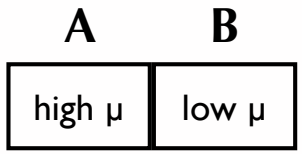
Physics 3410 Quiz 6

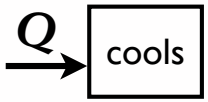
Please write the letter of the correct answer in the box provided. Name: _____

☐ 1. P and V are conjugate variables, while the conjugate variable of temperature T is
A) S **B)** U **C)** k_B

☐ 2. If A has a higher chemical potential than B, particles will
A) flow right, from A to B **B) flow left, from B to A**

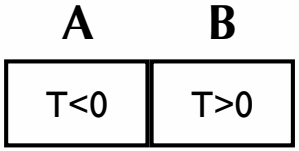


☐ 3. When heat flows into this system, its temperature decreases. This system is
A) ascetic **B) miserly** **C) impossible**



☐ 4. At energies near its maximum ($N_\uparrow$=N), a paramagnet is
A) ascetic **B) miserly** **C) neither**

☐ 5. If A has a negative temperature, and B a positive one, then heat will flow
A) right, from A to B **B) left, from B to A** **C) neither of these**



☐ 6. If a system is destroyed and its energy released, the amount of energy that can be used as useful work is
A) chemical potential **B) enthalpy** **C) free energy**

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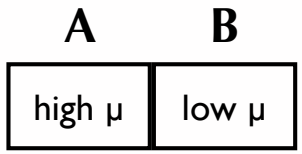
A

1. P and V are conjugate variables, while the conjugate variable of temperature T is
A) S **B) U** **C) k_B**

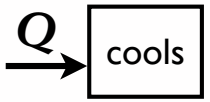
A

2. If A has a higher chemical potential than B, particles will
A) flow right, from A to B **B) flow left, from B to A**



B

3. When heat flows into this system, its temperature decreases. This system is
A) ascetic **B) miserly** **C) impossible**



A

4. At energies near its maximum ($N_\uparrow$=N), a paramagnet is
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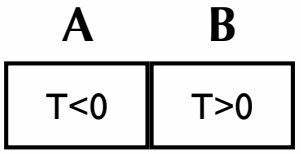
A

5. If A has a negative temperature, and B a positive one, then heat will flow
A) right, from A to B **B) left, from B to A** **C) neither of these**



C

6. If a system is destroyed and its energy released, the amount of energy that can be used as useful work is
A) chemical potential **B) enthalpy** **C) free energy**