Chapter 4 Question #11

\[ dU = \delta Q - pdV \]

This form of the First Law of Thermodynamics is valid for:

1) All processes
2) Processes where changes in KE and PE are zero
3) Quasi-static processes where changes in KE and PE are zero
4) Quasi-static processes of an ideal gas where changes in KE and PE are zero
5) All quasi-static processes of an ideal gas
6) All quasi-static processes
7) None of the above
Chapter 4 Question 11 Answer:

(3) quasi-static processes where changes in kinetic and potential energy are zero

Thus (4) is also correct though more limiting

Class Response: