MDCAT Physics Chapter 13 Deformation of Solids MCQ's Test

Sr	Questions	Answers Choice
1	The domains are the small regions of the order of	A. Millimeter B. Micrometer C. Micron D. None of these
2	Which of the following pair of quantities do not have the same units?	A. Stress, Young's modulus B. Strain, bulk modulus C. Stress, bulk modulus D. None of them
3	In semiconductors at 0 K the valence band is	A. Completely filled B. Partially filled C. No D. Yes
4	The work done by stretching force is the area of	A. Trapezium B. Triangle C. Rectangle D. None of these
5	The whole structure obtained by the repetition of unit cells is called:	A. Crystal lattice B. Amorphous solid C. Polymeric solid D. Polystrene E. None of these
6	Shear modulus for mercury is	A. 0 B. 12 C. 27 D. 42
7	The example of insulators are	A. Copper B. Nickel C. Diamond D. None of these
8	Young's modulus for concrete is	A. 10 B. 15 C. 25 D. 30
9	Within each domain, the magnetic fields of all the spinning electrons are	A. parallel B. antiparallel C. perpendicular D. all of them
10	If stress is increased beyond the elastic limit a permanent change in the material is observed This behavior is called	A. Elastic deformation B. Elasticity C. Plasticity D. Yield strength
11	The measure of deformation of a solid when stress is applied to it is called	A. Strain B. Stress C. Force D. None of these
12	Which of the following is not dimension less	A. Poission ration B. Sharing strain C. Longitudinal strain D. Volume stress
13	The examples of diamagnetic substances	A. Water B. Copper C. Antimony D. All of them
14	The molecules or ions in a crystalline solid are	A. static B. not static C. randomly moving D. all of them
15	The pattern of a crystalline solid is:	A. One dimensional B. Two dimensional C. Three dimensional

		D. Either A or B E. None of these
16	The unit cell of the shape of match box is called	A. Cubic B. Tetragonal C. Orthorhombic D. Rhomboheral
17	When a stress changes the shape, it is called the	A. compressional stress B. tensile stress C. shear stress D. any one of them
18	Which one of the following has only bulk modulus?	A. Diamond B. Glass C. Tungsten D. Water
19	Whenever a covalent bond is broken in an intrinsic semi-conductor	A. hole is created B. an electron is created C. an electron hole is generated D. all of them
20	Which of the following pairs is not correct	A. Strain - dimensional B. Stress - N/m² C. Modulus of elasticity - N/m² D. Shear stress - N/m²
21	Which one of the material is not polymer	A. Glass B. Natural rubber C. Polyethene D. Polystyrene
22	Steel is preferred for making springs over copper.Whey?	A. Steel is cheaper B. Young;s modulus of steel is more than that of copper C. Young's modulus of copper is more than that of steel D. Steel is less likely to be oxidized.
23	Donor impurities donate	A. Holes B. Electrons C. Both holes and electrons D. None of them
24	Crystalline solid do not show	A. Sharp melting points B. Flat faces C. Long range order D. Isotropic expansion coefficients
25	The electrical conductivities of insulators are ranging from	A. 10⁻⁵to 10⁻¹⁰(Ω m)⁻¹ B. 10⁻¹⁰to 10⁻¹⁵(Ω m)⁻¹ C. 10⁻⁵to 10⁻¹⁵(Ω m)⁻¹ D. 10⁻¹⁰to 10⁻²⁰(Ω m)⁻¹
26	The measure of deformation in a certain solid due to the action of stress is called	A. Hooke's law B. Mechanical advantage C. Stress D. Strain
27	Stress change the shape, volume or length of a body due to the	A. Applied force B. External force C. Force D. Force on unit area
28	The critical temperature of aluminum is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
29	A rubber cord 100 cm long is elongated 1 cm by a stretching force of 0.2 N. The cross-sectional area of the cord is 0.04 cm^2. Find the Young's modulus	A. 0.5 N cm⁻² B. 0.05 N cm⁻² C. 50 N cm⁻²

	for that rubber.	C. 50 N cm⁻² D. 500 N cm⁻²
30	The word amorphous means:	A. Without any structure B. With define structure C. Regular arrangement of molecules D. Both B and C E. None of these
31	Solids have sharp melting points account of	A. Long range order of atoms B. Short range order of atoms C. Equal strength of inter-atomic bonds D. An isotropic nature
32	Acceptor impurities donate	A. Holes B. Electrons C. Both Electrons and Holes D. None of them
33	Domains are present only in	A. Diamagnetic material B. Para magnetic material C. Ferromagnetic material D. All of these
34	In the stress-strain graph, stress is increased linearly with strain until a point is reached, this point is known as	A. plastic limit B. plastic deformation C. proportional limit D. elastic behaviour
35	The ability of the body to return to its original shape is called	A. deformation B. stretching C. compressing D. elasticity
36	The smallest three dimensional basic structure in a crystalline solid is called	A. lattice point B. crystal lattice C. cubic crystal D. unit cell
37	The ratio of volumetric stress to volumetric strain is called	A. Young's modules B. Bulk modulus C. Shear modulus D. Hooke's law
38	Young's modulus for mercury is	A. 0 B. 2 C. 5 D. 6
39	The band above the valence band is called	A. high energy band B. conduction band C. empty band D. none of them
40	The ratio of applied stress to volumetric strain is called	A. shear modulus B. Young's modulus C. Bulk modulus D. None of these
41	The metals become a magnetic material because of their	A. Hardness B. Alignment of atoms C. Structure D. All of them
42	Conductivity of semiconductor is of order of	A. 10⁻⁶ to 10⁴ Ω⁻¹ m⁻¹ B. 10⁻¹⁰ to 10⁻²⁰ (Ωm)⁻¹ C. 10⁷ Ωm⁻¹ D. None
43	In the phenomenon of hysteresis, the magnetism and magnetizing current behaves as	A. I lags B. 1 leads B C. I & B becomes equal D. None of these
44	Reciprocal of bulk modulus is called	A. Shear modulus B. Compressibility C. Young s modulus D. None
45	When a crystal is subjected to stress, it tends to break or fracture along definite direction which is characteristic of a simple. This is called	A. Cleavage B. Allotropy C. Isotropy D. None of these
46	The modulus of elasticity of material does not depend upon	A. Shape B. Temperature

46	The modulus of elasticity of material does not depend upon	C. Nature of material D. Impurities mixed
47	The metals become electrically conducting due to their	A. Ductility B. Hardness C. Structure D. All of them
48	A substance which have empty conduction band is called	A. Conductor B. Insulator C. Semiconductor D. None of these
49	$Nm^{-2}$is approximately called:	A. Telsa B. Weber C. Pascal D. Watt E. Guass
50	In semiconductor Si or Ge a missing electron in covalent bond from an atom is a	A. Charged atom B. Hole C. Ion D. All of them
51	The dimensional formula for the modulus of elasticity is same as that for:	A. Stress B. Strain C. Velocity D. Surface tension
52	The value of young's modulus is maximum for:	A. Dimond B. Copper C. Ice D. Mercury E. Water
53	A cable breaks if stretched by moe than 2mm, it is cut into two equal parts. How much either [art can be stretched without breaking?	A. 25 m B. 1 mm C. 2 mm D. 0.5 m
54	Young's modulus for water is	A. 0 B. 2 C. 5 D. 9
55	The crystalline structure of NaCl is	A. rectangular B. hexagonal C. tetrahedral D. cubical
56	Young's modulus for lead is	A. 10 B. 11 C. 15 D. 19
57	While vibrating the atoms are at their	A. Fixed positions B. Extreme position C. Average positions D. None of these
58	The magnetic fields produced by electron in an atom is due to	A. Spin motion B. Orbital motion C. Both a & b D. All above
59	A mental wire is stretched by suspending weight to if x is the longitudinal strain and y is young s modulus of elasticity then the elastic potential energy per unit volume is	A. 1/2 y x² B. x² / 2y C. y² / 2x D. x² / 2y
60	Polymers are the chemical combination of carbon with:	A. Nitrogen B. Oxygen C. Hydrogen D. All of these E. None of these
61	Which of the following material have young and bulk modulus are same	A. Brass B. Bone C. Aluminum D. Steel
62	The forbidden energy band gaps in conductors semiconductors and EG,EG_2 and EG_3 respectively The relation among them is	A. EG₁ = EG₂ = EG₃ B. EG₁ < EG₂ < EG₃ C. EG₁ > EG₂ > EG₃ D. EG₁ < EG₂ > EG₃

63	Shear modulus for bone is	A. 15 B. 40 C. 50 D. 80
64	If stress is increased beyond the elastic limit and change in solid is permanent this behaviour is called	A. Elasticity B. Plasticity C. Conductivity D. Insulator
65	The solids are classified as:	A. Metals B. Crystalline C. Amorphous D. Polymeric E. All expect A
66	N-type crystal is	A. Neutral B. Positively charged C. Negative charged D. None of these
67	What is the unit of the Young's modulus?	A. N m⁻² B. N m⁻¹ C. N m D. N m²
68	The main reason for the high speed of bullet train is	A. Magnetic effect B. Reduced friction C. Design of train D. None of these
69	The whole structure obtained by the repetition of unit cell is known as	A. Unit cell B. Crystal lattice C. Ore D. All of these
70	The limit below which the Hooke s law holds well is called	A. Yield point B. Breaking stress C. Tensile strength D. Elastic limit
71	Bulk modulus for tungsten is	A. 50 B. 100 C. 150 D. 200
72	A body is in its state of stress when it is	A. Displaced from its equilibrium position B. Remains at rest when shape changed C. Their angles change D. All of them
73	Under the elastic region, the deformation produced in the material is	A. permanent B. temporary C. either of them D. none of them
74	A current which demagnetize the material completely is called	A. Applied current B. Coercive current C. Maximum current D. None of these
75	A wire is stretched by applying a stretching force.If the stretching force is doubled within elastic limit Then energy stored in the wire will	A. Be double B. Increase by four times C. Increase by eight time D. Remain same
76	At higher temperature their vibrations become so great that structure suddenly breaks up and changes into	A. Order to disorder B. Solid into liquid C. Melted D. All of them
77	Polymers have chemically combinations with	A. Carbon B. Nitrogen C. Hydrogen D. All of them
78	_____ does not have linear strain	A. Water B. Copper C. Aluminum D. Iron
79	The maximum stress that a material can withstand is known as	A. plastic point B. elastic point C. yield point D. ultimate tensile strength
		A. Moving charges B. Bar magnets

80	The magnetic fields are produced by the	B. Bar magnets C. Motion of conductor in a magnetic field D. All of them
81	The temperature below which materials are superconductor is called as:	A. Kelvin temperature B. Critical temperature C. Curie temperature D. none of these
82	Material with smaller hystersis loop area are best for the construction of	A. Transformer B. Core of transformer C. D.C motor D. Rectifier
83	Bulk modulus for mercury is	A. 27 B. 29 C. 29.4 D. 30
84	An n-type semiconductor is obtained by doping germanium or silicon with	A. Tetravalent impurity B. Trivalent impurity C. Pentavalent impurity D. Monovalent inpurity
85	Energy per unit volume of a stretched wire is	A. (1/2) x load x extension B. Load x stress C. Stress x strain D. (1/2) x stress x strain
86	Bulk modulus for steel is	A. 60 B. 120 C. 160 D. 170
87	A wire is stretched to double of its length. Its train is:	A. 2 B. 1 C. 0 D. 0.5
88	The area of hysteresis loop is an indication of the	A. Permeability of the material B. Susceptibility of the material C. Retentivity of the material D. Energy dissipated per cycle
89	The symbol K and G have been used to denote respectively:	A. Young's modulus and bulk modulus B. Young's modulus and shear modulus C. Bulk modulus and shear modulus D. Any of these E. None of these
90	The conduction band in a solid	A. may be empty B. cannot be empty C. should be filled D. all of them
91	Shear modulus for tungsten is	A. 50 B. 100 C. 150 D. 200
92	A steel wire 12 mm in diameter is fastened to a log and them pulled by a tractor. The length of stire between the log and tractor is 11 m. The force of 10,000 N is required to pull the log. What is stress	A. 84.46 MPa B. 85.46 MPa C. 88.46 MPa D. 89.46 MPa
93	Modulus elasticity of any materiel is of the order of:	A. 10⁵ B. 10² C. 10⁻² D. 10⁻⁵ E. 10⁻¹⁰
94	Young's modulus for bone is	A. 10 B. 15 C. 20 D. 25
95	Super conductors are materials like	A. Alloys B. Ceramic C. Semiconductors D. a and b
96	The atoms molecules or ions in a crystalline solids are at room temperature	A. Motionless B. Vibrate violently C. Fixed D. Simply vibrate
97	The SI unit of strain is	A. N B. dynes C. pascal D. dimensionless

		D. dimensionless
98	When the deformation produced in the material becomes permanent, this type of behaviour is called	A. proportionality B. elasticity C. plasticity D. none of them
99	The each atom of pure Ge or Si shares neighboring electrons are	A. Three B. Four C. Five D. None of these
100	A stress which decreases the stress along one dimension is known as:	A. Compressive stress B. Tensile stress C. Linear stress D. Both (B) and (C)
101	The critical temperature T_C for lead is	A. 5.4 K B. 6.3 K C. 6.9 K D. 7.2 K
102	The structure of the polymeric solid is:	A. An ordered structure B. A disordered structure C. Intermediate between order or disorder D. Any of these E. None of these
103	The valence band of an atom in a solid	A. is always empty B. may or may not be empty C. can never be empty D. none of them
104	The energy dissipated per cycle for iron in hysteresis loop is	A. less than for steel B. equal to the steel C. more than the steel D. any one of them
105	The dimension of elastic modulus	A. ML⁻¹T² B. MLT² C. ML⁻¹T² D. MLT³
106	Bulk modulus for ice is	A. 5 B. 6 C. 7 D. 8
107	The amplitude of oscillation of each atom in a metallic crystal rises with the	A. rise in temperature B. decrease in temperature C. even temperature remains constant D. all of them
108	Bulk modulus for aluminium is	A. 40 B. 70 C. 75 D. 95
109	A cable breaks if stretched by more than 2 mm.It is cut into two equal parts.How much either part can be stretched without breaking?	A. 0.25 m B. 0.5 m C. 1 mm D. 2 mm
110	The shape of crystals other than a cube have	A. Right angles B. Not right angles C. Not corners D. None of these
111	Which of the following can become a good temporarily magnet?	A. iron B. steel C. both of them D. none of them
112	The measure of the deformation in a solid when stress in applied to it is called	A. elastic constant B. Young's modulus C. strain D. elasticity
113	When the shear stress and shear strain are involved, then their ratio is called	A. Young's modulus B. Bulk modulus C. Shear modulus D. all of them
114	The energy need to magnetize and demagnetize the specimen during the each cycle of magnetizing current is	A. Value of current B. Value of demagnetizing current C. Value of magnetic flux density D. Area of the loop
		A. conduction electrons

115	The electrons occupying the conduction band are known as	B. free electrons C. both of them D. none of them
116	Which of the given pair have same dimension	A. Stress, pressure B. Elastic modules, pressure C. Stress, elastic modules D. All have same dimension
117	Elastic deformation of a material is the deformation which is	A. Permanent B. Temporary C. Some what permanent D. None of these
118	The modulus of elasticity can be written as	A. stress x strain B. strain/stress C. 1/2 x stress x strain D. stress/strain
119	The coercivity of the steel is	A. less than the iron B. equal to the iron C. more than the iron D. any one of them
120	Which of the following strain are possible in solids	A. Linear B. Volumetric C. Shear D. All of these
121	Such substance which break soon after crossing the elastic limit is called	A. Weak substance B. Ductile substance C. Brittle substance D. Organic substance
122	The theory which explains the vast diversity in an electrical behaviour of all types the materials is	A. Free electron theory B. Band theory C. Theory based as chemical properties D. None of these
123	The curie temperature for iron is	A. 750°C B. 570°C C. 750°k D. 57°K
124	The critical temperature of lead is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
125	Young's modulus for steel is	A. 100 B. 200 C. 300 D. 400
126	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
127	Ratio between total intensity of magnetic field at equator to poles is	A. 1 : 1 B. 2 : 1 C. 1 : 2 D. 1 : 4
128	The ultimate tensile strength of the material can be regarded as	A. Maximum strength B. Nominal strength C. No strength D. None of these
129	Molecules of a solid possess:	A. Translation motion B. Vibration motion C. Rotation motion D. Linear motion
130	In deformation of the material, the potential energy of the molecules due to displacement from their mean positions is	A. Lost B. Gained C. No lost no gain D. None of these
131	Which of the following is an example of Brittle substances?	A. Copper and Brass B. Brass and glass C. Copper and glass D. Only glass
132	The smallest portion of a crystal lattice that if repeated in three-dimensions will generate the entire lattice is called:	A. Unit cell B. Lattice plane C. Crystal D. None of these

133	Each atom in a metal crystal:	A. Remains fixed B. Vibrates about a fixed point C. Moves randomly D. Rotates about the centre of the crystal E. None of these
134	Electrons of an isolated atom are bound to the nucleus, and?	A. can only have distinct energy level B. can only have same energy level C. may or may not have distinct energy D. none of them
135	The force which maintains the strict long-range order between atoms of a crystalline solid is the:	A. Nuclear force B. Cohesive force C. Adhesive force D. Coulomb force E. None of these
136	The conduction of electrons takes place and conduct electric current through solids is a	A. Energy band B. Conduction band C. Valence band D. Completely filled band
137	The magnetism produced by electrons within an atom from motion/motions of electron.	A. One motion B. Two motions C. Three motions D. None of these
138	Crystalline solids are also	A. Metals B. Ionic compound C. Ceramics D. All of them
139	The charged nucleus of an atom itself spins, it's magnetic field	A. equals 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 them
140	Stress that induces a change in the shape of the body is named as	A. Tensile stress B. Volumetric stress C. Shear stress D. None of these
141	Stree is _____ property of solids	A. Electrical B. Polymeric C. Conductive D. Mechanical
142	Arsenic antimony or phosphorus are impurities of	A. p-type B. n-type C. May be p-type or n-type D. None of these
143	Young's modulus for diamond is	A. 700 B. 913 C. 1100 D. 1120
144	220 $cm^3$of water, when subjected to a stress of 100 atmosphere, becomes 219 cm^3. Find the bulk modulus of water	A. 100 N m⁻³ B. 100 N m⁻² C. 22000 N m⁻³ D. 22000 N m⁻²
145	_____ is a pattern which has got one more atom at the centre of a simple cube.	A. Simple cube B. Face centered cube C. Body centered cube D. None of these
146	In a semi-conductor material, the total current is	A. only the +ve current B. only the electronic current C. sum of +ve and electronic current D. all of them
147	The expression of energy stored in an inductor of length L and current I can be expressed by a relation	A. 1/2 LI² B. 1/2 I²L C. 1/2 I²L² D. 1/2 IL
148	The strain is the ratio of	A. Stress/strain B. Strain/stress C. Force area D. change in length/original length
149	The area of the loop is the dissipated energy which do work against friction of domains is called	A. Current loss B. Voltage loss C. Hysteresis loss D. None of these

150	The electrons occupying the outermost shell of an atom and the electrons occupying in the energy band are called	A. Energy band B. Valence band C. Forbidden energy band D. None of these
151	The property due to which the size or shape of a lattice is not important is called	A. Cleavage B. Anisotropy C. Homogenity D. None of these
152	The materials in which valence electrons are bound very tightly to their atoms and are not free, are known as	A. conductors B. insulators C. semi-conductors D. all of them
153	Examples of polymeric substances are:	A. Plastic B. Synthetic rubbers C. Zirconia D. All of these E. Both A and B
154	A hole in a semi-conductor material is treated as	A. positive charge B. negative charge C. neutral D. none of them
155	When relatively simple molecules are chemically combined into massive molecules, the reaction is called:	A. Fission reaction B. Fusion reaction C. Polymerization reaction D. Any of these E. None of these
156	Bulk modulus for water is	A. 2.2 B. 4.5 C. 6.2 D. 7.3
157	With rise in temperature the electric conductivity of intrinsic semiconductor	A. Increases B. Decreases C. First increases and then decreases D. First decreases and then increases
158	The electrical resistance of mercury disappeared below temeprature	A. 2.1 K B. 3.4 K C. 4.1 K D. 4.2 K
159	If both the length and radius of rod are doubled, then the modulus of elasticity will:	A. Increase B. Decrease C. Remains the same D. Doubled
160	The ability of body to return to its original shape is called	A. Elasticity B. Stress C. Strain D. Shear
161	An atom in which there is a resultant magnetic field behave like a	A. Tiny magnet B. Magnetic dipole C. No magnet D. a and b
162	What is the Young modulus of a meta?	A. Extension/force B. Force/extension C. Strain/stress D. Stress/strain
163	Unit cell has a basic structure of	A. One dimensional B. Two dimensional C. Three dimensional D. None of these
164	The shearing strain is measured by	A. Angle of rotation B. Shearing stress C. Angle of shear D. Modulus of rigidity
165	The results of mechanical tests are usually expressed in terms of	A. stress B. strain C. stress and strain D. neither stress nor strain
166	There is a regular arrangement of molecules in	A. amorphous solids B. polymeric solids C. crystalline solids D. none of these
		A. 60<span style="font-size: 10.5pt; line-height:

167	In a cubic crystal, all the sides meet at:	107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 109<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° E. 10<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
168	A piece of copper and another of germinium are cooled from room temperature to 80K. The resistance of	A. Each of them increases B. Each of them decreases C. Copper increases and germanium for D. Copper decreases and germanium increases
169	Examples of brittle substances are	A. Glass B. Copper C. Lead D. None of these
170	The conductivities of conductors (metals) have	A. 10⁵ (Ω)⁻¹ B. 10⁷ (Ωm)⁻¹ C. 10⁸ (Ωm)⁻¹ D. 10⁹ (Ωm)⁻¹
171	When a silicon crystal is doped with a trivalent element, then the atom of the trivalent element is known as	A. acceptor B. donor C. either of them D. none of them
172	A special alloy called Alnico is known as	A. Soft magnetic material B. Hard magnetic material C. In between soft and hand magnetic material D. None of these
173	After curie temperature iron is	A. Ferromgnetic B. Diamagnetic C. Paramagnetic D. None
174	The results of mechanical tests are usually expressed in terms of:	A. Stress B. Applied force C. Strain D. Deformation E. All of these
175	A solid subjected to deformation along one dimension	A. Only have tensile stress B. Only have compressive stress C. Have both tensile and compressive stress D. None of them
176	The atom or molecules in crystalline solids are held together by:	A. Cohesive force B. Adhesive force C. Gravitational force D. Magnetic forces
177	The SI unit of stress is same as that of	A. Momentum B. Pressure C. Force D. Length
178	In n-type substances the minority carriers are	A. Holes B. Electrons C. Neutrons D. None
179	The bonding between the semi-conductor materials is	A. covalent B. ionic

179	The bonding between the semi-conductor materials is	C. either of them D. none of them
180	Bulk modulus for glass is	A. 2 B. 31 C. 36 D. 42
181	Each atom in a metal crystal vibrates about a fixed point with a amplitude that:	A. Decreases with rise in temperature B. Is not affected by rise in temperature C. Increases with rise in temperature D. Both B and C E. None of these
182	Iron, cobalt and nickle are examples of	A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them
183	When a stress changes its volume it is called	A. Tensile stress B. Shear stress C. Volume stress D. None of these
184	The number of different crystals systems based on the geometrical arrangement of their atoms and the resultant geometrical structures are	A. 5 B. 7 C. 9 D. 14
185	Which of the following is not crystalline solid	A. Zinc B. Copper C. Sodium chloride D. None of these
186	The curie temperature of iron is called	A. 250°C B. 500°C C. 750°C D. 1000°C
187	The force applied on unit area to produce any change in the shape, volume or length of a body is known as	A. strain B. elasticity C. stretching D. stress
188	A wire can support a load W without breaking. It is cut into two equal parts. The maximum load that each part can support is:	A. W/4 B. W/2 C. W D. 2 W
189	When the stress change length of a body, it is called:	A. Shear stress B. Tensile stress C. Volume stress D. Any of these E. None of these
190	The deformation measured in terms of some twisting angle due to action of stress is known as	A. Stress B. Linear stress C. Compressive stress D. Shear stress
191	Glass and high carbon steel are the examples of	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
192	Synthetic materials fall into the category of	A. crystalline solids B. amorphous C. polymeric solids D. all of them
193	Tick the one which is not a crystalline solid:	A. Zirconia B. Glass C. Copper D. Ceramic solid E. An ionic compound
194	Doping is the process in which the small amount of impurity is added into pure semiconductor lattice in the ratio	A. 1 to 10³ B. 1 to 10⁴ C. 1 to 10⁵

	semiconductor lattice in the ratio	C. 1 to 10⁵ D. 1 to 10⁶
195	In semiconductors, the valence band at room temperature is	A. Completely filled B. Partially filled C. Empty D. None of these
196	In a crystal the density of atoms or molecules does not vary from direction to direction. This is known as:	A. Cleavage B. Anisotropy C. Homogeneity D. None of these
197	The band full of electrons, which donot play any part in the conduction process is known as	A. Conduction band B. Forbidden energy band C. Valence band D. Completely filled band
198	Which of the following have the same unit:	A. Both (A) and (C) B. Both (A) and (B) C. Modulus elasticty D. Strain E. Stress
199	The modulus of elasticity of a liquid is:	A. Zero B. 1 C. Infinity D. A value not one of those mentioned above
200	In super conductors, once the current is established it exists	A. 1 day B. 30 days C. indefinitely D. None of these
201	Each domain contains the atoms of range of	A. 10⁻¹⁰ to 10¹⁸ B. 10¹⁰ to 10¹⁶ C. 10¹² to 10¹⁷ D. 10¹² to 10¹⁶
202	Which of the quantity is dimensionless:	A. Strain B. Stress C. Modulus of elasticity D. Work E. Entorpy
203	Which of the following can become a good permanent magnet?	A. iron B. steel C. both of them D. none of them
204	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
205	A valance band in solids is	A. Always completely filled B. Empty C. Either completely or partially filled D. None
206	Yttrium barium copper oxide ($Yba_2Cu_3O_7$) becomes superconductor at	A. 163 K B. -100 °C C. both and b D. None of these
207	In the phenomenon of hysteresis.	A. magnetism leads the magnetising current B. magnetism lags behind the magnetising current C. magnetism goes along the magnetising current D. none of them
208	A regular, repetitive, three-dimensional pattern of points, which represent the position of molecules, atoms or ions in the crystal, is called:	A. Unit cell B. Space lattice C. Crystal D. None of these
209	Super conductors are the those materials whose resistivity becomes zero below certain temperature called	A. Curie temperature B. Fixed temperature C. Critical temperature D. None of these
210	Strain is defined in terms of:	A. Formation B. Deformation C. Area D. Newtons E. None of these
211	Amorphous solids are called	A. Polymeric B. Crystal C. Glassy solids D. All

		D. All
212	Steel is preferred for making permanent magnets because it has	A. Large retentivity and large coercively B. Small retentively and small coercively C. Large retentively and small soercively D. Small retentively and large coactivity
213	The value of shear modulus is zero for:	A. Water B. Mercury C. Diamond D. Both (A) and (B) E. Both (A) and (C)
214	In case of linear deformation, the ratio of the tensile stress to the tensile strain is called	A. Young's modulus B. Bulk modulus C. shear modulus D. all of them
215	Such substances which break soon after they cross elastic limit is called	A. Weak substance B. Ductile substance C. Brittle substance D. Organic substance
216	Insulators are those material in which energy gap is	A. very large (several eV) B. very narrow (= 1ev) C. either of them D. none of them
217	The units of modulus of elasticity are same as that of	A. Stress B. Strain C. Force D. None
218	A bullet train move with the velocity of	A. 400 Kmh⁻¹ B. 460 Kmh⁻¹ C. 500 Kmh⁻¹ D. 510 Kmh⁻¹
219	The idea that all magnetic effects may be due to circulating currents (i.e moving charges) Was first held by	A. Ampere B. Faraday C. Lenz D. Gauss
220	Stress is defined in terms of:	A. Applied force B. Deformation C. Formation D. Any of these E. None of these
221	Which of the following pair of quantities have the same units?	A. stress, Young's modulus B. Young's modulus, bulk modulus C. Stress, bulk modulus D. All of them
222	In semiconductors, at 0 K, the electrons in conduction band is	A. Partially filled B. No C. Yes D. None of these
223	When a silicon crystal is doped with pentavalent impurity which are	A. Boron B. Antimony C. Gallium D. None of these
224	The substances in which atoms cooperate with each other in such a way so as to exhibit a strong magnetic effect, are called	A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them
225	If S is the stress and Y is Young's modulus of the material of a wire, the energy stored in the wire per unit volume is	A. 2 S²Y B. S²/2Y C. 2Y/S² D. S/2Y
226	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
227	The value of young modulus in $Nm^{-2}$for water is	A. 70 x 10 B. 2.2 x 10⁵ C. Zero D. None of these
228	The fractional change in volume per unit increase is pressure in called:	A. Pressure coefficient B. Volume coefficient C. Bulk modulus D. Compressibitlity

229	The young's modulus of a wire of length L and radius 'r' is Y. If the length is reduced to L/2 and radius to r/2, its Young's modulus will be	A. Y/2 B. Y C. 2Y D. 4Y
230	A steel bar can bear a load of 20 tons. If the thickness of bar is double, then for the same depression it can bear a load of:	A. 40 ton B. 80 ton C. 160 ton D. 5 ton
231	Glass and high carbon steel are	A. Brittle substances B. Insulator C. Ductile substances D. None of these
232	When a sillicon crystal is doped with a pentavalent element, such an extrinsic semi-conductor is called	A. p-type semi-conductor B. n-type semi-conductor C. either of them D. none of them
233	Steel is more elastic than rubber because	A. It is a metal B. Its density is higher C. Ratio of stress to strain is more D. Ratio of stress to strain is less
234	Shear modulus for glass is	A. 23 B. 39 C. 52 D. 69
235	Which of the given elements is a diamagnetic material	A. Antimony B. Bismuth C. Copper D. All of these
236	The valence energy band can never be	A. Filled B. Partially filled C. Empty D. None of these
237	Metals are good conductors of electricity and their conductivities are of the order of	A. 10³(Ω m)⁻¹ B. 10⁴(Ω m)⁻¹ C. 10⁶(Ω m)⁻¹ D. 10⁷(Ω m)⁻¹
238	Shear modulus for aluminium is	A. 30 B. 70 C. 80 D. 90
239	In superconductors, the resistance of a material drops to zero and no	A. Power is dissipated B. Energy is dissipated C. Current is dissipated D. None of these
240	The limit up to which the stress is directly proportional to strain is called	A. Elastic limit B. Proportional limit C. Breaking limit D. Ultimate tensile limit
241	The substances in which, atom are so oriented that their field support each other and the atoms behave like tiny magnets, are called	A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them
242	The ability of anybody to return, to its original shape is called	A. Elasticity B. Elastic force C. Stress D. Strain
243	The ratio of linear stress/linear strain is called as	A. Young's modulus B. Bulk modulus

243	The ratio of linear stress/linear strain is called as	C. Shear modulus D. Modulus
244	Conductors are those materials in which the free electrons	A. Very large B. Very small C. Plenty of D. None of these
245	Question Image	
246	The substance, which exists in two or more crystal forms under different conditions is called:	A. Isomorphism Substance B. Allotropic substances C. True substances D. Polymorphous substances
247	The saturation of the material reached when magnetic flux density changes from	A. Zero to minimum value B. Zero to maximum value C. Maximum to zero value D. Minimum to negative value
248	When a stress changes the volume, it is called the	A. compressional stress B. tensile stress C. shear stress D. any one of them
249	In Insulators the conduction band is	A. Empty B. Partially filled C. Full D. None of these
250	The critical temperature Tc for Aluminium is	A. 2.1 K B. 1.1 K C. 1.18 K D. 1.19 K
251	The SI unit of stress is same as that of.	A. Momentum B. Pressure C. Force D. Length
252	In terms of energy bands, semiconductors are those materials which at room temperature have conduction band	A. Partially filled B. Full filled C. Slightly filled D. None of these
253	Bulk modulus for diamond is	A. 250 B. 540 C. 695 D. 714
254	Which of the given strains can also be written as tan θ	A. Compressional strain B. Volumetric strain C. Shear strain D. All of these
255	The stress which increase the length in one dimension only is called	A. length stress B. only have compressive stress C. Have both tensile and compression stress D. None of them
256	Substances which undergo plastic deformation until they break are called:	A. Ductile B. Brittle C. Malleable D. Soft E. Hard
257	The technological uses of superconductors are	A. MRI B. Magnetic levitation trains C. Faster computer chips D. All of them
258	Which of the following theory completely explain the three types of materials?	A. Bohr model of electron distribution B. Rutherford atomic model C. Pauli's exclusion principle D. energy band theory
259	The ratio of kinetic energy to potential energy for solids is	
260	Insulators are those materials in which valence band is	A. Empty B. Partially filled C. Full D. None of these
261	The critical temperature of tin is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
		A. Force

262	The S.I. unit of stress is also	B. Pascal C. Momentum D. None of these
263	When a stress change its shape it is called	A. Tensile stress B. Shear stress C. Volume stress D. None of these
264	There are some materials whose resistivity becomes zero below a certain temperature, called	A. absolute zero B. 0° C C. critical temperature D. lower fixed point
265	The charged nucleus of an atom itself spins its magnetic field is	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. Very strong
266	The ability of body to return to its original shape (after the force is removed) is called:	A. Elasticity B. Ductility C. Stress D. Strain E. Any of these
267	The materials in which there are plenty of free electrons for electrical conduction are known as	A. conductors B. insulators C. semi-conductors D. all of them
268	On heating, it becomes a very viscous liquid at almost	A. 500 C^o B. 800 C^o C. 900 C^o D. 1000 C^o
269	Insulators are those materials which valence electrons are bound	A. Loosely B. Tightly C. Very tightly D. None of these
270	Young's modulus for copper is	A. 70 x 10 Nm⁻² B. 91 x 10 Nm⁻² C. 110 Nm⁻² D. None of these
271	The Hook's law defines	A. Modulus of elasticity B. Stress C. Strain D. Elastic limit
272	The results of mechanical tests are usually represents in terms of:	A. Stress B. Strain C. Both A & B D. None of these
273	In the doping process, the ratio of the doping atoms to the semi-conductor atom is	A. 1 to 10 B. 1 to 10³ C. 1 to 10⁶ D. 1 to 10⁹
274	The substances which break just after the elastic limit is reached, are known as	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
275	Polymers are the physical combinations of carbon with:	A. Oxygen only B. Hydrogen C. Nitrogen D. All of these E. None of these
276	Stress beyond which a permanent deformation is observed in a body is called	A. Minimum stress B. Maximum C. Yield stress D. Plastic stress
277	Polymers have specific gravity which is:	A. Low as compared to even the lightest metal B. High as compared to the heaviest metal C. Intermediate D. Any of these E. None of tese
278	S.I unit of stress is	A. N/m B. N m C. Nm⁻² D. newton

		D. newton
279	Amorphous solids:	A. Have definite melting point B. Are called glassy solids C. Have no definite meting point D. Both B and C E. Both A and C
280	In a semiconductor,the mobility of holes is	A. Greater then electrons B. Less than electrons C. Equal to electrons D. None
281	The maintaining the elastic limits of any body, the relation stress to strains is called	A. Hooke's law B. Pascal's law C. Young's law D. None of them
282	On heating, glass gradually softens into a paste-like state before it becomes a very viscous liquid at almost	A. 600°C B. 7600°C C. 800°C D. 900°C
283	The doped semi-conductors materials are known as	A. intrinsic semi-conductor B. extrinsic semi-conductor C. either of them D. none of them
284	The ultimate tensile strength is	A. Greatest stress, a material can endure B. Stress is increased beyond the yield strength C. Maximum stress, a material can with stand D. None of these
285	If one atom or molecule lies out each of the eight corners of a cube, it is called	A. Simple cube B. Face centered cube C. Body centered cube D. None of these
286	When a germanium atom is doped with phosphorous atoms it becomes	A. N-type semiconductor B. p-type semiconductor C. An insulator D. None of them
287	The transition of from solid to liquid is actually from:	A. Order to disorder B. Disorder to order C. Order to order D. Disorder to disorder
288	Shear stress addresses to the:	A. Volume changes due to the applied stress B. Shape changes due to the applied stress C. Length changes due to the applied stress D. All of the above
289	Nm^{-2} or Pa are the units of	A. Stress B. Strain C. Modulus of Elasticity D. a and b
290	The critical temperature T for is	A. 1.6 K B. 2.71 K C. 3.72 K D. 2.82 K
291	Young's modulus for aluminium is	A. 30 B. 70 C. 80 D. 100
292	Crystalline solids have the properties such as	A. Regular arrangement B. Covalent bonding C. Some what defective D. All of them
293	A wire length L and radius r is fixed at one end and force F applied another end produces an extension x The extension produced in another wire of the same material of length 2L and radius 2r by force 2F is	A. 1 B. l C. 21 D. 41
294	Ferromagnetic substances lose their magnetism when heated above a certain temperature, known as	A. critical temperature B. curie temperature C. high temperature D. fixed temperature
295	The modulus of rigidity of a liquid is	A. Zero B. 1

	The modulus of rigidity of a liquid is	C. Infinite D. None of these
296	The high-tensile steel used to support the roadway of a suspension bridge breaks under a stress of 2 x 10^9Pa. Find the minimum cross-sectional area for a cable if it is to support a load of mass 2 x 10^5kg. (g = 10 N kg^{-1})	A. 10⁻²m² B. 10⁻¹m² C. 10⁻⁴m² D. 10⁻³m²
297	The fractional change in volume per unit increase in pressure is called	A. Pressure coefficient B. Volume coefficient C. Bulk modulus D. Compressibility
298	If the tensile force is suddenly removed from a wire then its temperature will	A. Decrease B. Increase C. Become zero D. Remain constant
299	Remanance or Retentivity is the phenomenon in which the material still remains strongly magnetized when curve is	A. Increase to maximum B. Reduce to minimum C. Reduce to zero D. None of these
300	The first superconductor was discovered by	A. Fermi B. Kmaerlinghormes C. Weinberg D. None of these
301	A semi conductor in its extremely pure from is known as	A. extrinsic semi-conductor B. intrinsic semi-conductor C. either of them D. none of them
302	The ability of a body to return to its original shape when applied force is removed is called	A. Stress B. Strain C. Elasticity D. All of them
303	The ultimate tensile strength (UTS) can be regarded as the	A. Maximum strength of the material B. Nominal strength of the material C. Minimum strength of the material D. None of these
304	Substance which break just after the elastic limit is crossed are called	A. Soft subtances B. Hard substances C. Brittle substances D. Ductile substances
305	Change in length divided by original length is called:	A. tress B. Young's modulus C. Strain D. Both (B) or (C) E. None of these
306	The region of plasticity represents	A. Proportional limit σ_p B. Elastic limit σ_e C. UTS (ultimate tensile strength σ_n) D. None of these
307	Shear modulus for steel is	A. 20 B. 84 C. 95 D. 202
308	Crystalline solids are in the form of:	A. Metals B. Ionic compounds C. Ceramics D. Both A and B E. All of these
309	What is the SI unit of Tensile strain?	A. Nm⁻² B. Jm⁻² C. Nm⁻¹ D. Being a number, it has no unit
310	The maximum stress that a body can tolerate is called	A. UTS B. Permanent stress C. Elastic strength D. Plastic stress
311	Paramagnetic substances are those in which	A. Spin and orbital motions are supported B. Spin and orbital motions are opposed C. Spin and orbital motions supported a little D. None of these
		A. Definite

312	Every crystalline solid has a melting point	B. Not definite C. Any D. Change every time
313	A wire breaks of stretched by more than 3mm. It is cut into equal parts. Then each part can be stretched with out-breaking by	A. 0.75 mm B. 1.5 mm C. 3.0 mm D. 6.0 mm
314	The ratio of volume stress/volume strain is called as	A. modulus B. Bulk modulus C. shear modulus D. Young's modulus
315	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
316	Two substances having the same crystal structure are called:	A. Isomorphism B. Subtance C. Allotropic subtances D. Polymorphous substances
317	In between two consecutive permissible energy band there is a range of energy states which cannot be occupied by electrons. These are called	A. Energy band B. Energy states C. Forbidden energy gap D. None of these
318	The SI unit of stress is same as that of	A. Momentum B. Pressure C. Force D. Length
319	What is the bulk modulus of a material?	A. strain/volumetric strain B. volumetric stress/strain C. stress/volumetric strain D. volumetric stress/volumetric strain
320	When a stress changes its length, it is called	A. Stress B. Tensile stress C. Shear stress D. None of these
321	The cohesive forces between atoms, molecules or ions in crystalline solids maintain	A. short range order B. long range order C. both of them D. none of them
322	Which of the modulus of elasticity is involved in compressing a rod to decrease its length?	A. Young's modulus B. Bulk modulus C. Modulus of rigidity D. None of the above
323	In proportional limit (σ) of material, the stress increases with strain	A. Linearly B. Constant C. Abruptly increases D. None of these
324	Young's modulus for glass is	A. 15 B. 35 C. 39 D. 55
325	Which one is ferromagnetic	A. Ferries B. Cobalt C. Nickel D. All
326	1st superconductor was discovered in year	A. 1890 B. 1930 C. 1895 D. 1911
327	The greatest stress that a material can endure without losing the proportionality between stress and strain is called	A. Plasticity B. Breaking point C. Proportional limit D. Strain
328	The critical temperature for mercury is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
329	The size of the domains in such that they can contain	A. 10²to 10⁴atoms B. 10⁴to 10⁸atoms C. 10⁸to 10¹²atoms D. 10¹²to 10¹⁶atoms

330	Super conductor offers no resistance to	A. Thermal agitation B. Electric current C. Induced current D. None of these
331	The energy gap is insulators becomes very large and has the value	A. Few electron volt (eV) B. Some electron volt (eV) C. Several electron volt (eV) D. None of these
332	The measure of the deformation of a solid is called	A. Stress B. Strain C. Elastic constants D. None of these
333	Substances which undergo plastic deformation until they break, are known as	A. brittle substances B. ductile substances C. plastic substances D. neither of them
334	A semiconductor is known to have an electron concentration of 8 x 10^{13} per cm^3 and hole concentration of 5 x 10^{12} per cm^3 the semiconductor is	A. n-type B. P-type C. Intrinsic D. None of these
335	Bulk modulus is involved when the deformation is	A. One dimensional B. Two dimensional C. Three dimensional D. All of these
336	A temperature at which the material losses its orderliness is know as	A. Ambient temperature B. Curie temperature C. Highest temperature D. None of these
337	Upon applying some unbalanced external stress the deformation may be observed in	A. Length B. Surface area C. Volume D. All of these
338	The valency of electron in the valence band is known as	A. Atom B. Molecule C. Hole D. None of these
339	The valence energy band may be either	A. Completely filled B. Partially filled C. a and b D. All of them
340	Polymeric solids have the properties like	A. No definite shape B. No definite structure C. Partially crystalline solids D. All of them
341	Examples of crystalline solids are:	A. Copper B. Zirconia C. NaCl D. All of these E. Both A and B
342	The magnetic field produced due to circulating currents. The idea was first given by	A. Faraday B. Ampere C. Lenz D. None of these
343	Diamagnetic substances are those in which	A. Spin and orbital motions are supported B. Spin and orbital motions are opposed C. Resultant of spin and orbital motion is zero D. None of these
344	With the rise of temperature the amplitude of atoms	A. Slow down B. Fixed C. Increases D. None of these
345	The insulators have conductivities ties in the range	A. 10⁻¹⁰ to 10⁻²⁰ (Ωm) ⁻¹ B. 10⁻⁵ to 10⁻²⁰ (Ωm) ⁻¹ C. 10⁻¹⁵ to 10⁻²⁵ (Ωm) ⁻¹ D. None of these
346	The critical temperature of mercury is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K

347	The ratio of shearing stress/shearing strain is called as	A. modulus B. Pascal modulus C. Hooke's modulus D. shear modulus
348	Examples of polymers are	A. Polythene B. Polystyrene C. Nylon D. All of them
349	If both the length and radius of the wire are doubled,how does the modulus of elasticity change?	A. Becomes one fourth B. Halved C. Doubled D. Remains unchanged
350	Polymeric solids have the structure	A. One dimensional B. Two dimensional C. Zero dimension D. Three dimensional
351	When a strength changes the length of a body,it is called	A. Tensile stress B. Shear stress C. Compressional stress
352	The process of doping causes resistivity of semiconductor to	A. Increase B. Decrease C. Same D. Become zero
353	The combination of solenoid and a specimen of iron inside it make a power full magnet called	A. Horse shoe magnet B. Bar magnet C. Electromagnet D. 10⁻¹⁰ to 10¹⁸
354	The electrons in the outermost shell are called	A. Super electrons B. Valance electrons C. Full valance D. Upper deep up
355	Shear modulus for ice is	A. 1.2 B. 2.5 C. 3 D. 3.3
356	Zirconia is classified as:	A. Ceramic solid B. Ionic compound C. Metal D. Either A or B E. Either B or C
357	Shear modulus for lead is	A. 1.7 B. 4.9 C. 5.6 D. 6.2
358	The cores of electromagnets used for alternating currents where the specimen repeatedly undergoes magnetization and demagnetization should have	A. broad hysteresis curves B. narrow hysteresis curves C. any one of the them D. none of them
359	A geometric shape of a solid obtained by regular, respetive, three-dimensional arrangements of its molecules,atoms or ions is called a:	A. Crystal B. Crystal Lattice C. Crystal plane D. None of these
360	Identify practical use of superconductor	A. MRI B. Super computer C. Magnetic levitation train D. All above
361	The SI unit of stress is	A. Nm² B. Nm C. dynesm⁻¹ D. N
362	The forbidden energy gap in semiconductors	A. Lies just below the valence band B. Lies just above the conduction band C. Is the same as the valence band D. Lies between the valence band and conduction band
363	Stress may be	A. Tensile B. Compressive C. Shear D. All of these
364	Shear modulus for water is	A. - 4.7 B. - 3.3

364	Shear modulus for water is	C. - 1.2 D. 0
365	The ratio of stress/strain is called as	A. Modulus of elasticity B. Bulk modulus C. Shear modulus D. Young's modulus
366	The electrical behavior of semiconductor depends on the material purity which is	A. Sensitive B. Extremely sensitive C. Non-sensitive D. None of these
367	The electrons in the outermost shell of an atom are called	A. Valence electrons B. Tightly bound electrons C. Free electrons D. None of these
368	When a body is subjected to some external force, deformation is produced in:	A. Shape B. Length C. Volume D. Any of these E. None of these
369	The smallest part of a crystal lattice is called:	A. A molecule B. An atom C. A unit cell D. A particle
370	The atoms or molecules in a crystalline solid are held together by	A. Attractive force B. Gravitational force C. Cohesive force D. Electromagnetic force
371	Hard magnetic materials are	A. Iron B. Steel C. Alnico D. None of these
372	Solids having partially field conduction bands are	A. Insulator B. Semiconductor C. Super conductor D. Semi conductor
373	Which of the following is more elastic material?	A. iron B. Aluminum C. Wood D. Rubber
374	A material with high retentively and large corcivety most useful to make	A. Electromagnet B. Permanent magnet C. Choke D. None of these
375	Shear modulus for copper is	A. 20 B. 27 C. 44 D. 43
376	If a wire is stretched to double of its length then the strain will be	A. 1 B. 0.5 C. 2 D. 0
377	When an atom is surrounded by large number of atoms their the energy levels are	A. Distinct B. Very close C. Energy band D. None of these
378	Ductility is the property of a substance in which a material undergoes the deformation as	A. Elastic deformation B. Plastic deformation C. Shear deformation D. None of these
379	The subtances which break just after the elastic limit is reached are known as:	A. Ductile B. Brittle C. Malleable D. Hard E. Soft
380	The polymeric solids have specific gravity compared with even the lightest of metals	A. Low B. Very Low C. Slightly low D. None of these
381	Stress maybe:	A. Tensile B. Compressive C. Compressible

		D. All of these E. Both (A) and (B)
382	Conductors are those materials in which energy gap is	A. very large (several eV) B. very narrow (= 1eV) C. either of them D. none of them
383	When small number of atoms from some other suitable element is added to the semi-conductor material, then this process is known as	A. impurification B. adding C. doping D. extrinsivity
384	The pattern of NaCl particles have a shape which is:	A. Cubic B. Body centred cubic C. Simple cubic D. Face centred E. Both A and C
385	Bulk modulus for bass is	A. 20 B. 41 C. 61 D. 81
386	The young s modulus for a perfect rigid body is	A. Zero B. 1 C. Infinite D. None of these
387	Strain is dimensionless and has	A. Units B. No units C. S.I. units D. None of these
388	The substances in which atoms are so oriented that the field produced by spin and orbital motion of the electrons might add up to zero, are called	A. diamagnetic substances B. ferromagnetic substances C. paramagnetic substances D. all of them
389	In crystalline solids, atoms are held about their equilibrium positions depending upon the strength of:	A. Adhesive forces B. Nuclear forces C. Inter atomic cohesive force D. Electromagnetic force E. None of these
390	polymeric solids have	A. low specific gravity B. high specific gravity C. either of them D. none of them
391	How many types of strain is	A. 1 B. 2 C. 3 D. 4
392	When a silicon crystal is doped with a trivalent element, such an extrinsic semi-conductor is called	A. p-type semi-conductor B. n-type semi-conductor C. either of them D. none of them
393	If the tensile force is suddenly removed from a wire then its temperature will	A. Decrease B. Increase C. Becomes zero D. Remain constant
394	The young s modulus for a perfectly rigid body is	A. Zero B. 1 C. Infinite D. None of these
395	When a stress changes length, it is called the	A. compressional stress B. tensile stress C. shear stress D. any one of them
396	The current once established, does not require	A. Current source B. Source of emf C. Induced current D. None of these
397	In the stress-strain graph stress is increased linearly with strain until a point is reached this point is known as	A. Plastic limit B. Plastic deformation C. Proportional limit D. Elastic behaviour
		A. 800<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial;

398	An ordinary glass gradually softens into a paste-like state before it becomes a very viscous liquid. It happens almost at:	background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°C B. 500<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°C C. 300<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°C D. 100<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°C E. None of these
399	A bar of length L, cross-section A and Young's modulus Y, is pulled by a force F from both ends so as to produce an elongation x. Then:	A. x∝1/L B. x∝A C. x∝1/A D. x∝Y
400	Solids which have no regular atomic structure are called	A. Crystalline solid B. elastic solid C. Glassy solid D. All of these
401	_____ is a cubic pattern having one extra atom or molecule at the centre of each of the six faces of the cube	A. Simple cube B. Face centered cube C. Body centered cube D. None of these
402	The modulus of rigidity of a liquid is:	A. Zero B. 1 C. Infinite D. None of these
403	In 1986 a new class of ceramic material was discovered at temperature as high as	A. 19 K B. 78 K C. 108 K D. 12 K
404	The arrangement or molecules or atoms in a crystalline solid can be studied by using:	A. Chemical methods B. Neutrons C. X-ray techniques D. Copper atoms E. Both A and B
405	Which of the following substances possesses the highest elasticity?	A. Al B. Copper C. Steel D. Rubber
406	The ratio of tensile stress to tensile strain is	A. Force B. Young's modulus C. Bulk modulus D. Shear modulus
407	The bands below the valence band are	A. completely filled and play active part in conduction process B. completely filled and plays no part in conduction process C. not completely filled and play active part in conduction process D. not completely filled and play no part in conduction process
408	Which of the following is not true for a crystalline substance	A. Shorter range order B. Isotropic electrical conductivity C. Flat surface D. Sharp melting point

409	The ratio of linear stress/linear strain is called	A. Yong's modulus B. Bulk modulus C. shear modulus D. modulus
410	The domains are of macroscopic size of the order of	A. centimetres B. metres C. millimetres D. nanometres
411	Force applied on a unit area of a body to produce any change in its shape, Volume or length of a body is called:	A. Strain B. Stress C. Young's modulus D. Bulk modulus E. Either (C) or (D)
412	A stress which is along one dimension is known as:	A. Tensile stress B. Linear stress C. Compressive stress D. Both (A) and (C) E. Both (A) and (B)
413	The SI unit of stress is some as that of:	A. Pressure B. Momentum C. Impulse D. Change momentum E. Force
414	To make a permanent magnet, a material should have	A. hihg retentivety and small coercive force B. low retentivety and high coercive force C. low retentivety and small coercive force D. high retentivety and high coercive force
415	A women of 50 kg distributes her wright equally over high-heeld shoes. Each heel has an area of 0.75 cm^2. The pressure exerted by each heel will be	A. 6.66 x 10⁶ Pa B. 3.33 x 10⁶ Pa C. 1.67 x 10⁶ Pa D. 3.33 x 10⁻⁶ Pa
416	At 0 K a piece of Ge and Si is a perfect	A. Conductor B. Insulator C. Semiconductor D. None of these
417	Lead, copper and wrought iron are examples of	A. brittle substances B. ductile substances C. plastic substances D. elastic substances
418	Which of the material have largest value of young's modulus	A. Copper B. Diamond C. Aluminum D. Iron
419	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
420	Polymers have naturally combinations like with	A. Oxygen B. Sulphuric C. Hydrocarbons D. Oxygen and carbons
421	The transition from solid to liquid state is:	A. Abrupt B. Slow C. Continuous D. Discontinuous E. Both A and D
422	Bulk modulus for copper is	A. 50 B. 75 C. 140 D. 147
423	The field of a long bar magnet is like a	A. Two pole pieces of magnet B. Solenoid C. Toroid D. None of these
424	High temperature superconductors have temperature	A. Above 77 K B. Below 77 K C. At 77 K D. None of these
425	When the opposite faces of a rigid cube are subjected to shear stress, the shear strain produced is given by	A. γ = Δa/a B. tan θ C. γ = θ

		D. All of them
426	Young's modulus for ice is	A. 3 B. 14 C. 20 D. 32
427	If band gap between valence and conduction band material is 5 eV. The material is	A. Insulator B. Good conductor C. Semiconductor D. Such material are not exist
428	Ferromagnetic materials are those in which atoms cooperate with each other	A. Weakly B. Strongly C. Moderately D. None of these
429	Curie temperature is a point where:	A. Diamagnetism changes to paramagnetism B. paramagnetism changes to Diamagnetism C. Ferromagnetism changes to paramagnetism D. paramagnetism changes to Ferromagnetism
430	On applying a stress of 20 x $10^8 Nm^{-2}$, the length of perfectly elastic wire is doubled. Its young' modulus is	A. 40 x 10⁸N/m² B. 20 x 10⁸N/m² C. 10 x 10⁸N/m² D. 5 x 10⁸N/m²
431	Young's modulus for tungsten is	A. 90 B. 190 C. 390 D. 590
432	When an atom is isolated, it energy levels are	A. Distinct B. Very close C. Very very close D. None of these
433	The reciprocal of bulk modulus is called:	A. Shear modulus B. Elasticity C. Young's modulus D. Compressibility
434	The electrons, which can wander in the solid, are known as:	A. Valence electron B. Free electron C. Loosely bound electrons D. None of these
435	For obtaining appreciable extension,the wire should be:	A. Short and thin B. Long and thin C. Short and tick D. Long and thick
436	The conductivity of super conductor at critical temperature becomes	A. Zero B. 1 C. Infinite D. Negative
437	Amorphous solids are more like	A. crystalline solids B. polymeric solids C. glassy solids D. any one of them
438	A semiconductor in its extremely pure form in known as	A. Extrinsic semiconductor B. Intrinsic semiconductor C. Both a and b D. None of these
439	Shear modulus for diamond is	A. 156 B. 353 C. 450 D. 477
440	Longitudinal strain can be produced in	A. Glass B. Water C. Honey D. Hydrogen gas
441	Hooks law hols within	A. Proportional limit B. Elastic limit C. Plastic limit D. None
442	The young s modulus of a wire of length L and radius r is Y if the length is reduced to L/2 and radius to r/2 its young s modulus wire be	A. Y / 2 B. Y C. 2 Y D. 4 Y
		A. amorphous solids B. polymeric solids

443	The solids which have structure in between order and disorder are called	B. polymeric solids C. crystalline solids D. all of them
444	Semiconductors, like Ge or Si at room temperature becomes a	A. Semiconductor B. Conductor C. Insulator D. None of these
445	In a semi-conductor material, current flows due to	A. positive charge B. negative charge C. both of them D. none of them
446	The energy gap between conduction band and valence band is semiconductor is	A. A very narrow forbidden energy gap B. A narrow forbidden gap C. Of the order of 1 eV D. a and b
447	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
448	According to the Hooke's law the force required to change the length of a wire by '1' is proportional to:	A. 1⁻² B. 1⁻¹ C. 1
449	Polythene,polystyrene and nylon are example of	A. Polymeric solids B. Crystalline solids C. Glassy solids
450	Brittle is the property of the substance in which a material undergoes	A. Elastic deformation B. Plastic deformation C. Ultimate tensile strength limit D. None of these
451	Two wires of the same material have diameters in the ration 2 : 1 if they are stretched by the same force their elongations will be in the ratio	A. 8 : 1 B. 1 : 8 C. 2 : 1 D. 1 : 4
452	In the hysteresis loop, when the current is reduced to zero, the material	A. does not retain magnetism B. retains not retain magnetism C. retains strong magnetism D. none of them
453	Which of the following has no dimension	A. Stress B. Strain C. Elastic modulus D. Both strain and elastic modulus
454	Every crystalline solid has	A. definite melting point B. different melting points C. may or may not be definite D. none of them
455	Hysteresis is the loop in which the material is magnetized and its curve never pass through	A. The same line B. One side of origin C. Origin D. None of these
456	In metallic crystals which of the following thing remains constant?	A. amplitude of oscillations B. temperature of solid C. average atomic positions D. all of them
457	The fractional change in volume per unit increase in pressure is called:	A. Bulk modulus B. Compressibility C. Pressure coefficient D. Volume coefficient
458	Those solid which breaks soon after crossing the elastic limit are called	A. Amorphous B. Glassy solid C. Crystalline solid D. Brittle
459	The curie temperature of iron is	A. 600 C^o B. 650 C^o C. 700 C^o D. 750 C^o
460	Glass is an example of	A. crystalline solid B. amorphous solid C. polymeric solid D. none of them
461	Stress may cause a change in:	A. Length B. Volume C. Shape

461	Stress may cause a change in:	C. Shape D. Any of these E. None of these
462	The young modulus of steel is greater than that of aluminium. Keeping the statement above in mind state which of the following is true	A. Steel requires a larger stress on it for a given strain than does aluminium B. Aluminium requires more force than steel does to get a similar extension as steel C. Steel requires less force than aluminium does to get a similar extension as aluminium D. Steel requires a larger strain on it for a given stress than does aluminium
463	The magnetism produced by electrons within an atom is due to	A. Spin motion B. Orbital motion C. Spin and orbital motion D. None of these
464	Breaking load for units area of cross-section of a wire is called:	A. Tensile strength B. Ductibility C. Yield point D. Breaking stress
465	Bulk modulus is involved when the deformation is:	A. One dimentional B. Two dimentional C. Three dimentional D. Any of these E. None of these
466	To get p-type semiconductor we add impurity from	A. 3rd group B. 4th group C. 5th group D. 6th group
467	The amorphous material (solids) have	A. No structure B. No melting point C. No definite shape D. All of them
468	If the stress increased on a material is beyond the yield strength of the material is called	A. Plasticity B. Elasticity C. Still in elasticity D. None of these
469	How does the Young's modulus vary with the increase of temperature?	A. Decrease B. Increase C. Remains constant D. First increases and then decreases
470	Semiconductor materials have the conductivities generally lies between	A. 10⁻⁵ to 10⁻⁶ (Ωm) ⁻¹ B. 10⁻⁶ to 10⁻⁴ (Ωm) ⁻¹ C. 10⁻⁷ to 10⁻³ (Ωm) ⁻¹ D. None of these
471	Crystal lattice is a repetition of	A. Atoms B. Molecules C. Unit cell D. All of them
472	The first superconductor was discovered in	A. 1905 B. 1911 C. 19161 D. 1920
473	Above the curie temperature, iron becomes	A. ferromagnetic B. paramagnetic C. diamagnetic D. any one of them
474	A unit set is the smallest basic structure which is:	A. One dimensional B. Two dimensional C. Three dimensional D. Four dimensional E. None of these
475	Is there any physical distinction between the valence and conduction band	A. Yes B. No C. Very small D. None of these
476	A wire of 100 mm length and 1 mm^2surface area stretches 10 mm under a load of 60 N. A second wire of same material, with half the diameter of the first wire is stretched by the same load. What is the extension in the second wire?	A. 20 mm B. 30 mm C. 40 mm D. 50 mm
		A. Critical temperature B. Temperature of vaporization

477	The temperature at which the vibrations become so great that structure of the crystal breaks up, is called:	B. Temperature of vaporization C. Melting point D. Both A and C E. Both A and B
478	After elastic limit the shape of graph is	A. Curved B. Straight Line C. Saw tooth D. Arbitrary
479	The magnetism produced by electrons within an atom can arise from	A. electrons orbiting the nucleus B. electrons orbiting the nucleus C. both motions D. none one these motions
480	Bulk modulus for lead is	A. 2.9 B. 7.7 C. 9.3 D. 15.6
481	Which one of the following is polymer	A. Polythene B. Polystyrene C. Nylon D. All
482	The motion of a charged nucleus also produces a magnetic field which is	A. Weaker than orbital electrons B. Stronger than orbital electrons C. Equal than orbital electrons D. None of these
483	Young's modulus for brass is	A. 40 B. 60 C. 90 D. 91
484	Experiments revealed that the ratio of the stress to the strain is a constant value for	A. different material B. all material C. a given material D. all of them
485	Magnetic permeability is maximum for	A. Dia-magnetic B. Ferromagnetic C. Paramagnetic D. Non-magnetic
486	Which of the material is brittle ?	A. Steel B. Low carbon steel C. High carbon steel D. None of these
487	When a silicon crystal is doped with trivalent impurity which are	A. Indium B. Arsenic C. Phosphorous D. None of these
488	A certain force F increases the length of a wire by 1 mm. The force required to increase its length by 2mm is	A. 2 F B. 4 F C. 8 F D. 16 F
489	A wire is stretched to double of its length.The strain is	A. 2 B. 1 C. Zero D. 0.5
490	Arsenic, antimony and phosphorous are the elements from	A. third group B. fourth group C. fifth group D. none of them
491	The deformation produced in the body by an applied force in their	A. Shape B. Length C. Volume D. All of them
492	In a soft iron, domains are	A. easily oriented along external field and do not return to original random positions B. easily oriented along external field and readily returns to originally random positions C. do not oriented along external field and also do not returns to original random position D. none of them
493	In conductors, the valence band and conduction bands are	A. Touch each other B. Overlapped each other C. Largely overlapped D. None of these
		A. Vander vall force

494	Inspite vibrations the force which hold the atoms in their ordered form is	B. Cohesive force C. Adhesive force D. None of these
495	Pure form of semiconductor is called	A. Extrinsic semiconductor B. Intrinsic semiconductor C. N type D. P type material
496	A material most suitable to make the permanent magnet are	A. High retentivity B. Large coercive current C. Small domain friction D. a and b
497	Amorphous materials have the properties of solids like	A. No structure B. Like liquid C. Glassy D. a and c
498	Semi-conductor elements have atoms with	A. 2 valence electrons B. 3 valence electrons C. 4 valence electrons D. 5 valence electrons
499	Shear modulus for brass is	A. 36 B. 39 C. 51 D. 65
500	In case of the three dimensional deformation, when volume is involved, the ratio of applied stress to volumetric stain is called	A. Young's modulus B. Bulk modulus C. shear modulus D. all of them
501	The band above the valence band is	A. Completely filled band B. Conduction band C. Forbidden energy band D. None of these