ELECTRICAL TEAM TRAINING

ROBOCON TASK

PREFACE

Robocon is an International Robotic Contest organized by ABU (Asia-pacific Broadcasting Union) and hosted by different member country every year since 2002.The host country declares the Theme (Problem statement) of the competition one year in advance. Based on the same theme, every member country organizes the National level competition and selects the national winner which further represents the country in international competition.

In **2026**, the ABU Robocon contest will be hosted by **Hong Kong**. The event will showcase the theme **"Martial Arts"**, creatively merging traditional cultural elements with innovations in artificial intelligence and robotics.

Game Zones:
1. Martial Club
2. Meihua Forest
3. Arena

Robots:
1. **R1:**
   - Manual or autonomous
   - moves through the Martial Club, the Meihua forest **pathway** and the arena
2. **R2:**
   - must be fully autonomous
   - moves through the Martial Club, the Meihua forest and the arena

Robocon Ideation (Group Task)

◆ **Objective:**

analyze the **ABU Robocon 2026 contest video** and groups must do **brain storming sessions** to come up with their best ideas about how each mechanism will look like and the overall approaches took in designing the robot.

◆ Requirments:

● As shown in the video the robots must do all of the following:

-R2 must go **through the Meihua forest** as shown in the video
- R1 can assemble weapons
- Both robots can collect scrolls
- R1 can use the weapons to attack in the arena area
- R1 can place scrolls in the bottom row in the tic-tac-toe area
- R2 can place scrolls in the middle row in the tic-tac-toe area
- R1 can carry R2 to place scrolls in the top row in the tic-tac-toe area

● Each team should submit the following for each of the above tasks:

- A **fully documented explanation** for the group's final design idea for the mechanisms needed to achieve each of the above missions.

- you **should add at least one** of the following in your documentations for each mechanism:
1. clear paper with hand drawings for the mechanism with labeling each part in the drawing.
2. Digital sketch for the mechanism with labeling each part in the drawing.

3. Any other type of visualization that will showcase your mechanism in a clear way (3D visualizations, video with graphics, etc)

◆ Contest Links:

ABU Robocon 2026 contest video
Contest Rule Book