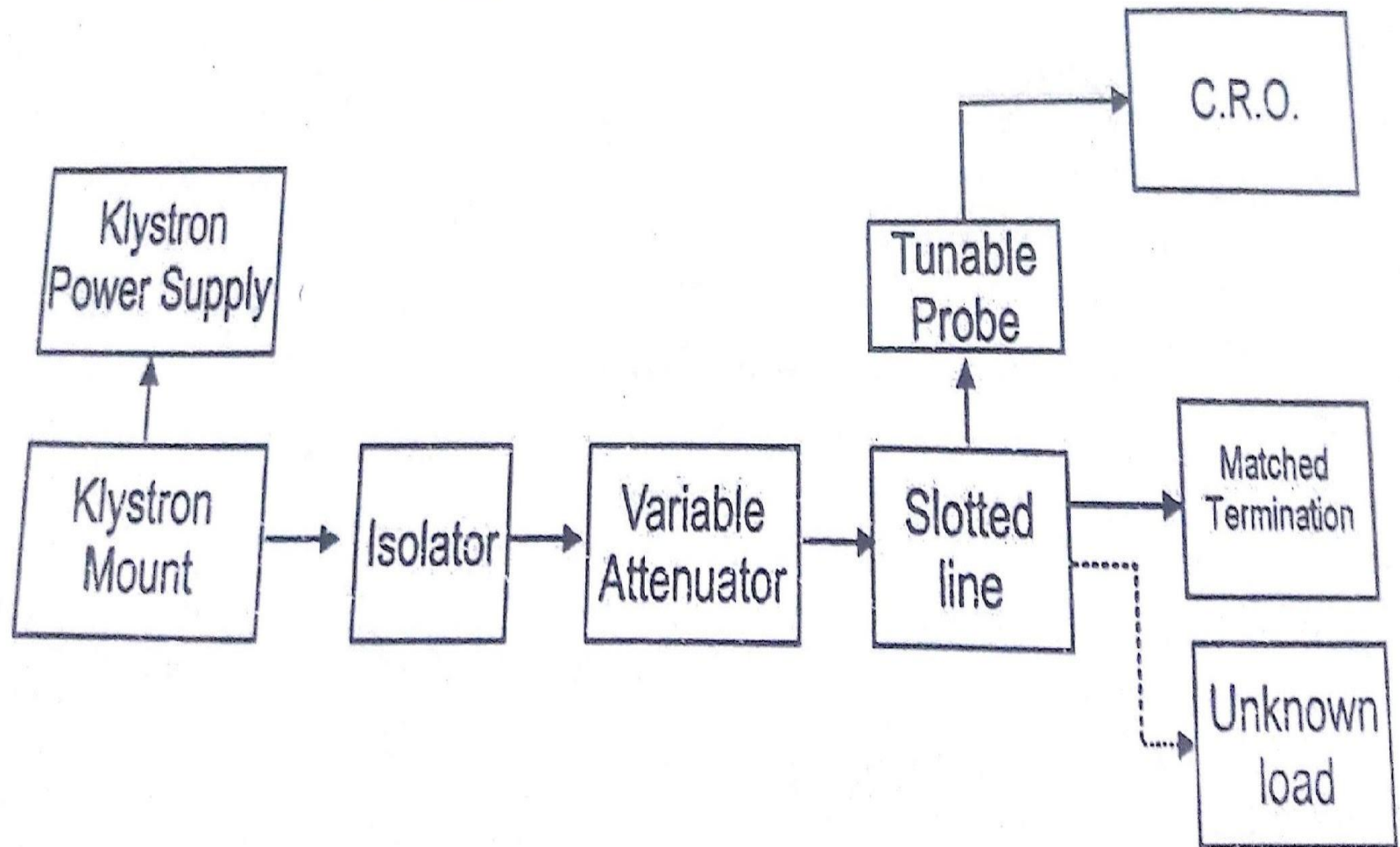


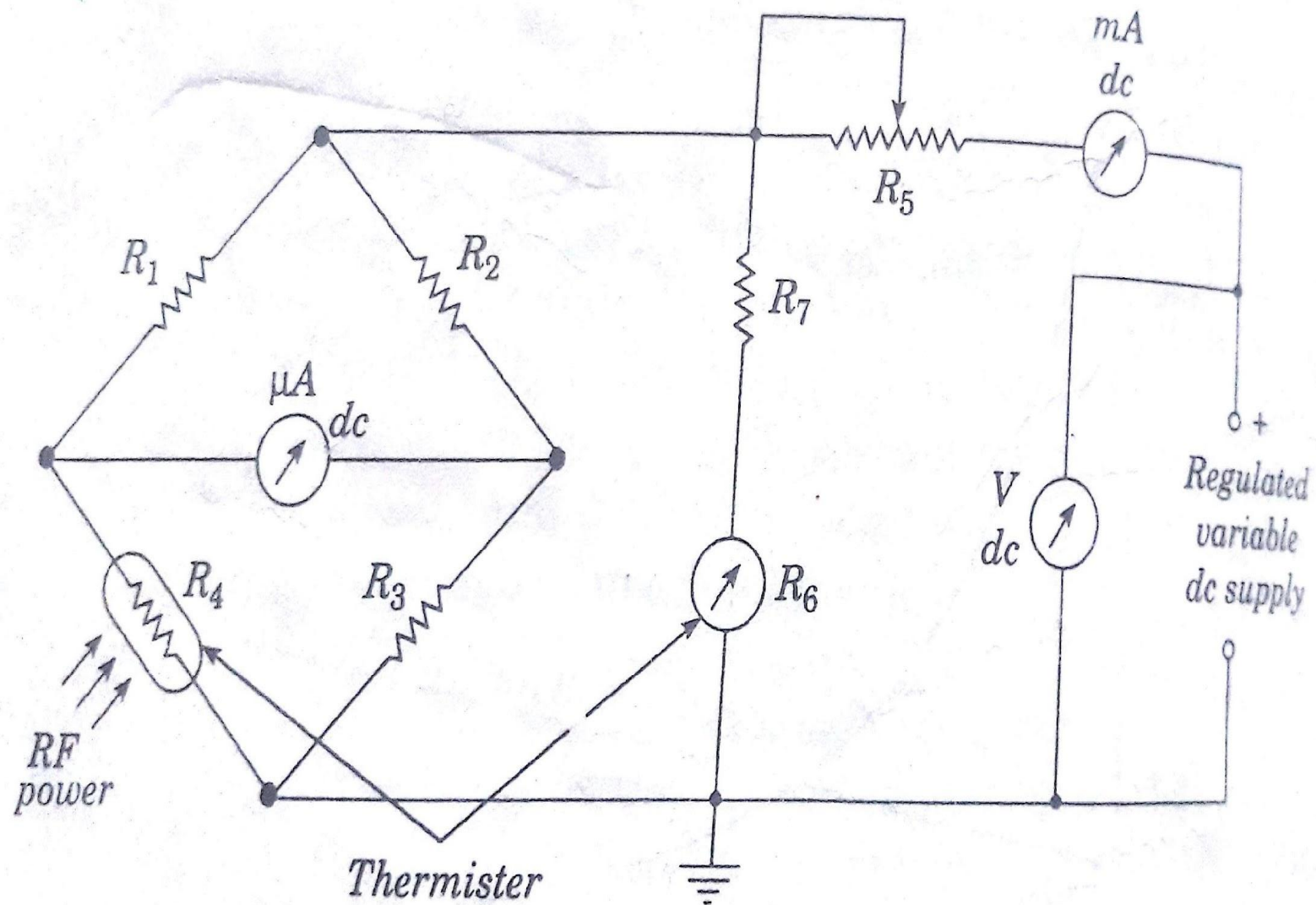
MESUREMENT OF UNKNOWN LOAD IMPEDENCE

EXPERIMENTAL SETUP



1. Basic setup of equipments should be done.
2. Now starting from load ,locate minima of the standing wave by moving tunable probe of slotted section, preferably the minima closest to the matched termination. record the probe position as X_1 from scale. Then , locate the next successive minima. Record the probe position as X_2 .
3. Without disturbing the any setup, replace matched termination by movable short as unknown load. Locate the new minima (X_3) between the two minima(X_1 and X_2) previously measured with the matched termination.
4. Find the shift in minima by $(X_1 - X_3)$ or $(X_2 - X_3)$ depending on minima (X_3) is near to which value that is X_1 or X_2 respectively. If the minima is shifted towards load , it will be inductive load and if the minima is shifted toward generator, it will be capacitive load.

MESUREMENT OF POWER BY BOLOMETER METHOD.



1. The Bolometer Itself Is Made To Be One Of The Arms Of A Wheat Stone Bridge As Shown In Fig.2
2. Initially The Bridge Is Balanced By An Adjustment Of Resistance R_5 , Absence Of Any Microwave Power.
3. Rf Power Applied , Bridge Goes Out Of Balance, Resistance Of The Thermister Changes.
4. The Current Of Galvanometer Is Converted Into Microwave Power Reading. Galvanometer Can Be Calibrated Directly In Miliwatts.
5. The Bolometer Are Temperature Sensitive Devices So Some Form Of Temperature Compensation Has To Be Use To Avoid Errors.
6. The Most Of Easy Method Is By The Use Of Resistors R_6 And R_7 Where Element R_6 Is Identical To Element R_4 .
7. If Tempreture Changes And The Resistance R_4 , This Will Not Be Intepreted As An Rf Power Changes , Beacause The Resistance R_6 Will Be Equally Reduced; Thus More Current Will Flow Through It.