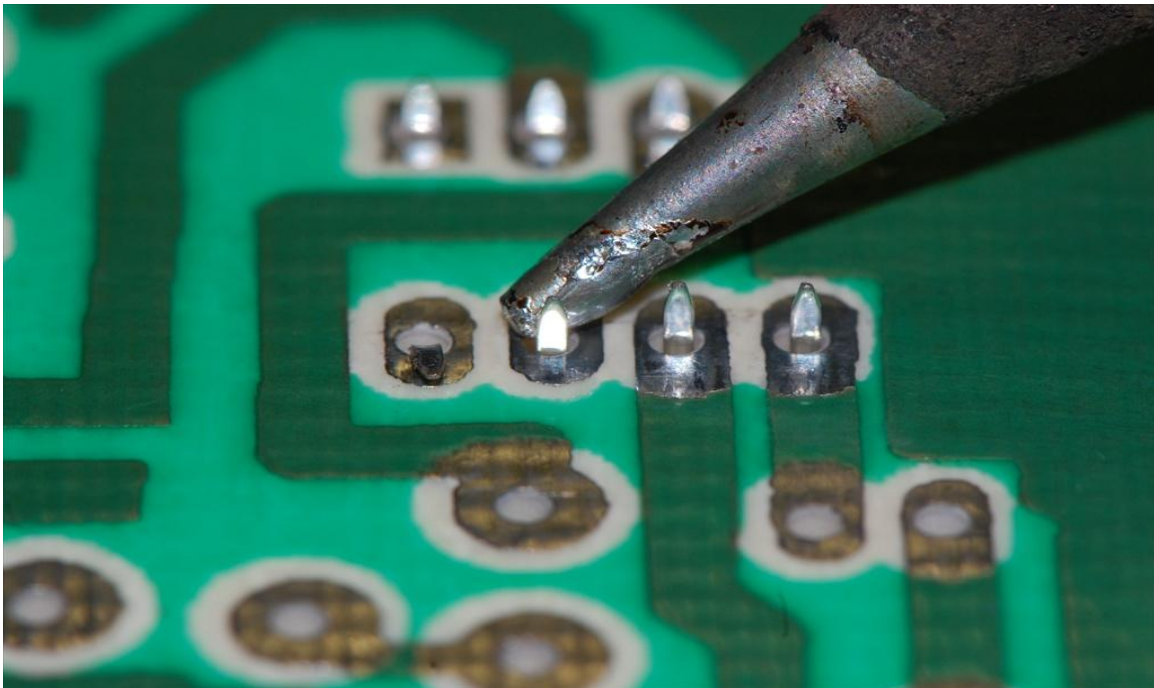


## **SOLDERON**

*“Breakless Bond”*

### **INTRODUCTION:**

Soldering is a process in which two or more metal items are joined together by melting and flowing a filler metal (solder) into the joint, the filler metal having a lower melting point than the adjoining metal. Soldering differs from welding in that soldering does not involve melting the work pieces. In brazing, the filler metal melts at a higher temperature, but the work piece metal does not melt. In the past, nearly all solders contained lead, but environmental concerns have increasingly dictated use of lead-free alloys for electronics and plumbing purposes.



### **PROBLEM STATEMENT:**

You have to design a specific electronics application by using the components provided at the time of the event. The application will use the concepts from basic Analog and Digital electronics and are to be designed on a Bread Board.

## **RULES AND REGULATIONS:**

- There will be total 2 rounds.
- First round will be elimination round with objective type questions from fields of electronics.
- Second round will be circuit designing round in which actual application has to be made.
- Both the rounds are open in nature, means you will be provided question sheets/components on the registration desk and you need to submit them back within the specified time limit.
- All the components and material required for the circuit will be provided by us.
- Power supply and other testing devices like millimetre, CRO (if needed) and other tools will be made available in a shared hall.

### **Round 1:**

- This will be a written elimination round consisting of questions related to electronic fundamentals and hardware.
- Question sheets will be provided to the registered teams on a particular time.
- They will have 1 hour to solve the questions and submit the answer sheets.
- Answers have to be written on the same sheet.
- There may be negative marking in some questions. Details will be specified in question sheet.
- Sheets must be submitted within the time limit. No sheets will be accepted after the dead line.
- Submitting the sheet early will benefit the team as time bonus.
- Time bonus will be considered for tie-breaking between two or more teams.
- Results will be declared on the same day and selected teams will have to report for next (Final) round.

## **Round2:**

Teams that will qualify after the first round will build an Application. The theme of which will be disclosed on the spot.

- All the components and required material will be provided to the teams.
- All teams will be having same kit of components.
- A total of 2 hours will be given to each team.
- Working space with all tools and equipments will be made available however teams are free to move at their pace but they have to submit finished/unfinished application and all other unused parts to the registration desk.
- Teams should draw circuit diagram of the application depicting all the principles and theories involved in circuit as well as the working of the Application on a Chart Sheet.
- Chart Sheet will also be made available by us but you can get only one chart sheet per team.
- Application, Chart Sheets and other unused components must be submitted within the time limit.
- Submitting the application/kits early will benefit the team as time bonus.
- Time bonus will be considered for tie-breaking between two or more teams.

## **JUDGING CRITERIA (FOR ROUND 2):**

- The application will be judged according to the following criteria:
- Design of circuit. (10)
- Compactness of design. (15)
- Efficiency of the application. (15)
- Desired output. (20)

- Exploration of concepts/theories.(10)
- Neatness of the implemented circuit. (10)

### **TEAM SIZE:**

A team may contain a maximum of 2 participants.

### **ELIGIBILITY CRITERIA:**

- All students with a valid Registration Card of DEXTRA 2014 along with their respective educational institutes' ID Card are eligible to participate.
- Non-JUET participants must possess an Accommodation Confirmation Letter (ACL) issued by the organizing body at the time of registration

### **EVENT MANAGER:**

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