

A decorative graphic on the left side of the slide, consisting of a network of thin, light blue lines and small circles, resembling a circuit board or a stylized tree structure, set against a blue gradient background.

# BASIC OF SEMICONDUCTORS.



# HISTORY OF DISCOVERY

- Semiconductor was opened by three American scientists John Barden, Walter Brattain and William Shockley. And all of them received the Nobel Prize in 1965.

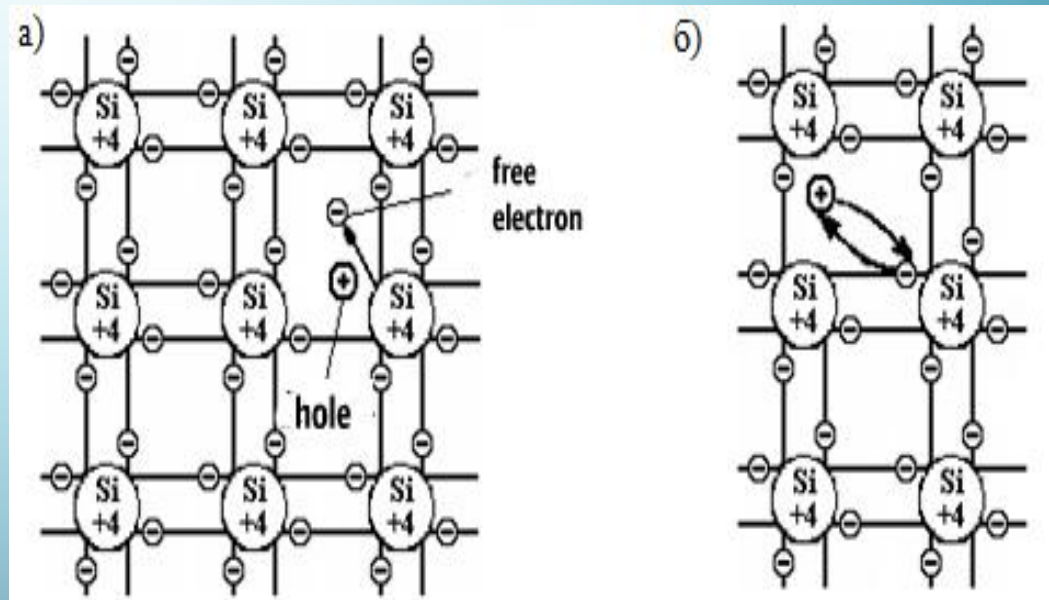




# DIFFERENT TYPES OF SEMICONDUCTORS

- Intrinsic semiconductor

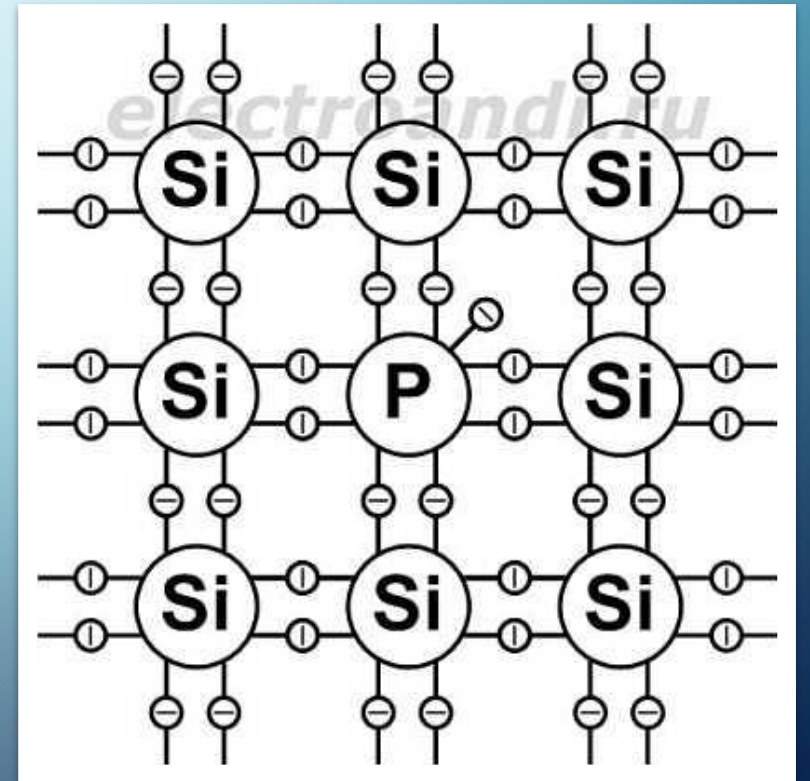
This is a pure form of semiconductor crystal.



## • Extrinsic semiconductor

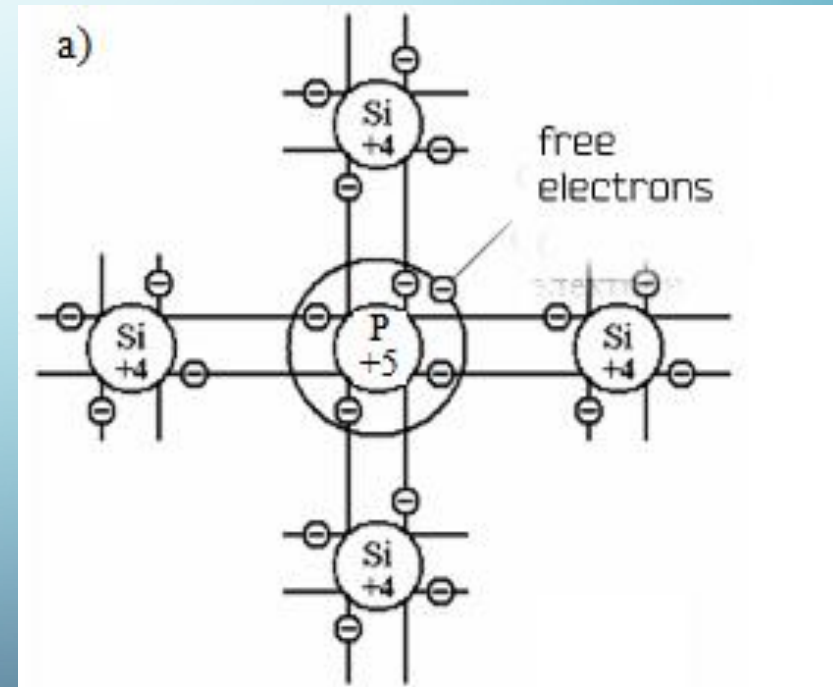
When the properties of intrinsic semiconducting materials are altered by adding impurities to it, it becomes an extrinsic semiconducting material. Besides, extrinsic semiconductors classified into

- N-type
- P-type



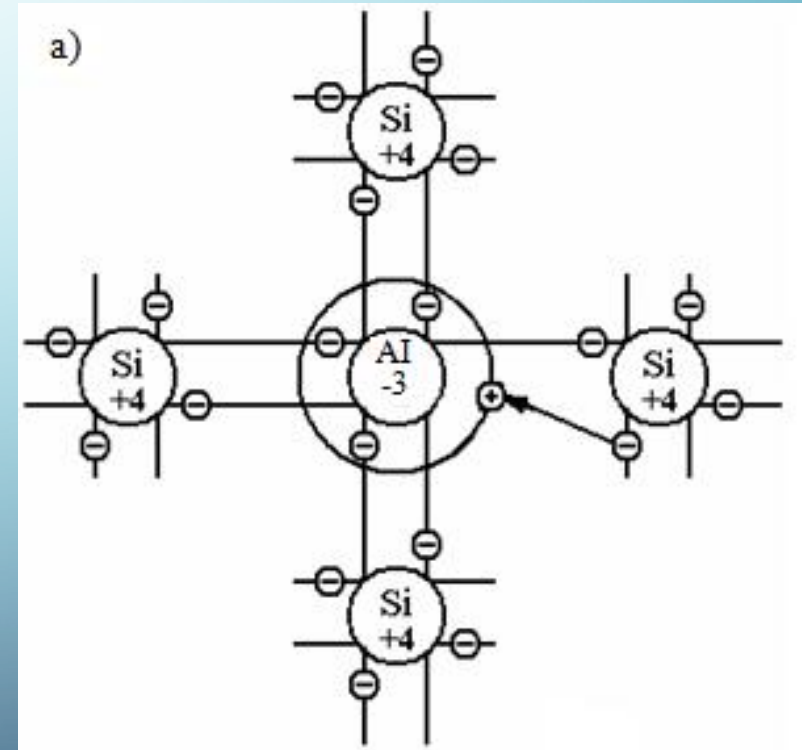
## ○ N-type

N-type semiconductors are produced when a pentavalent impurity such as antimony or phosphorus is added to a pure semiconducting material like silicon or germanium.



## ○ P-type

P-type semiconductors are produced when a trivalent impurity such as aluminum or indium is added to a pure semiconducting material like silicon.





# APPLICATIONS OF THE SEMICONDUCTORS

- basic electronic components
- for electric rail roads
- for radar and satellite communication
- integrated solar cells

