Quiz 1

Total points 0/15





Physics of Materials PHY1000

The respondent's email (ec20b1042@iiitdm.ac.in) was recorded on submission of this form.

Declaration of Academic Integrity

0 of 0 points

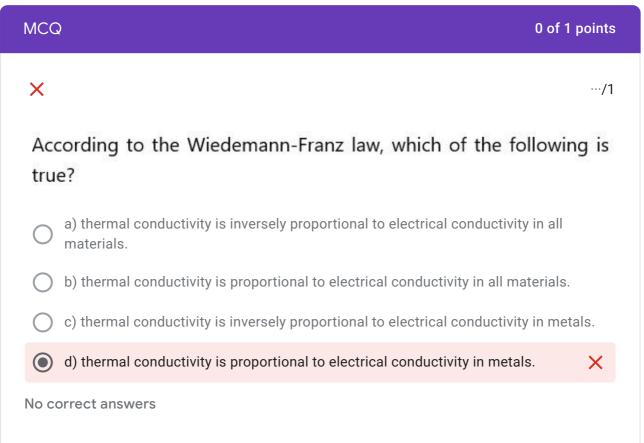
"I (Name of student)---------- declared that, have not copied any of the answer(s) in any quiz/exam from any online/offline sources/ friend(s). If found so, I am aware of the fact that, violation of this is regarded as cheating and can result in cancelation of my quiz/exam".

Name and Roll Number of Student *

B Srinidhi - EC20B1042

MCQ 0 of 2 points

> × MCQ .../2 In which of the cases below does A have a higher static dielectric constant than B, assuming that both A and B are dielectrics? (note that more than one answer may be correct) a) A has a higher permittivity than B. b) A is a non-polar gas; B is a polar gas. c) Two capacitors, X and Y, have identical geometry. Capacitor X contains a sample of A and has a capacitance of 200 nF. Capacitor Y contains a sample of B and has a capacitance of 0.6 µF. d) A is a sample of water at a temperature of 20 °C; B is a sample of water at a temperature of 80 °C. e) An electric field of strength 1000 V m-1 passes through both A and B. The field strength is reduced less on passing through A than it is on passing through B. No correct answers



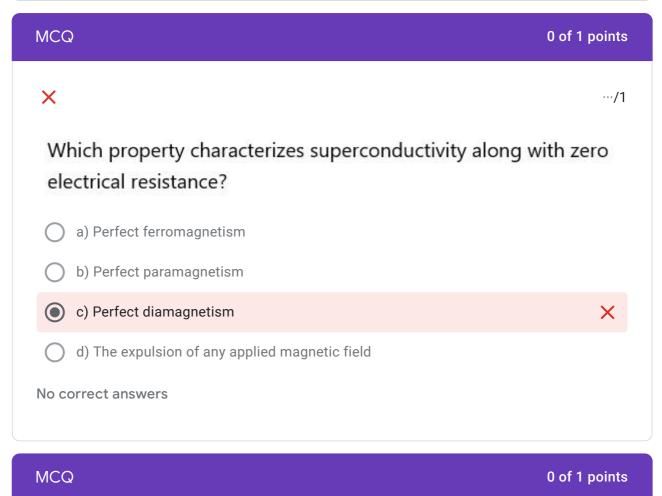
MCQ

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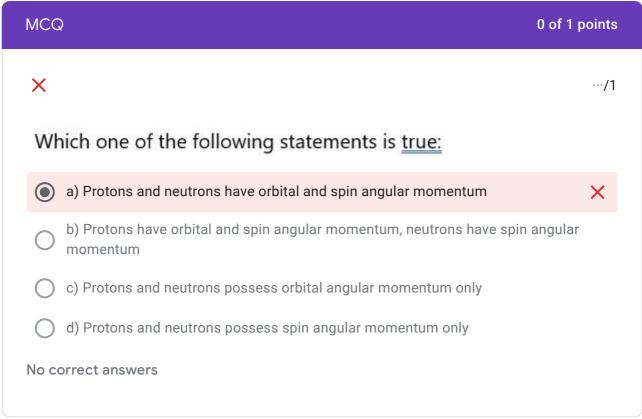
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Which of the following statements about electrical conduction in nearly pure materials are true?	า
a) At low temperatures, resistivity decreases to zero as the lattice no longer interferes with electron motion.	
b) At low temperatures, conductivity decreases to a minimum based on residual lattice defects.	
c) Dislocations and grain boundaries provide a low resistance route for electrons to travel through a material.)
d) At higher temperatures, the scattering effect of thermal phonons swamps that o residual lattice defects.	f
e) At low temperatures, conductivity increases with the addition of high valency atoms to the bulk lattice, as they provide more electrons to the lattice.	
f) At low temperatures conductivity does not increase beyond a maximum due to imperfections in at the lattice scattering electrons.	×
No correct answers	

MCQ	0 of 1 points
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Seebeck Effect is the conversion of heat energy into	
a) Electrical energy	×
b) Mechanical energy	
C) Heat energy	
d) None of above.	
No correct answers	

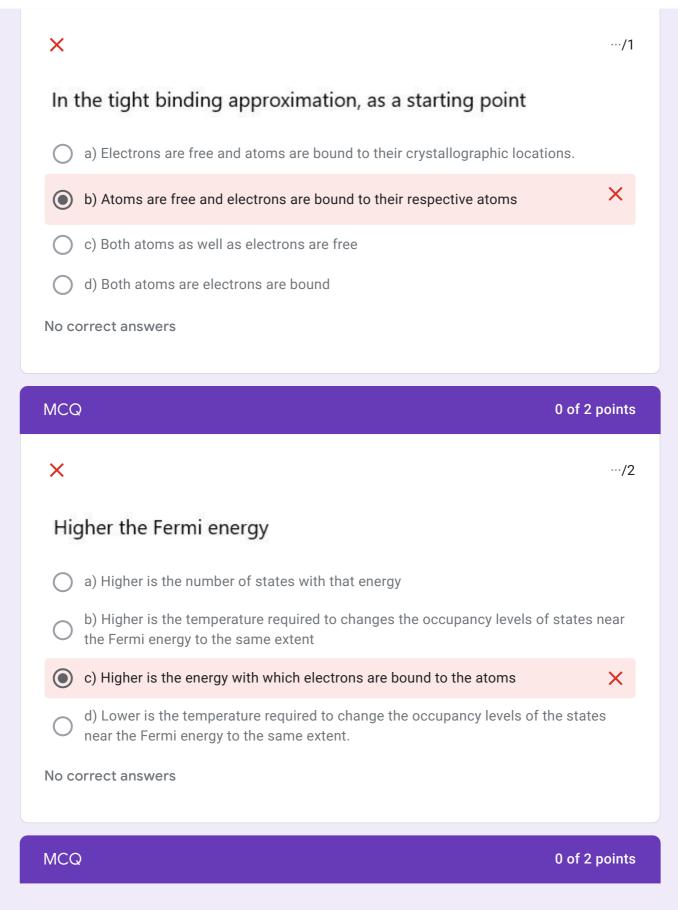
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Wh	y is window glass transparent?
0	a) Because it has a single crystal structure and each sheet is cut with the optic axis normal to the plane of the window.
0	b) Because it has an amorphous structure with large interatomic spacing. Light waves can pass between widely spaced atoms without any interaction with the solid structure.
0	c) Because sheets of glass are cut thin enough for light to pass through without any significant absorption.
•	d) Because of the electronic nature of the bonds between the atoms in the glass. $igstar$
No co	prrect answers



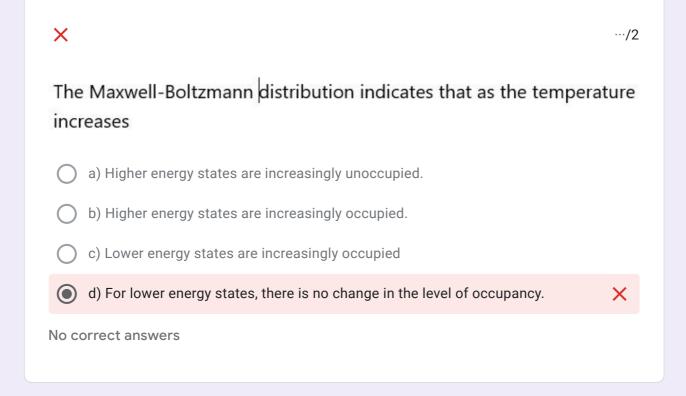
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Using the assumptions in the Free electron model, how do crystal lattices affect electrons?	ıl
a) The lattice is not taken into account, lattice imperfections and defects are ignored.	
b) The lattice is not taken into account, but lattice imperfections and defects may scatter electrons.	
c) The lattice and any defects are taken into account and are able to scatter electrons.	
No correct answers	



MCQ 0 of 1 points



Quiz 1 5/21/2021



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