Yakeen NEET 2.0 2026

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DPP: 3

Thermodynamics & Thermochemistry

Q1 An ideal gas enclosed in a cylinder fitted with a frictionless and weight less piston, pushes it outside. What would be the sign convention for the work?
(A) Positive
(B) Negative
(C) Zero
(D) Cannot be predicted

Q2 In a constant volume process, internal energy change is equal to
(A) Heat transferred
(B) Work done
(C) Zero
(D) None of the mentioned

Q3 Which of the following is zero for an isochoric process?
(A) dP
(B) dV
(C) dT
(D) dE

Q4 In an isochoric process the increase in internal energy is
(A) Equal to the heat absorbed
(B) Equal to the heat evolved
(C) Equal to the work done
(D) Equal to the sum of the heat absorbed and work done

Q5 The process, in which no heat enters or leaves the system, is termed as
(A) Isochoric (B) Isobaric
(C) Isothermal (D) Adiabatic

Q6 Which of the following is true for an adiabatic process?
(A) $\Delta \mathrm{H}=0$
(B) $\Delta \mathrm{W}=0$
(C) $\Delta \mathrm{Q}=0$
(D) $\Delta \mathrm{V}=0$

Q7 The first law of thermodynamics is only
(A) The law of conservation of energy
(B) The law of conservation of mass
(C) The law of conservation of momentum
(D) Both (1) and (2)

Q8 The internal energy of a substance
(A) Increases with increase in temperature
(B) Decreases with increase in temperature
(C) Remains constant
(D) Calculated by $E=\mathrm{mc}^2$

Q9 The process carried out in perfect insulation is
(A) Isothermal (B) Isobaric
(C) Isochoric (D) Adiabatic

Q10 During the adiabatic expansion of ideal gas, which is correct?
(A) Temperature increases
(B) $q=0$
(C) Temperature remains constant
(D) $\Delta \mathrm{E}=0$

Q11 For isothermal expansion of ideal gas which is correct?
(A) $\Delta \mathrm{H}=0$
(B) $\Delta \mathrm{E}=0$
(C) $\Delta \mathrm{T}=0$
(D) All

Q12 As per the First Law of thermodynamics, which of the following statement would be appropriate:
(A) Energy of the system remains constant
(B) Energy of the surroundings remains constant
(C) Entropy of the universe remains constant

(D) Energy of the universe remains constant

Q13 For a particular process $q = -10\ kJ$ and $w = 25\ kJ$. Which of the following statements is true?

(A) Heat flows from the surroundings to the system

(B) The system does work on the surroundings

(C) $\Delta E = -35\ kJ$

(D) None of the above is true

Answer Key

Q1	(B)
Q2	(A)
Q3	(B)
Q4	(A)
Q5	(D)
Q6	(C)
Q7	(A)
Q8	(A)
Q9	(D)
Q10	(B)
Q11	(D)
Q12	(D)
Q13	(D)