

TOPICS COVERED ON PH115 FINAL EXAM

1. Ideal gas law and the units of each of the terms
2. The ways heat can be transferred
3. Definitions of isochoric, isobaric, isothermal and adiabatic
4. Heat capacity and how it relates to cooling
5. How temperature varies in the cooling process
6. Boyle's Law
7. Charges and electric fields in a conductor
8. The size of molecules, atoms, and nuclei
9. The role of each particle in an atom and which carry current
10. The electrical characteristics of vacuum
11. The relationship between mean free path and gas density
12. Coulomb's law and its consequences
13. Dielectric breakdown
14. Series and parallel resistors
15. DC vs. AC and RMS voltage
16. Ohmic Behavior
17. AC current and resistance
18. Phase differences between components in a circuit
19. Capacitance of a capacitor
20. Capacitors in an RC circuit
21. Inductance of an inductor
22. Inductors in an RL circuit
23. Power through transformers