# ST. XAVIER'S COLLEGE,
MAPUSA, GOA

## DEPARTMENT OF ELECTRONICS

4 QUALITY EDUCATION

# ElectroQuest 2026

SPOT • SOLVE • BUILD • INNOVATE • CONTROL!

18th MARCH 2026

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| **Ms. Ursula Barreto** | **Dr. Caje Pinto** | **Fr. Antonio Salema** |
| Officiating Principal | HOD, Electronics & Convenor | Administrator |

# ABOUT
# ELECTROQUEST 2026

The Department of Electronics, St. Xavier's College, Mapusa–Goa, is organizing an event designed to test students' practical knowledge, creativity, and problem-solving skills through a series of engaging challenges.

The event is structured around five themes, each focusing on a different technical competency:

- **Spot – Electronic Maze Challenge**: Identify electronic components and locate their names in a maze puzzle.
- **Solve – Debug the C Code Challenge**: Detect and correct errors in C programs under time pressure.
- **Build – Circuit Building Challenge:** Construct a working circuit using provided electronic components.
- **Innovate – E-Waste Home Challenge**: Repurpose discarded electronic items into creative or functional projects.
- **Control – Line Follower Robot Challenge:** Design and demonstrate a robot that autonomously follows a track.

This event provides students with an opportunity to apply theoretical knowledge, develop hands-on skills, and showcase innovation in electronics and technology.
Participants compete individually or in teams, with certificates awarded to the top performers in each challenge.

# 1) ELECTRONIC MAZE CHALLENGE

*Spot It, Solve It, Win It!*

## COMPETITION RULES:-

**S**tudents must:

1. Physically identify electronic components placed on a table.
2. Search for the names of those components in the crossword-style maze.

### Round Format

· Round 1: Visual Identification

- 10 components are displayed.
- Students must correctly name each component by sight.

· Round 2: Maze Search

- Using the crossword sheet, students locate the names of the identified components.

**Time Limit**

· 10 minutes for identification

· 10 minutes for maze search

**Time: 9:30 am**

**Venue: Electronic Lab, ground floor, Science building**

# 2) DEBUG THE C CODE CHALLENGE

Spot Errors, Fix Fast!

## COMPETITION RULES:-

Participants must debug faulty C programs provided in the challenge sheet. Each program contains logical, syntactical, or runtime errors. The goal is to correct the code so it compiles and runs as intended.

**Round: Syntax Errors, Logic Errors!!!**

- Short snippets with missing semicolons, braces, or incorrect keywords.
- Programs that compile but give wrong output (e.g., wrong loop conditions, incorrect variable use).
- Larger code blocks with mixed errors (syntax + logic + runtime).

**Time Limit:** 20 minutes.

**Time: 10:00 am**
**Venue: Electronic Lab, ground floor, Science building**

# 3) CIRCUIT BUILDING CHALLENGE

Connect, Create, Compete!

## COMPETITION RULES:-

Participants must construct a functional circuit using the provided electronic components. The circuit should meet the challenge requirements.

**Round**

- Construct a circuit to blink LED using 555 timer.

**Time Limit:** 30 minutes

**Time: 11:00 am**
**Venue: Electronic Lab, ground floor, Science building**

# 4) E-WASTE HOME CHALLENGE

Create, Innovate, Present!

## COMPETITION RULES:-

Students must collect electronic waste items from home (old circuit boards, wires, switches, motors, chargers, etc.) and repurpose them into a creative project. The project can be functional, decorative, or educational, and must be presented to judges.

### Round Format

- **Round 1:** Collection & Idea
  - Gather e-waste items from home.
  - Build the project at home using e-waste materials..
- **Round 2: Presentation**
  - Present the project in class/competition.
  - Explain the components used, the process, and the purpose.

**Time Limit**

- 1 week at home for collection and construction.
- 5–10 minutes per student for presentation.

**Time: 11:30 am**

**Venue: Electronic Lab, ground floor, Science building**

# 5) LINE FOLLOWER ROBOT CHALLENGE

Track It, Control It, Win It!

## COMPETITION RULES:-

Participants must design and construct a robot that can autonomously follow a marked black track on a white surface using sensors and control logic.

**Round Format**

- **Round : Basic Track**
  - Straight line with gentle curves.
  - Includes sharp turns and intersections.

**Note: Use own Kit. No Robotic kit be given.**

**Time Limit**

- 30 minutes setup + 10 minutes trial per team

**Time: 12.30 pm**

**Venue: Electronic Lab, ground floor, Science building**

# LETS DIVE IN!!!!

## Scan for Registration

For Further Details
Contact:
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# THANK YOU!