SCHOOLS' ROBOTIC GAMES - SMART DELIVERY ROBOT

1. OBJECTIVE

To build a fully autonomous microcontroller-controlled robot to trace a guide path, through a maze of obstacles, and travel across a pivoted platform to deliver a ball to a target tray.

2. JUDGING CRITERIA

The shortest time to complete the task successfully.

3. RULES AND REQUIREMENTS

3.1 The robot is to be controlled by an on-board microcontroller and powered by on-board battery.

3.2 The maximum size of the vehicle is 20 cm long and 15 cm wide.

3.3 The race course is approximately 2 metre long and 0.5 m wide.

3.4 The robot will start from a starting frame at one end of the track and carry a table tennis ball. It is to trace along a guide path and travel around several obstacles to reach a pivoted platform. It is to go over the platform and deliver the ball into a tray located at the far end of the track. The guide path is made up of reflective tape of 50 mm wide on black background.

3.5 The robot is given 12 minutes to produce its best result.

3.6 A penalty of 5 seconds will be added for every adjustment made during each run. Only 3 adjustments are allowed for each run.

3.7 Permission may be granted for 1 recess and it carries a penalty of 3 minutes on the competition time.