

LESSON PLAN-1

T1-Session 2015-2016

<i>For the 3rd Week of March</i>	<i>Objectives (Concepts & Skills)</i>	<i>Learning Outcomes</i>	<i>Instructional Tools & References</i>	<i>Pedagogy</i>	<i>Activity / Assignment / Projects</i>	<i>Assessment of Learning Outcomes</i>	<i>FA / SA Syllabus</i>
<p>Class : X</p> <p>Subject : Physics</p> <p>Theme: Electricity</p> <p>Periods: (2)</p> <p>Theory: (2)</p> <p>Practical:(0)</p>	<p>➤ <i>Concept of Electric Charge and its properties.</i></p> <p>➤ <i>Basic concept of Electric current and its units.</i></p> <p>➤ <i>Basic concept of the components of Electric circuit & their symbols.</i></p> <p>➤ <i>Textbook Numerical problems related to the topic.</i></p> <p>Skills: (Scientific Aptitude) (Content of Knowledge) (Presentation) (Correctness) (Thinking skills) (Reasoning Skills) (Attentiveness) (Listening Skills)</p>	<p>Make it sure that the student learns the concepts given.</p> <p>Charge is quantized.</p> <p>Charge is conserved.</p> <p>Charge is additive</p> <p>Flow of Electric charge through a metallic wire.</p> <p>$I = q/t = ne/t$</p> <p>Direction of current.</p> <p>Definition of the SI unit of unit of current.</p> <p>Drawing of the Components of Electric circuit & their symbols.</p> <p>Drawing Circuit Diagram.</p> <p>Textbook Numerical problems related to the topic.</p>	<p><i>In addition to general teaching tools like white board, marker, etc, the teacher will use Electric devices like Ammeter, Voltmeter, electric cell, battery, plug key, connecting wires etc.</i></p> <p><i>The References used will be :</i> -Conceptual Physics by Paul Hewit -Science and Technology Text Book for class X.</p> <p>-</p>	<p>Activating Prior Knowledge by Random Questioning</p> <p>Introducing the topic to be taught after getting the expected response from the students.</p> <p>Developing hypothesis by :</p> <p>Brainstorming</p> <p>Lecture</p> <p>Discussion</p> <p>In Text Questions</p>	<p>Home Assignments: The areas of assessment will be: (Regularity) (Content of Knowledge) (Presentation) (Correctness) (Thinking skills)</p>	<p>Chart Making: The areas of assessment will be: (Time Management) (Presentation) (Correctness)</p>	<p><u>FA Syllabus:</u> Electric Charge and its properties.</p> <p>Electric current and its units.</p> <p>Components of Electric circuit & their symbols.</p> <p>Drawing Circuit Diagram.</p> <p>Textbook Numerical problems related to the topic.</p> <p><u>SA Syllabus</u> Same as FA</p>

LESSON PLAN-2

T1-Session 2015-2016

<i>For the 1st Week of April</i>	<i>Objectives (Concepts & Skills)</i>	<i>Learning Outcomes</i>	<i>Instructional Tools & References</i>	<i>Pedagogy</i>	<i>Activity / Assignment / Projects</i>	<i>Assessment of Learning Outcomes</i>	<i>FA / SA Syllabus</i>
<p>Class : X</p> <p>Subject : Physics</p> <p>Theme: Electricity</p> <p>Periods: (4)</p> <p>Theory: (2)</p> <p>Practical: (2)</p>	<p>➤ <i>Concept of Ohms law.</i></p> <p>➤ <i>Basic concept of Resistance and its units.</i></p> <p>➤ <i>Factors affecting Resistance</i></p> <p>➤ <i>Basic concept of Conductor, Resistor and Insulator.</i></p> <p>➤ <i>Textbook Numerical problems related to the topic.</i></p> <p>Skills: (Scientific Aptitude) (Content of Knowledge) (Presentation) (Correctness) (Thinking skills) (Reasoning Skills) (Attentiveness) (Listening Skills)</p>	<p>Make it sure that the student learns the concepts given.</p> <p>➤ $V \propto I$ (Ohms Law)</p> <p>➤ <i>Ohmic and non-Ohmic conductors</i></p> <p>➤ $R = V/I$</p> <p>➤ <i>Definition of SI unit of Resistance</i></p> <p>➤ $R \propto L/A$</p> <p>➤ <i>Factors affecting Resistance</i></p> <p>➤ <i>Difference between Conductors, Resistor and insulator.</i></p> <p>➤ <i>Textbook Numerical problems related to the topic.</i></p>	<p><i>In addition to general teaching tools like white board, marker, etc, the teacher will use</i></p> <p>i) <i>Electric devices like Ammeter, Voltmeter, electric cell, battery, plug key, connecting wires, Resistor, etc.</i></p> <p>ii) <i>Apparatus for verifying Ohms Law</i></p> <p><i>The References used will be :</i> -Conceptual Physics by Paul Hewit -Science and Technology Text Book for class X.</p> <p>-</p>	<p><i>Activating Prior Knowledge by Random Questioning</i></p> <p><i>Introducing the topic to be taught after getting the expected response from the students.</i></p> <p><i>Developing hypothesis by :</i></p> <p><i>Brainstorming</i></p> <p><i>Lecture</i></p> <p><i>Discussion</i></p> <p><i>In Text Questions</i></p>	<p>Chart Making: <i>The areas of assessment will be:</i> (Time Management) (Presentation) (Correctness)</p>	<p>Home Assignments: <i>The areas of assessment will be:</i> (Regularity) (Content of Knowledge) (Presentation) (Correctness) (Thinking skills)</p> <p>Group Activity: <i>The teacher will divide the students in groups to perform practical work (Ohms Law) in the lab and the areas of assessment may include</i> (Teamwork) (Submission of practical notebook) (Observation skill), (Experimental skills), (Understanding skill-viva voce), (Analytical skills), (Knowledge Application) (Computational skills) (Drawing conclusions).</p> <p><i>The teacher will assess any three relevant skills for FA.</i></p>	<p>FA Syllabus:</p> <p>➤ <i>Ohms law.</i></p> <p>➤ <i>Resistance and its units.</i></p> <p>➤ <i>Factors affecting Resistance</i></p> <p>➤ <i>Conductor, Resistor and Insulator.</i></p> <p>➤ <i>Textbook Numerical problems related to the topic.</i></p>

LESSON PLAN-3

Session 2015-2016

For the 2 nd And 3 rd Weeks of April	Objectives (Concepts & Skills)	Learning Outcomes	Instructional Tools & References	Pedagogy	Activity / Assignment / Projects	Assessment of Learning Outcomes	FA / SA Syllabus
<p>Class : X</p> <p>Subject : Physics</p> <p>Theme: Electricity</p> <p>Periods: (4)</p> <p>Theory: (2)</p> <p>Practical:(2)</p> <p>Skills: (Scientific Aptitude) (Content of Knowledge) (Presentation) (Correctness) (Thinking skills) (Reasoning Skills) (Attentiveness) (Listening Skills)</p>	<p>➤ Concept of Resistors in series</p> <p>➤ Derivation of $R_s = R_1 + R_2 + R_3$</p> <p>➤ Basic concept of Resistors in parallels $1/R_s = 1/R_1 + 1/R_2$</p> <p>➤ Different combinations of Resistors</p> <p>➤ Heating effect of current</p> <p>➤ Electric power</p>	<p>Make it sure that the student learns the concepts given.</p> <p>➤ Resistors in series $I_s = I_1 = I_2 = I_3$ $V = V_1 + V_2 + V_3$</p> <p>➤ Derivation of $R_s = R_1 + R_2 + R_3$</p> <p>➤ Basic concept of Resistors in parallels $V = V_1 = V_2 = V_3$ $I_s = I_1 + I_2 + I_3$</p> <p>➤ Derivation of $1/R_s = 1/R_1 + 1/R_2$</p> <p>➤ Heating effect of current $H = Vq = VIt = I^2Rt$</p> <p>➤ Applications of heating effect in electric devices like heater, bulb, electric fuse, etc.</p> <p>➤ Electric power $P = VI = I^2R = V^2/R$</p> <p>Textbook Numerical problems related to the topic.</p>	<p>In addition to general teaching tools like white board, marker, etc, the teacher will use</p> <p>(i) Apparatus for verifying: - law of combination of resistors in series</p> <p>(ii) law of combination of resistors in parallels</p> <p>The References used will be : - Conceptual Physics by Paul Hewit</p> <p>- Science and Technology Text Book for class X.</p> <p>-</p>	<p>Activating Prior Knowledge by Random Questioning</p> <p>Introducing the topic to be taught after getting the expected response from the students.</p> <p>Developing hypothesis by :</p> <p>Brainstorming</p> <p>Lecture</p> <p>Discussion</p> <p>In Text Questions</p>	<p>Oral Questions: The teacher will do it to assess the understanding of the topic by the students. The areas of assessment will include: (Listening Skills) (Clarity of concepts) (Communication skills)</p> <p>Chart Making: The areas of assessment will be: (Time Management) (Presentation) (Correctness)</p>	<p>Group Activity: The teacher will divide the students in groups to perform practical work (Verification of Resistors in series & parallels) in the lab and the areas of assessment may include (Teamwork) (Observation skill), (Experimental skills), (Understanding skill-viva voce), (Analytical skills), (Knowledge Application) (Computational skills) (Drawing conclusions) (Submission of practical notebook)</p> <p>The teacher will assess any three relevant skills for FA.</p>	<p>FA Syllabus:</p> <p>➤ Resistors in series</p> <p>➤ Derivation of $R_s = R_1 + R_2 + R_3$</p> <p>➤ Resistors in parallels</p> <p>➤ Derivation of $1/R_s = 1/R_1 + 1/R_2$</p> <p>➤ Different combinations of Resistors</p> <p>➤ Heating effect of current</p> <p>➤ Applications of heating effect in electric devices like heater, bulb, electric fuse, etc.</p> <p>➤ Electric power $P = VI = I^2R = V^2/R$</p> <p>➤ Textbook Numerical problems related to the topic.</p>

LESSON PLAN-4

T1-Session 2015-2016

<i>For the 4th Week of April</i>	<i>Objectives (Concepts & Skills)</i>	<i>Learning Outcomes</i>	<i>Instructional Tools & References</i>	<i>Pedagogy</i>	<i>Activity / Assignment / Projects</i>	<i>Assessment of Learning Outcomes</i>	<i>FA / SA Syllabus</i>
<p>Class : X</p> <p>Subject : Physics</p> <p>Theme: Magnetic Effects of current</p> <p>Periods: (4)</p> <p>Theory: (2)</p> <p>Practical:(2)</p>	<p>➤ <i>Concept Properties of a Magnet</i></p> <p>➤ <i>Magnetic Field Lines and their applications</i></p> <p>➤ <i>Oersted's Experiment</i></p> <p>➤ <i>Magnetic field due to a current carrying straight wire, coil and solenoid</i></p> <p>Skills: (Scientific Aptitude) (Content of Knowledge) (Presentation) (Correctness) (Thinking skills) (Reasoning Skills) (Attentiveness) (Listening Skills)</p>	<p>Make it sure that the student learns the concepts given.</p> <p>➤ <i>Properties of a Magnet</i></p> <p>➤ <i>Magnetic Field Lines and their applications</i></p> <p>➤ <i>Oersted's Experiment</i></p> <p>➤ <i>Magnetic field due to a current carrying straight wire</i> $B \propto I/d$</p> <p>➤ <i>Magnetic field due to a current carrying coil</i> $B \propto nI/d$</p> <p>➤ <i>Magnetic field due to a current carrying solenoid</i> $B \propto nI$</p> <p><i>Textbook Numerical problems related to the topic.</i></p>	<p><i>In addition to general teaching tools like white board, marker, etc, the teacher will use</i></p> <p>(i) Magnets of different shapes</p> <p>(ii) Electromagnet</p> <p>(iii) Oersted's Experiment</p> <p><i>The References used will be :</i></p> <p>-Conceptual Physics by Paul Hewit</p> <p>-Science and Technology Text Book for class X.</p> <p>-</p>	<p><i>Activating Prior Knowledge by Random Questioning</i></p> <p><i>Introducing the topic to be taught after getting the expected response from the students.</i></p> <p><i>Developing hypothesis by :</i></p> <p><i>Brainstorming</i></p> <p><i>Lecture</i></p> <p><i>Discussion</i></p> <p><i>In Text Questions</i></p>	<p>Home Assignments: <i>The areas of assessment will be:</i> (Regularity) (Content of Knowledge) (Presentation) (Correctness) (Thinking skills)</p>	<p>Group Activity: <i>The teacher will divide the students in groups to perform activity (current produces magnetism) in the lab and the areas of assessment may include (Teamwork) (Observation skill), (Experimental skills), (Analytical skills), (Knowledge Application) (Drawing conclusions).</i></p> <p><i>The teacher will assess any three relevant skills for FA.</i></p>	<p>FA Syllabus:</p> <p>➤ <i>Properties of a Magnet</i></p> <p>➤ <i>Magnetic Field Lines and their applications</i></p> <p>➤ <i>Oersted's Experiment</i></p> <p>➤ <i>Magnetic field due to a current carrying straight wire</i></p> <p>➤ <i>Magnetic field due to a current carrying coil</i></p> <p>➤ <i>Magnetic field due to a current carrying solenoid</i></p>

