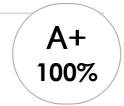
Quizlet

16 Multiple choice questions

- 1. the ability of a material to withstand shock loading (opposite to brittleness)
 - a. CORRECT: toughness
 - b. steel
 - c. voltage
 - d. polymer



- 2. a hard phase produced when steel is cooled from the hardening temperature at a speed greater than its critical cooling rate, martensite is an acicular (needle-like) phase when seen under microscopic examination
 - a. **CORRECT:** martensite
 - b. voltage
 - c. steel
 - d. pearlite
- 3. involves the movement of planes of atoms moving relative to each other
 - a. steel
 - b. CORRECT: slip
 - c. pearlite
 - d. voltage
- 4. a phase of carbon steel and cast iron consisting of ferrite and cementite formed into distinct layers (or lamellae) on slow cooling from austenite
 - a. CORRECT: pearlite
 - b. martensite
 - c. slip
 - d. polymer
- 5. a giant molecule based on carbon
 - a. voltage
 - b. vector
 - c. slip
 - d. CORRECT: polymer

6.	the a	mount of energy required to move a small electric charge along a path
	a.	vector
	b.	slip
	c.	CORRECT: voltage
	d.	polymer
7.	invol	ves the use of a variety of rates of cooling to cause a steel to harden; media include water, brine and oil
	a.	tempering
	b.	pearlite
	c.	CORRECT: quenching
	d.	vector
8.	rehe	ating of a quenched steel to a sub-critical temperature in order to improve ductility and toughness
		CORRECT: tempering
	b.	steel
	c.	quenching
	d.	vector
9.	conta	ains no, or minimal, iron
		tempering
		vector
		polymer
		CORRECT: non-ferrous
10.	wher	n three forces act on a body and the body is in a state of equilibrium, then the three forces must be concurrent,
10.		ney will all intersect a common point
	a.	transformer
	b.	CORRECT: three force rule
	c.	work hardening
	d.	tempering

11.	the result of a plastic or permanent deformation of the crystal structure
	a. normalising
	b. quenching
	c. CORRECT: work hardening
	d. tempering
12.	the work or energy per unit charge needed to move an electron from one point to another; measured in volts
	a. polymer
	b. CORRECT: potential difference
	c. non-ferrous
	d. work hardening
13.	reduce or increase the voltage of an alternating current
	a. steel
	b. tempering
	c. CORRECT: transformer
	d. polymer
14.	when a quantity has a magnitude, direction and sense e.g. displacement, velocity, acceleration
	a. steel
	b. CORRECT: vector
	c. voltage
	d. polymer
1.5	
15.	an alloy of iron and up to 2% carbon often with other additions of other alloying elements such as manganese silicon, chromium, nickel and molybdenum
	a. polymer
	b. vector
	c. CORRECT: steel
	d. slip

- 16. a heat treatment process for ferrous alloys involving heating the material above the upper critical temperature then cooling in still air, the objective being to enhance toughness by refining grain size
 - a. tempering
 - b. work hardening
 - c. quenching
 - d. **CORRECT:** normalising