

Course outline						
How does an NPTEL online course work?						
Week-01						
Week-02						
Week-03						
Week-04						
 Lecture 07- Surface Energy and their Aspects (Part-I) 						
 Lecture 08- Surface Energy and their Aspects (Part-II) 						
 Lecture 09- Thermodynamics of Nano-materials 						
Feedback for Week 4						
O Quiz: Week-04: Assignment-04						
 Week-04: Assignment-04 Solution 						
Week-05						
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Week-09						

Week-10

Week-11

Week- 12

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No, the answer is incorrect. Score: 0

Gibbs free energy

No, the answer is incorrect.

1000J/mole. Calculate the entropy of melting at 400° C.

9) Which one of the following thermodynamic quantities is not a state function?

10) Equilibrium melting temperature of a metal at 1 atm pressure is 400°C and the latent heat of melting at this temperature is

1 point

1 point

Accepted Answers: I, II, III, and IV

enthalpy

entropy

Accepted Answers:

1.49 J/mol.K

2.0 J/mol.K

3.5 J/mol.K

2.2 J/mol.K

Accepted Answers:

1.49 J/mol.K

Score: 0

No, the answer is incorrect.

work

Score: 0

work

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operties Ar	nnouncements	About the Course	Ask a Question	Progress M	lentor
Week-04: Assignme					
The due date for submitting this assignment has passe As per our records you have not submitted this assignr			Due o	n 2021-09-01, 2	23:59 IS
Calculate the number of broken bonds per uni		crystal on the			1 poi
(100) planes.					
○ 3.22×10 ¹⁹ ○ 1.55×10 ¹⁹					
○ 7.55×10 ¹⁷ ○ 4.8 ×10 ⁵					
No, the answer is incorrect. Score: 0					
Accepted Answers: 3.22×10 ¹⁹					
Calculate the number of atoms per unit area in	n an Iron crystal o	n the (111), planes.			1 poi
○ 1.78×10 ¹⁹					
○ 5.5×10¹⁰ ○ 1.21 ×10¹⁰					
\circ 2.9 ×10 ⁹					
No, the answer is incorrect. Score: 0					
Accepted Answers: 1.21 ×10 ¹⁹					
3) Heat capacity has units as					1 poi
○ J/kg.K					
○ J/mol.K ○ J.ohm/sec.K ²					
○ W/m.K No, the answer is incorrect.					
Score: 0 Accepted Answers:					
J/mol.K					
4) Miller indices for Octahedral plane in cubic cr	rystal				1 poi
(100) (110)					
(111) None					
No, the answer is incorrect.					
Score: 0 Accepted Answers:					
(111)	-1				4
 Coordination number for closest packed crysta 16 	ai structure				1 poi
○ 12					
○ 8 ○ 4					
No, the answer is incorrect. Score: 0					
Accepted Answers: 12					
Determine the Miller indices of a plane that m	nakes intercepts of	4Å, 3Å and 8Å on the	coordinate axes of	an orthorhombic	1 poi
lattice with the ratio of the axial lengths as: a : b : c	_				
○ (452) ○ (481)					
(220) (324)					
O (324) No, the answer is incorrect.					
Score: 0 Accepted Answers:					
 (481) 7) For the following reaction at 25°C, ΔH° = +11 + 2Br₂(l). 	5 kJ and Δ S° = +1	25 J/K. Calculate ΔG°	for the reaction at 2	25°. SBr₄(g) → S(g) 1 poi
○ +152 kJ					
○ -56.7 kJ ○ +77.8 kJ					
○ +37.1 kJ					
No, the answer is incorrect. Score: 0 Accepted Answers: +77.8 kJ					
8) The entropy will usually increase when					1 poi
I. a molecule is broken into two or more sr II. a reaction occurs that results in an increa		of moles of gas			,
III. a solid change to a liquid	.se in the number	or mores or gas.			
IV. a liquid changes to a gas. I only					
O II only					
○ III only ○ I, II, III, and IV					