

Course outline

How does an NPTEL online course work?

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

● Lecture 36 : Introduction to Energy Balance - VI

● Lecture 37 : Introduction to Energy Balance - VII

● Lecture 38 : Introduction to Energy Balance - VIII

● Lecture 39 : Introduction to Energy Balance - IX

● Lecture 40 : Introduction to Energy Balance - X

● Week 8 Lecture Material

○ Quiz: Week 8 : Assignment 8

● Week 8 Feedback Form

Week 9

Week 10

Week 11

Week 12

Download Videos

Detailed Assignment Solution

Live Interactive session

Week 8 : Assignment 8

The due date for submitting this assignment has passed.

Due on 2021-09-22, 23:59 IST.

As per our records you have not submitted this assignment.

 1) **When a mixture of two liquids having different boiling points are gradually heated then;** 2 points

- (A) The mixture completely vaporizes over bubble point.
 (B) The mixture completely vaporizes below bubble point.
 (C) The mixture completely vaporizes below dew point.
 (D) The mixture completely vaporizes above dew point.

- A)
 B)
 C)
 D)

No, the answer is incorrect.

Score: 0

Accepted Answers:

D)

 2) **If for a mixture of two liquids, their relative miscibility increases with increase in temperature, then the system is called a;** 2 points

- (A) Lower Critical Solution Temperature System.
 (B) Upper Critical Boiling Temperature System.
 (C) Upper Critical Solution Temperature System.
 (D) Lower Critical Boiling Temperature System.

- A)
 B)
 C)
 D)

No, the answer is incorrect.

Score: 0

Accepted Answers:

C)

 3) **If for a liquid mixture, at some temperature if the vapor phase composition and the liquid phase composition are same, then the system forms;** 2 points

- (A) A homogeneous solution
 (B) A heterogeneous solution
 (C) An azeotrope
 (D) A two-phase liquid

- A)
 B)
 C)
 D)

No, the answer is incorrect.

Score: 0

Accepted Answers:

C)

 4) **Find out the correct statement.** 2 points

- (A) Value of state variable does not depend on the previous history of the system.
 (B) Value of state variable depends on the previous history of the system.
 (C) Path variables are associated with exact differential.
 (D) Path variables are known as point function.

- A)
 B)
 C)
 D)

No, the answer is incorrect.

Score: 0

Accepted Answers:

A)

 5) **Find the correct statement.** 2 points

- (A) A cycle process must be reversible
 (B) It is possible to have a process without change of state
 (C) A reversible process must be a quasi-equilibrium process
 (D) A system at thermodynamic equilibrium means it is undergoing a process.

- A)
 B)
 C)
 D)

No, the answer is incorrect.

Score: 0

Accepted Answers:

C)

 6) **A concept that “work done on the system is positive” is based on the concept;** 2 points

- (A) By doing work on the system its temperature increases.
 (B) By doing work on the system its volume increases.
 (C) By doing work on the system its pressure increases.
 (D) By doing work on the system its internal energy increases.

- A)
 B)
 C)
 D)

No, the answer is incorrect.

Score: 0

Accepted Answers:

D)

 7) **Energy associated with “Rotation / Vibration” of a system are due to;** 2 points

- (A) External Kinetic Energy
 (B) Intra molecular Interactions
 (C) Inter molecular Interactions
 (D) Internal Kinetic Energy

- A)
 B)
 C)
 D)

No, the answer is incorrect.

Score: 0

Accepted Answers:

B)

 8) **Find out the wrong statement.** 2 points

- (A) Flow work is associated with a system in equilibrium.
 (B) Flow work is only possible for an open system.
 (C) Flow work must involve flow of liquid.
 (D) It is possible that flow work can get converted to mechanical work.

- A)
 B)
 C)
 D)

No, the answer is incorrect.

Score: 0

Accepted Answers:

A)

 9) **Find out the correct statement.** 2 points

- (A) $1 \text{ J} = 1 \text{ N/m}$
 (B) $1 \text{ J} = 1 \text{ Pa/m}^3$
 (C) $1 \text{ J} = 1 \text{ N/m}^2$
 (D) $1 \text{ J} = 1 \text{ Pa.m}^3$

- A)
 B)
 C)
 D)

No, the answer is incorrect.

Score: 0

Accepted Answers:

D)

 10) **Identify the correct statement.** 2 points

- (A) An open system must be insulated
 (B) A closed system must be insulated.
 (C) An open system may have an imaginary boundary.
 (D) An isolated system can never be at thermodynamic equilibrium.

- A)
 B)
 C)
 D)

No, the answer is incorrect.

Score: 0

Accepted Answers:

C)