SCHOOLS' ROBOTIC GAMES - SMART DELIVERY ROBOT

1. OBJECTIVE

To build a microcontroller – controlled autonomous robot to trace a path, through obstacles, travel across a pivoted platform to deliver a ball to a target tray and return to the starting line.

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 6 AA size batteries. The body of the robot should mainly be made up of LEGO parts.

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

3.3 The path is made up of light color reflective tape of 50 mm wide with black background.

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, deliver the ball into a tray located at the far end of the track and return to the starting frame following the same path.

3.5 The robot is given 10 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. Dropping of ball during the run is considered as an unsuccessful run.

3.7 Permission may be granted for 1 recess (10 minutes) and it carries a penalty of 3 minutes on the competition time.