**DEPARTMENT OF ELECTRICAL ENGINEERING**



***Instrumentation & Measurement***

***Spring - 2018***

***INSTRUCTOR: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***IQRA National University, Peshawar***



***Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***Semester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***Registration Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***Subject: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***Group Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

**Lab safety Measurements**

* ***It is your responsibilities to ensure that at all times you work in such a way as to ensure your own safety and that of other persons in the laboratory.***
* ***None of the experiments in the laboratory is dangerous provided that normal practices are followed. However, particular care should be done while performing experiments.***
* ***If you are uncertain about any safety matter for any of the experiments, you MUST consult a demonstrator.***
* ***All accidents must be reported to a laboratory supervisor or technician who will take the necessary action.***
* ***You should take care of all lab equipment and do not practice any experiment without instructor permission.***
* ***Prominently show your University ID card before entering in the Lab.***
* ***Submit your ID card to lab assistant before issuing any equipment in the lab***

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***Instrumentation & Measurement (Lab)***

***LIST OF EXPERIMENTS***

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| **S.NO** | **EXPERIMENTS** |
| 1 | Implementation of electrical equipment and different components |
| 2 | Conversion of galvanometer to voltmeter |
| 3 | Conversion of galvanometer to ammeter |
| 4 | To measure the power of a resistive load by analog wattmeter. Also calculate its power factor |
| 5 | To measure the power and power factor by three voltmeter method |
| 6 | Measuring Different Parameters Using Lux Meter, Micro Power Monitor and Infrared Thermometer |
| 7 | Fundamentals of oscilloscope |
| 8 | Measurement of semiconductor devices with Multimeter |
| 9 | To measure The unknown resistance by Wheatstone Bridge |
| 10 | To measure the unknown inductance by Maxwell Wein Bridge |
| 11 | To measure the unknown inductance by Maxwell Inductance Bridge |
| 12 | To Check Insulation Of Different Equipments using Insulation Tester (Megger) |