniques Criteria Sheet

| Separation                   | Detailed Criteria          | Topic Understanding | Scorecard    |
|------------------------------|----------------------------|---------------------|--------------|
| Creativity (30)              | Production plan(10))       | O/X                 | 2/4/6/8/10   |
|                              | Problem Solving (10)       |                     | 2/4/6/8/10   |
|                              | Robotics Creativity(10)    |                     | 2/4/6/8/10   |
| Technical understanding (40) | Sensor Utilization(10)     |                     | 2/4/6/8/10   |
|                              | Control Methods (10)       |                     | 2/4/6/8/10   |
|                              | Programming(10)            |                     | 2/4/6/8/10   |
|                              | Completeness(10)           |                     | 2/4/6/8/10   |
| Announcements(30)            | Demonstration(10)          |                     | 2/4/6/8/10   |
|                              | Questions and Answers (20) |                     | 4/8/12/16/20 |

### 2) Creative idea judging criteria sheet



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## 5.2 Tiebreakers

In the event of a tie, prioritization is based on the following order, with 1) and 2) being handled differently depending on the specific item.

- 1) Priority 1: Higher technical work
- 2) Priority 2: Higher Creativity
- 3) Priority 3: Higher Completeness
- 4) Priority 4: The demeanor and confidence displayed by the team during the presentation, reflecting their enthusiasm and professionalism for the competition.
- 5) Priority 5: Highly engaging cross-team work

## 6. Other

All participants, regardless of category, must comply with the rules defined below. Participants who violate the rules will be subject to the general rules, including penalties or disqualification.

- 6.1 Use of materials:** It is not permitted to use online or offline documentation, including manuals, notes, photos, etc. to aid in the sport.
- 6.2 Internet/Telecommunications Use:** Participants are prohibited from using telecommunications, internet, or cell phone data during the Competition.
- 6.3 Use of mobile devices:** Participants who need to use mobile devices must remove the device SIM and have it checked by the judges and referees.
- 6.4 Leaving the arena:** Contestants can only leave with the permission of the judges or organizers.
- 6.5 Seeking assistance:** Contestants may only receive assistance from the organizers and judges. Teams or individuals who receive assistance from outside parties will be disqualified, and any work deemed not to be the participant's own will be excluded from the award.
- 6.6 External Interference:** External parties\* will be warned if they disrupt the competition or interfere with event staff. Repeated offenses by the same party will result in the team being disqualified.

\* External parties include parents, coaches and other participants.

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## 7. Game etiquette

- 7.1 Participating teams are expected to demonstrate player-like behavior when interacting with opposing teams. Harassment, unsportsmanlike conduct, and intentionally harming another team is strictly prohibited. Participants found to be in violation of these rules may be penalized or disqualified depending on the severity of the offense.
- 7.2 During the competition, judges may ask participants questions about the performance and construction of their robot. Participants found or suspected of any form of misconduct or cheating may be penalized and penalized.
- 7.3 Participants are expected to maintain a clean environment and may be penalized for not keeping their team's area in proper condition.

