



SETHU INSTITUTE OF TECHNOLOGY
 (An Autonomous Institution | Accredited with 'A' Grade by NAAC)
 PULLOOR, KARIAPATTI – 626 115.



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
Activity Supports Employability/Entrepreneurship/Skill Development

Course Code : 19UEE306
Course Name : Electrical Measurements and Instrumentation
Academic Year : 2020 – 2021 (ODD) Class : II Year

Category	Employability
Activity	Videos on measuring instruments help to improve the technical knowledge.
Topic	Multi meter, AC and DC bridges

Wheatstone bridge

Balanced condition of Wheatstone bridge
 Galvanometer - no deflection $\Rightarrow I_3 = 0$

$V_{AB} = V_A - V_B = I_1 P \dots(1)$
 $V_{BC} = V_B - V_C = I_1 Q \dots(2)$
 $V_{AD} = V_A - V_D = I_2 R \dots(3)$
 $V_{DC} = V_D - V_C = I_2 X \dots(4)$

Resistances P and Q are known.
 Hence, $\frac{Q}{P}$ is known.
 R is a variable resistance
 X is unknown resistance

Bridge Measurements

Outcome	Instrumentation can refer to devices as simple as direct-reading thermometers, or as complex as multi-sensor components of industrial control systems. Today, instruments can be found in laboratories, refineries, factories and vehicles, as well as in everyday household use. Students have to know the basic concepts, working and applications of various types of instruments to be employable in core companies.
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Course Instructor

HoD/EEE