

ECAT Physics Chapter 17 Physics of Solids

Sr	Questions	Answers Choice
1	Semi-conductor elements have atoms with	A. 2 valence electrons B. 3 valence electrons C. 4 valence electrons D. 5 valence electrons
2	Recently a complex crystalline structure known as Yetrium Barium Copper Oxide have been reported to become superconductor at	A. 125 K B. 25 K C. 263 K D. 163 K
3	The crystalline structure of NaCl is	A. rectangular B. hexagonal C. tetrahedral D. cubical
4	The solids are classified as:	A. Metals B. Crystalline C. Amorphous D. Polymeric E. All except (A)
5	When a large number of atoms are brought close to one another to form a solid, each energy level of an isolated atom splits into sub-levels, called	A. energy bands B. energy shells C. states D. all of them
6	A unit cell is smallest basic structure which is:	A. One dimensional B. Two dimensional C. Three dimensional D. Four dimensional E. None of these
7	Any superconductor with critical temperature above 77 K, is referred as	A. low temperature superconductor B. high temperature superconductor C. very low temperature superconductor D. none of them
8	The ratio of linear stress/linear strain is called as	A. Yong's modulus B. Bulk modulus C. Shear modulus D. Modulus
9	Polymeric solids have	A. low specific gravity B. high specific gravity C. either of them D. none of them
10	The units of modulus of elasticity are	A. Nm^{-2} B. Nm C. ms^{-1} D. Pascal
11	The smallest three dimensional basic structure is called as:	A. An atom B. Unit cell C. Crystal lattice D. Polymer E. None of these
12	A structure of polymeric solid is:	A. An ordered structure B. A disordered structure C. Intermediate between order and disorder D. Any of these E. None of these
13	The charged nucleus of an atom itself spins its magnetic field	A. equal to the field produced by orbital electrons B. greater than the field produced by orbital electrons C. much weaker than the field produced by orbital electrons D. none of these

14	Recent studies of ferromagnetism have shown that there exists in ferromagnetic substances small regions called	A. tiny regions B. domains C. vectors D. none of them
15	The size of the domain is such that they can contain	A. $10^{²}$ to $10^{⁴}$ atoms B. $10^{⁴}$ to $10^{⁸}$ atoms C. $10^{⁸}$ to $10^{¹²}$ atoms D. $10^{¹²}$ to $10^{¹⁶}$ atoms
16	When a silicon crystal is doped with a pentavalent element, then the atom of the pentavalent element is known as	A. acceptor B. donor C. either of them D. none of them
17	An atom in which there is a resultant magnetic field, behaves like a tiny magnet and is called as	A. magnetic B. magnetic dipole C. magnetic monopole D. none of them
18	Experiments revealed that the ratio of the stress to the strain is a constant value for	A. different material B. all materials C. a given material D. all of them
19	The whole structure obtained by the repetition of unit cells is called:	A. Crystal lattice B. Amorphous solid C. Polymeric solid D. Polysterne E. None of these
20	The band above the valence band is called	A. high energy band B. conduction band C. empty band D. none of them