

Master copy

1. M. Nadeem Khan



28/12/22

APPLIED

2. Hassan Abbas

ELECTRICIAN



GRADE - IX

3. Atif Sudheer



4. Syed Zeeshan Haider

Zeeshan 28/12/22

5. Masood Ali Raza



COURSE OUTLINE

Ch#01 Fundamentals of Electricity	28 =Periods 12=(T), 16= (P)
Theme/Content	Activities/Practical
<ul style="list-style-type: none"> • Basic concept of Electricity (Voltage, current and resistance) • Basic Units of Electricity • Electrical Symbols 	<ul style="list-style-type: none"> • Carryout Orientation Visit of Electrical Lab/workshop and record the observation. • Recognize Electrical symbols with fixed component and equipment (in workshop/lab) • Draw electrical symbols • Measure Current by Am meter • Measure voltage by Volt meter • Measure Resistance by Ohm meter
<ul style="list-style-type: none"> • Conductor, Insulator, Semi-Conductor • Ohm's Law 	<ul style="list-style-type: none"> • Recognize/identify conductor, insulator and Semiconductor form given table • Apply ohm's law for measuring Current, Voltage and Resistance

Ch#02. Cells and Batteries	36 Periods 12=(T), 24 = (P)
Theme/Content	Activities/Practical
<ul style="list-style-type: none"> • Cell and Batteries • Define cell • Define battery • Construction of Lead acid cell and battery 	<ul style="list-style-type: none"> • Identify cell and battery terminals • Perform series and parallel connection of cells. • Perform series and parallel connection of batteries. • Perform charging of a battery
<ul style="list-style-type: none"> • Battery tests 	<ul style="list-style-type: none"> • Perform Maintenance of battery • Check gravity of battery with the help of hydrometer • Perform testing of cell and battery by DC volt meter.

Ch#03. Magnetism and ElectroMagnetism	28 =Periods 12=(T), =16 (P)
Theme/Content	Activities/Practical
<ul style="list-style-type: none"> • Magnet and magnetic material • Attraction and repulsion of poles • Define Electro magnetism • Faraday's laws of 	<ul style="list-style-type: none"> • Identify Magnetic and nonmagnetic material with the help of magnet • Identify the poles and magnetic field of different types of magnets. • The magnetic effect of electric current • Apply Faraday's laws of electromagnetic induction

Electromagnetic induction	
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Ch#04. Electrical power and Energy	48 = Periods 18=(T) = 30 (P)
Theme/Content	Activities/Practical
<ul style="list-style-type: none"> • Series and Parallel circuit • Define series circuit • Define parallel circuit 	<ul style="list-style-type: none"> • Construct a series circuit and measure Current, Voltage and Resistance • Construct parallel circuit and measure Current, Voltage and Resistance
<ul style="list-style-type: none"> • Electrical power • Define power • Calculate power 	<ul style="list-style-type: none"> • Connect the circuit according to the given equipment • Calculate/ measure the power of given load
<ul style="list-style-type: none"> • Electrical Energy • Define energy 	<ul style="list-style-type: none"> • Connect energymeter with the load single and three phase • Read the energymeter • Note the units consumed

Ch#05. Capacitor and inductor	30 = Periods 12 = (T), 18 = (P)
Theme/Content	Activities/Practical
<ul style="list-style-type: none"> • Capacitor • Define capacitor • Unit of capacitor • Connection of capacitor in series and parallel 	<ul style="list-style-type: none"> • Connect the capacitor in series and measure total capacitance • Connect the capacitor in parallel and measure total capacitance

Ch.6. Digital Communication and Social media	14 Period 05 (T) 09 (P)
Themes	Activities
<ul style="list-style-type: none"> • Effective email writing 	<ul style="list-style-type: none"> • Create email account • Write an official email to school principal on subject of any importance

<ul style="list-style-type: none">• Introduction to Social Media Platforms<ul style="list-style-type: none">✓ Facebook✓ Instagram✓ Twitter✓ YouTube	<ul style="list-style-type: none">• Create social media page for your self
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