

College of Science Department of physics	2 nd Stage Physics Heat and Thermodynamics	2023
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Q1/ Choose the correct answer

1. At constant volume, pressure extrapolates to zero at the temperature of:
 - a) 0 °C, b) 100 °C, c) -100 °C, d) -273.15 °C
2. As the temperature of water increases from 0 °C to 4 °C, its density:
 - a) decreases, b) increases, c) unchanged, d) 1000 g/m³
3. To make a very sensitive glass thermometer, which one is your choice:
 - a) Gasoline, b) mercury, c) alcohol, d) glycerin
4. Transfer of heat by radiation is an example of:
 - a) Reversible process, b) irreversible process, c) none of these
5. W.m⁻¹.K⁻¹ is the unit of:
 - a) thermal expansion, b) specific heat capacity, c) thermal conductivity, d) work
6. Which one is true for the entropy change of a system undergoes a reversible, adiabatic process:
 - a) $\Delta S < 0$, b) $\Delta S > 0$, c) $\Delta S = 0$, d) none of them
7. Newton's law of cooling is
 - a) a law of convection, b) a law of radiation, c) a law of conduction, d) a & b
8. Which contracts the most when its cooled?
 - a) Fe, b) H₂O, c) O₂, d) none of them
9. A body radiates heat energy at all temperature:
 - a) yes, b) no

Q2/ Define Stefan-Boltzman law? In Leseli cube, which side with the highest intensity and why explain it physically?

Q3/ In specific heat capacity of copper by Calender method, How the heat energy was produced, explain the method of Calender?

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