

# ST. XAVIER'S SCHOOL DORANDA, RANCHI

## TOTICS FOR THE PROJECT WORK 2020

### CLASS XII

### SUBJECT: PHYSICS

Semiconductors and semiconducting device.

1. Basic difference b/w conductors, insulators and semiconductor
2. Energy band, detailed explanation of energy band diagram for conductors, insulators and semiconductor
3. Formation of hole, energy gap, valence band, conduction band to be given.
4. Types of semiconductors, p – type , n – type and explanation with energy band diagram .
5. P – n Junction and p – n junction i.e. forward biasing reverse biasing.  
Explanation of the VI characteristic curve obtained
6. P – n junction diode used in hay wave and full wave rectifier circuits,  
Definition of rectifiers must be given.

**Note:** The students are advised to go through the topics and start working on their projects. All these things must be included with detail explanation.