Electronic Circuits – Tutorial 01

Introduction to Electronics 1

#	Question	Answer
1	Valence electrons are (a) in the closest orbit to the nucleus (b) in the most distant orbit from the nucleus (c) in various orbits around the nucleus (d) not associated with a particular atom	b
2	A positive ion is formed when (a) a valence electron breaks away from the atom (b) there are more holes than electrons in the outer orbit (c) two atoms bond together (d) an atom gains an extra valence electron	a
3	The atomic number of silicon is (a) 8 (b) 2 (c) 4 (d) 14	d
4	Every known element has (a) the same type of atoms (b) the same number of atoms (c) a unique type of atom (d) several different types of atoms	c
5	An atom consists of (a) one nucleus and only one electron (b) one nucleus and one or more electrons (c) protons, electrons, and neutrons (d) answers (b) and (c)	d
6	The nucleus of an atom is made up of (a) protons and neutrons (b) electrons (c) electrons and protons (d) electrons and neutrons	a
7	The most widely used semiconductive material in electronic devices is (a) germanium (b) carbon (c) copper (d) silicon	d

Q1	If the atomic number of a neutral atom is 6, how many electrons does the atom have? How many protons?
Sol 1	6 electrons; 6 protons

Q2	What is the maximum number of electrons that can exist in the 3rd shell of an atom?
Sol 2	18

Q3	A certain atom has four valence electrons. What type of atom is it?
Sol 3	..... Semi condcutor .....