**Nuclear Physics Lab**

Report 2

Statistics of Radioactivity

**Questions:**

**1.** **Using a Geiger counter, a radiation safety technician records 200 counts in 50 seconds. What is the total count rate in counts/min? What is the uncertainty in the count rate in counts/min?**

**2. Rate of transfer of energy by radiation can be increased by**

1. increasing surface temperature
2. decreasing surface area
3. using shiny white surfaces instead of dull and black surfaces
4. decreasing atmospheric pressure

**3. Thermal energy that reaches surface of earth from sun, is transferred through process of**

1. Conduction
2. Convection
3. Radiation
4. Conduction and convection

**4. In 1000 mode, the Geiger counter records a rate R1 = 400 counts per minute. What is δR1? In 100 mode, the Geiger counter records a rate R2 = 400 counts per minute. What is δR2?**

**4. Types of Radiation (explain)**

Alpha radiation

Beta radiation

Gamma rays

Neutrons