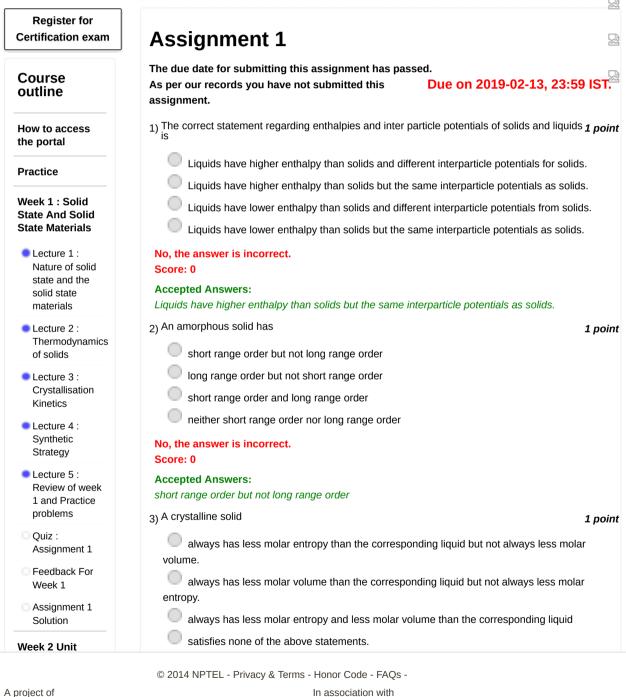
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## Unit 3 - Week 1 : Solid State And Solid State Materials







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## Solid State Chemistry - - Unit 3 - Week 1 : Solid ...

is equal to zero for all distances	
satisfies none of the above statements	
No, the answer is incorrect.	
Score: 0	
Accepted Answers:	
5)	1 po

A certain material has almost same molar volume in the solid and liquid state. Given that the molar entropies of the solid and liquid are quite different, the slope of the solid-liquid coexistence curve in the P-T phase diagram (i.e. dP/dT) is

very small	
very large	
equal to zero	
not necessarily very large or very small	Ţ,
No, the answer is incorrect. Score: 0	
Accepted Answers:	
very large	
6) The reason for a nucleation barrier for crystal growth from a supersaturated solution is	1 point
solids are much more stable than the supersaturated solution	
solids prefer to be part of the solution as opposed to the crystal	R
solution has lower free energy than solids	
none of the above statements	
No, the answer is incorrect. Score: 0	
Accepted Answers:	
none of the above statements	
7) When the liquid is cooled to its freezing point and the temperature is held at the freezing point, the rate of crystallisation is :	1 point
proportional to the enthalpy difference between the liquids and the solids	
proportional to the chemical potential difference between the liquids and solids which greater than zero.	is
equal to zero.	
None of the above	
No, the answer is incorrect. Score: 0	
Accepted Answers: equal to zero.	
$_{8)}$ On doubling the supersaturation of a solution, the rate of crystallization	1 point
O doubles	
$\bigcirc$ gets multiplies by a factor e <sup>2</sup>	
gets multiplied by a factor of In(2)	
does not change	
No, the answer is incorrect. Score: 0	
Accepted Answers: doubles	
9) One advantages of soft chemical methods over solid state synthesis:	1 point
The quality of crystals grown using soft chemical methods are better.	
Larger crystals can be grown by soft chemical methods.	
Crystal growth is faster using soft chemical methods.	
Crystals can be grown at lower temperatures in soft chemical methods.	
No, the answer is incorrect.	
Score: 0	

Accepted Answers:	
Crystals can be grown at lower temperatures in soft chemical methods.	
10 ron at room temperatures shows a bcc structure. However, on heating above 1180 K, it transforms to an fcc structure with a 9% increase in density. From this we conclude that :	1 point
At room temperature, bcc iron has higher density than fcc iron.	
At room temperature, bcc iron is metastable.	
At room temperature, bcc iron has greater entropy than fcc iron.	
none of the above.	
No, the answer is incorrect.	
Score: 0	_
Accepted Answers:	
At room temperature, bcc iron has greater entropy than fcc iron.	_
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