

EEEM

Chapter 1 Classification of Materials

Introduction -

हम daily life में observe करते हैं कि कभी कभी हमारे electrical equipments जैसे कि heater, fan, oven, fridge etc. काम करना बन्द कर देते हैं।

इसका कारण यह है कि हम उन equipments को proper तरीके से design नहीं करते हैं। उनको proper तरीके से design करने के लिए हमें उनकी physical, chemical & mechanical properties को ध्यान में रखना चाहिए।

VVImp Classification of electrical engineering materials with reference to their atomic structure.

	Rich Conductors	Ordinary Conductors	Poor Conductors	Rich Semiconductors	Poor semi conductors	Ordinary insulators	Good insulators	Rich insulators
	or	or	or	or	or	or	or	or
	Single valent material	Double Valent material	Tri Valent material	Four valent material	Five valent material	Six Valent material	Seven valent material	Eight valent material
Example:	${}^3\text{Li}$	${}^4\text{Be}$	${}^5\text{B}$	${}^6\text{C}$	${}^7\text{N}$	${}^8\text{O}$	${}^9\text{F}$	${}^{10}\text{Ne}$
	${}^{11}\text{Na}$	${}^{12}\text{Mg}$	${}^{13}\text{Al}$	${}^{14}\text{Si}$	${}^{15}\text{P}$	${}^{16}\text{S}$	${}^{17}\text{Cl}$	${}^{18}\text{Ar}$
	${}^{19}\text{K}$	${}^{20}\text{Ca}$	${}^{31}\text{Ga}$	${}^{32}\text{Ge}$	${}^{33}\text{As}$	${}^{34}\text{Se}$	${}^{35}\text{Br}$	${}^{36}\text{Kr}$
Valence e^-	1	2	3	4	5	6	7	8

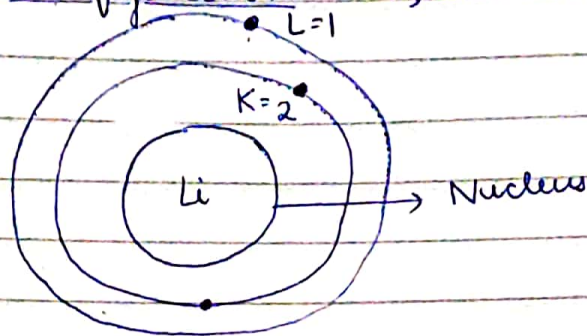
Rich Conductors:

1) Lithium (Li)

Symbol - Li

Atomic Number - 3

Bohr Bury configuration = 2, 1



2) Sodium (Na)

Symbol = Na

Atomic Number = 11

Bohr Bury configuration = 2, 8, 1

