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NPTEL

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Courses » Introduction to Chemical Thermodynamics and Kinetics

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## Unit 7 - Week 5

Register for  
Certification exam

## Course outline

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portal

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- Spontaneity and equilibrium - part 1
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- Spontaneity and equilibrium - part 3
- Lecture 05 notes
- Quiz : Assignment 5
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## Assignment 5

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

**Due on 2019-03-06, 23:59 IST**

- 1)  2145.71 cal K<sup>-1</sup> 1 point  
 21.71 cal K<sup>-1</sup>  
 45.71 cal K<sup>-1</sup>  
 5.71 cal K<sup>-1</sup>

No, the answer is incorrect.

Score: 0

Accepted Answers:

2145.71 cal K<sup>-1</sup>

- 2)  T > 369.23 K 1 point  
 T < 369.23 K  
 T = 369.23 K  
 T > 100.00 K

No, the answer is incorrect.

Score: 0

Accepted Answers:

T > 369.23 K

- 3) 1 point

- 500 cal, spontaneous
- 51.043 cal, spontaneous
- 200 cal, non-spontaneous
- 200 cal, spontaneous

No, the answer is incorrect.

Score: 0

Accepted Answers:

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No, the answer is incorrect.

Score: 0

Accepted Answers:

*-94286.7 cal mol<sup>-1</sup>*

5) In question 4, the value of  $\Delta S^{\circ}$  for the reaction at 400K is:

1 point

- 0.55 cal K<sup>-1</sup> mol<sup>-1</sup>
- 0.33 cal K<sup>-1</sup> mol<sup>-1</sup>
- 0.16 cal K<sup>-1</sup> mol<sup>-1</sup>
- 0.93 cal K<sup>-1</sup> mol<sup>-1</sup>

No, the answer is incorrect.

Score: 0

Accepted Answers:

*0.16 cal K<sup>-1</sup> mol<sup>-1</sup>*

6) The condition for a spontaneous process is given by

1 point

- 
- 
- 
- 

No, the answer is incorrect.

Score: 0

Accepted Answers:

7) An increase in entropy of the system means

1 point

- an increase in randomness of the system
- a decrease in randomness of the system
- an increase in number of accessible states
- a decrease in number of accessible states

No, the answer is incorrect.

Score: 0

Accepted Answers:

*an increase in number of accessible states*

8)  298 K

1 point

668.73 K

988.61 K

$\Delta G^{\circ}$  is positive, hence the reaction will never be spontaneous

No, the answer is incorrect.

Score: 0

Accepted Answers:

*988.61 K*

9) The condition for a spontaneous process is given by

1 point

- 
- 
- 
- 

No, the answer is incorrect.

Score: 0

Accepted Answers:

10) Two bodies A and B of same material and of same mass  $m$  are kept in

1 point

contact in a thermally insulated vessel at temperature  $T_1$  and  $T_2$  ( $T_1 > T_2$ ). Calculate  $\Delta S$  (in terms of specific heat (denoted by "s")) when both bodies attain the equilibrium temperature



No, the answer is incorrect.

Score: 0

Accepted Answers:

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