AIM: Measure the Resistivity/Resistance for a given sample as a function of temperature from 300 K down to 15 K

(Following points are general instructions/protocols to be followed and specific instructions will be given while performing the experiment)

Steps to operate CCR (Close cycle cryostat)

1. Open valve near the cryostat and close vent
2. Switch on TMP (Turbo molecular Pump)
3. Wait for the pressure to come below 7×10^{-7} mbar - check the display (it will take 30 – 45 min)
4. Turn on the chiller pump and switch on the Compressor
5. Make sure the chiller pump does not go above 26 ^{o}C
6. Set the temperature controller parameters – set point (the temperature at which, you wish to take next measurement), ramp rate, etc.
7. Measure the resistance of the sample at different temperatures. Example: From 300 K down to lowest temperature, at which you can make measurements, may be in steps of 25 K. You can perform the experiment while cooling as well as heating.

Note: Ramp rate should never be kept at "**ZERO**"

Heater range should be "**HIGH**"

Shutting down the equipment

1. Once it attains room temperature (300 K), close the valve near the cryostat, and switch off the temperature controller.
2. Switch off the turbo molecular pump.
3. After 10 min switch off the helium cryostat and switch off the mains.
4. After 10 min switch off the Chiller and close the knob at the back of the chiller.