**PHYSICS SCHEMES OF WORK**

**FORM THREE 2021**

**TERM I**

**REFERENCES:**

1. Secondary Physics KLB
2. Comprehensive Secondary Physics
3. Principles of Physics
4. Golden Tips
5. Teacher’s Book

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| **1** | **1-5** | **REPORTING AND REVISION OF LAST TERM’S EXAMS** |  |
| 2 | 1-3 | Linear Motion | Introduction of linear motion | By the end of the lesson, the learner should be able to:Define distance, displacement, speed, velocity and acceleration | Defining distance, speed, displacement, velocity and acceleration | Charts on motionTrolleysInclined planes | Comprehensive secondary physics book 3 pages 1Comprehensive secondary physics teachers book 3 pages 1-3Secondary physics KLB students book 2 page 1-7Physics made easier vol. 2 pages 1-2Secondary physics (M.N Patel) pages 5-8 |  |
|  | 4-5 | Linear Motion | Determining velocity | By the end of the lesson, the learner should be able to:Describe experiments to determine velocity | Describing experiments on velocity | TrolleysStop watchesGraph paperTicker timer | Comprehensive secondary physics book 3 pages 2-3Comprehensive secondary physics teachers book 3 pages 1-3Secondary physics KLB students book 3 page 4-6Physics made easier vol. 2 pages 2Secondary physics (M.N Patel) pages 9-14 |  |
| 3 | 1-2 | Linear Motion | Motion time graphs | By the end of the lesson, the learner should be able to Plot and explain motion time graphs | Plotting and interpreting motion-time graphs | Appropriate charts on velocity time and distance graphsGraph paperData showing different distance, velocity and time | Comprehensive secondary physics book 3 pages 5-9Comprehensive secondary physics teachers book 3 pages 8-18Secondary physics KLB students book 3 page 4-6Physics made easier vol. 2 pages 3-5Secondary physics (M.N Patel) pages 21-25 |  |
|  | 3-4 | Linear Motion | Measuring speed, velocity and acceleration | By the end of the lesson, the learner should be able to:Describe experiments to measure speed, velocity and acceleration | Describing experiments to measure speed, velocity and accelerationSolving problems | TrolleysTapesTicker timerGraphs | Comprehensive secondary physics students book 3 pages 2-3Comprehensive secondary physics teachers book 3 pages 1-3Secondary physics KLB students book 3 page 18-26Physics made easier vol. 2 pages 1-5Secondary physics (M.N Patel) pages 9-14 |  |
|  | 5 | Linear Motion | Acceleration | By the end of the lesson, the learner should be able to:Describe acceleration | Describing accelerationProblem solving | Charts on accelerationGraphsData on velocity and time | Comprehensive secondary physics students book 3 pages 2-3Comprehensive secondary physics teachers book 3 pages 1-3Secondary physics KLB students book 3 page 7-8Physics made easier vol. 2 pages 1-5Secondary physics (M.N Patel) pages 7-8  |  |
| 4 | 1-2 | Linear Motion | Measuring speed, velocity and acceleration | By the end of the lesson, the learner should be able to:Describe experiments to determine and measure speed, velocity and acceleration | Describing experiments to determine and measure speed velocity & acceleration | GraphsTicker timerTapesGraphs  | Comprehensive secondary physics students book 3 pages 2-3Comprehensive secondary physics teachers book 3 pages 1-3Secondary physics KLB students book 3 page 18-25Physics made easier vol. 2 pages 1-5Secondary physics (M.N Patel) pages 9-14 |  |
|  | 3-4 | Linear Motion | Equations of motion | By the end of the lesson, the learner should be able to:Derive and apply the equations of uniform acceleration | Stating the equations of motionDeriving the equations of motionApplying the equations of motion | GraphsWorked examples on motion | Comprehensive secondary physics students book 3 pages 7-9Comprehensive secondary physics teachers book 3 pages3-5Secondary physics KLB students book 3 page 26-29Physics made easier vol. 2 pages 6-7Secondary physics (M.N Patel) pages 25-27 |  |
|  | 5 | Linear Motion | Revision | By the end of the lesson, the learner should be able to:Solve problems involving uniform acceleration | Questions and answersExercises | Test paperMarking scheme | Comprehensive secondary physics students book 3 pages 9-10Comprehensive secondary physics teachers book 3 pages4-5Secondary physics KLB students book 3 page 37-39Physics made easier vol. 2 pages 12-14Secondary physics (M.N Patel) pages 30-36 |  |
| 5 | 1-5 | Linear Motion | Acceleration due to gravity | By the end of the lesson, the learner should be able to;Determine acceleration due to gravity by free-fall and simple pendulum | Determining acceleration by tree-fall and pendulum method | Pendulum bobStringStop watchesTicker-timer | Comprehensive secondary physics students book 3 pages 3-5Comprehensive secondary physics teachers book 3 pages1-3Secondary physics KLB students book 3 page 29-36Physics made easier vol. 2 pages 7-10Secondary physics (M.N Patel) pages 15-21 |  |
| 6 | 1-2 | Refraction Of Light | The meaning of refraction | By the end of the lesson, the learner should be able to Describe simple experiments to illustrate refraction of light | Experiments demonstrating refraction of light | BeakersWaterStick or glass rodBasinsCoinsGlass blocksPin  | Comprehensive secondary physics students book 3 pages 11-12Comprehensive secondary physics teachers book 3 pages6-9Secondary physics KLB students book 3 page 41-46Physics made easier vol. 2 pages 15-16Secondary physics (M.N Patel) pages 37-40 |  |
|  | 3-5 | Refraction Of Light | Laws of refraction | By the end of the lesson, the learner should be able to:State the laws of refraction and define refractive index | Discovering Snell’s law of refraction through experimentsDefining refractive indexStating the laws of refraction | Glass blocksPins Soft boardPlain paperGeometric set | Comprehensive secondary physics students book 3 pages 12-14Comprehensive secondary physics teachers book 3 pages6-9Secondary physics KLB students book 3 page 47-61Physics made easier vol. 2 pages 16-18Secondary physics (M.N Patel) pages 40-42 |  |
| 7 | 1-2 | Refraction Of Light | Refractive index | By the end of the lesson, the learner should be able to:Determine the refractive index of a given substance | Experiments to determine the refractive index of rates and glass by real and apparent depth method | WaterPins Plain papersCoinsBeakers | Comprehensive secondary physics students book 3 pages 14-15Comprehensive secondary physics teachers book 3 pages6-9Secondary physics KLB students book 3 page 61-68Physics made easier vol. 2 pages 17-19Secondary physics (M.N Patel) pages 42-45 |  |
|  | 3-5 | Refraction Of Light | Total material reflection and its effectCritical angle | By the end of the lesson, the learner should be able toDescribe an experiment to explain the total internal reflection and its effectsDefine critical angle | Experiments to explain the total internal reflection and its effectsDefining critical angleObservations and discussions on critical angle Total internal reflection | Glass blocksSoft boardsPinsGeometrical setSource of light | Comprehensive secondary physics students book 3 pages 16-17Comprehensive secondary physics teachers book 3 pages6-9Secondary physics KLB students book 3 page 68-76Physics made easier vol. 2 pages 19-20Secondary physics (M.N Patel) pages 46-49 |  |
| 8 | 1-3 | Refraction Of Light | Application of a total internal reflection in a prism periscope, optical fibre | By the end of the lesson, the learner should be able to:Explain the working of a prisms and optical fibres among other applications | Making a periscope Discussion on working of an optical fibre | Charts on total internal reflection and applications | Comprehensive secondary physics students book 3 pages 18-19Comprehensive secondary physics teachers book 3 pages6-9Secondary physics KLB students book 3 page 76-79Physics made easier vol. 2 pages 20-23Secondary physics (M.N Patel) pages 49-52 |  |
|  | 4-5 | Refraction Of Light | Dispersion of white light and recombination of colors of the spectrum | By the end of the lesson, the learner should be able to:Describe an experiment to illustrate the dispersion of light | Experiment on dispersion of light using glass prisms | Triangular glass prismsSource of lightScreen | Comprehensive secondary physics students book 3 pages 19-20Comprehensive secondary physics teachers book 3 pages6-9Secondary physics KLB students book 3 page 79-89Physics made easier vol. 2 pages 21-22Secondary physics (M.N Patel) pages 45-46 |  |
| 9 | 1-5 | Refraction Of Light | Problems of refractive index and critical angle | By the end of the lesson, the learner should be able to:Solve problems involving the refractive index and critical angle | Discussions and problem solving in critical angle using the formulae sin C=i/n and n=sin i/sin r | Review questionsPast examsExamples in the topic | Comprehensive secondary physics book 3 pages 21-22Comprehensive secondary physics teachers book 3 pages6-9Secondary physics KLB students book 3 page 82-86Physics made easier vol. 2 pages 24-25Secondary physics (M.N Patel) pages 53-55 |  |
| 10 | 1-5 | Newton’s Law’s Of Motion | Newton’s Laws of motion | By the end of the lesson, the learner should be able to State the Newton’s laws of motionState and explain the significance of a Newton’s laws of motionDescribe simple experiments to illustrate inertion | Discussion on Newton’s lawsExperiments to illustrate *© Education Plus Agencies*Newton’s laws of motion | Inclined planeTrolleyMarblesSpring balances | Comprehensive secondary physics students book 3 pages 23-27Comprehensive secondary physics teachers book 3 pages 13-17Secondary physics KLB students book 3 page 87-102Physics made easier vol. 2 pages 26-27Secondary physics (M.N Patel) pages 56-65 |  |
| 11 | 1-3 | Newton’s Law Of Motion | Conservation of linear momentumElastic collisionInelastic collisionRecoil velocity | By the end of the lesson, the leaner should be able to:State the law of conservation of momentumDefine elastic and inelastic collisionsDetermine recoil velocity | Discussions of the laws of conservation of linear momentumDetermining recoil velocity | MarblesTrolleysMeter rulesStop watchesPlasticine | Comprehensive secondary physics students book 3 pages 28-30Comprehensive secondary physics teachers book 3 pages 13-17Secondary physics KLB students book 3 page 103-108Physics made easier vol. 2 pages 28-30Secondary physics (M.N Patel) pages 66-72 |  |
|  | 4-5 | Newton’s Law Of Motion | Friction | By the end of the lesson, the learner should be able to:Define frictionState and explain types of frictionsDescribe and experiment to illustrate friction and state the applications of frictionState laws of friction | Defining frictionStating and explaining types of frictionsDescribing an experiment to illustrate frictionStating the applications of the frictionsStating laws of friction | Block of woodSpring balancePulleyFlat surface | Comprehensive secondary physics students book 3 pages 28-39Comprehensive secondary physics teachers book 3 pages 13-17Secondary physics KLB students book 3 page 109-115Physics made easier vol. 2 pages 30-31Secondary physics (M.N Patel) pages 73-76 |  |
| 12 | 1-5 | Newton’s Laws Of Motion | Viscosity | By the end of the lesson, the leaner should be able to:Define viscosityExplain the concept of terminal velocity | Distinguishing viscous from- non-viscous liquidsDefining viscous liquidsDefining and explaining terminal viscosity | GlycerinParaffinWaterBall bearings Stat watchesMeter ruleMeasuring cylinders | Comprehensive secondary physics students book 3 pages33Comprehensive secondary physics teachers book 3 pages 13-17Secondary physics KLB students book 3 page 115-119Physics made easier vol. 2 pages 31-33Secondary physics (M.N Patel) pages 76-78 |  |
| 13 | 1-5 | Newton’s Laws Of Motion | Revision | By the end of the lesson, the learner should be able to:Solve problems on Newton’s law of motion and law of conservation of linear momentum | Discussions and problem solving | QuizzesAssignmentReview questions | Comprehensive secondary physics students book 3 pages34-35Comprehensive secondary physics teachers book 3 pages 17-18Secondary physics KLB students book 3 page 119-120Physics made easier vol. 2 pages 34-38Secondary physics (M.N Patel) pages 78-82 |  |
| **14** |  | **END OF TERM EXAMS** |  |
| **15** |  | **PREPARATION OF REPORTS AND CLOSING** |  |

**PHYSICS SCHEMES OF WORK**

**FORM THREE**

**TERM II**

**REFERENCES:**

1. Secondary Physics KLB
2. Comprehensive Secondary Physics
3. Principles of Physics
4. Golden Tips
5. Teacher’s Book

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| **1** | **1-5** | **REPORTING AND REVISION OF LAST TERM’S EXAMS** |  |
| 2 | 1-3 | Energy, Work, Power And Machines | Energy | By the end of the lesson, the learner should be able toDefine energy Describe various forms of energy | Defining energyStating the forms of energyIdentifying and describing energy transformation | Chart on the forms of energy and transformation | Comprehensive secondary physics students book 3 pages34-35Comprehensive secondary physics teachers book 3 pages 17-18Secondary physics KLB students book 3 page 121,122-125Physics made easier vol. 2 pages 39Secondary physics (M.N Patel) pages 83-86 |  |
|  | 4-5 | Energy, Work, Power And Machines | Sources of energyRenewableNon-renewable | By the end of the lesson, the learner should be able to:Describe renewable and non-renewable sources of energy | Discussion on the sources of energyDescriptions of renewable and non-renewable sources of energy | Chart on the sources of energy | Comprehensive secondary physics students book 3 pages41Comprehensive secondary physics teachers book 3 pages 19-21Secondary physics KLB students book 3 page 121,122-125Physics made easier vol. 2 pages 39Secondary physics (M.N Patel) pages 83,85-86 |  |
| 3 | 1-3 | Energy, Work, Power And Machines | The law of conservation of energy  | By the end of the lesson, the learner should be able to:State the laws of conservation of energy Explain the applications of the laws of conservations of energy | Discussion on the law of conservation of energy | Chart on the laws of conservation of energy | Comprehensive secondary physics students book 3 pages 41-42Comprehensive secondary physics teachers book 3 pages 20-21Secondary physics KLB students book 3 page 132-134Physics made easier vol. 2 pages 39Secondary physics (M.N Patel) pages 86-88 |  |
|  | 4-5 | Energy, Work, Power And Machines | Work | By the end of the lesson, the learner should be able to:Define workExplain the concept of work and energy | Experiment on work done by moving objects through a distanceProblem solving | MassesWooden blockSpring balance | Comprehensive secondary physics students book 3 pages 42-43Comprehensive secondary physics teachers book 3 pages 18-22Secondary physics KLB students book 3 page 125-132Physics made easier vol. 2 pages 39-40Secondary physics (M.N Patel) pages 88-90 |  |
|  | 1-2 | Energy, Work, Power And Machines | Kinetic energyPotential energypower | By the end of the lesson, the learner should be able todefine powerexplain the meaning of power potential and kinetic energiesdistinguish between kinetic energy and potential energy  | Discussion and the meanings of kinetic energy and potential energyDefining powerDistinguishing between kinetic energy and potential energy | Object that can be liftedSpring balance | Comprehensive secondary physics students book 3 pages 43-45Comprehensive secondary physics teachers book 3 pages 18-22Secondary physics KLB students book 3 page 126-132,134-136Physics made easier vol. 2 pages 40-41Secondary physics (M.N Patel) pages 90-96 |  |
|  | 3-4 | Energy, Work, Power And Machines | Simple machines | By the end of the lesson, the bearer should be able to:State the mechanical advantageState the velocity ratio (V.R) of different machines | Discussions on the M.A and V.R of different machinesExperiments in illustrate M.A and V.R of machinesProblem solving | LeversPulleysInclined planesStrings Masses | Comprehensive secondary physics students book 3 pages 41-45Comprehensive secondary physics teachers book 3 pages 18-22Secondary physics KLB students book 3 page 126-132,134-136Physics made easier vol. 2 pages 40-441Secondary physics (M.N Patel) pages 96-97 |  |
|  | 5 | Energy, Work, Power And Machines | Simple machines | By the end of the lesson, the learner should be able toState and describe the efficiency of various machines | Discussion on efficiency of different machinesExperiments to illustrate efficiency of various machinesProblem solving | LeversPulleysInclined planesStringsMasses | Comprehensive secondary physics students book 3 pages 45-51Comprehensive secondary physics teachers book 3 pages 18-22Secondary physics KLB students book 3 page 137-159Physics made easier vol. 2 pages 44-50Secondary physics (M.N Patel) pages 97-111 |  |
| 4 | 1-5 | Energy, Work, Power And Machines | Revision | By the end of the lesson, the learner should be able toSolve problems involving work, energy, power and machines | Problems solvingQuestions and answersDiscussion on the problems involving work, power, energy and machines | QuizzesExercisesProject work | Comprehensive secondary physics students book 3 pages 52-53Comprehensive secondary physics teachers book 3 pages 23-24Secondary physics KLB students book 3 page 159-161Physics made easier vol. 2 pages 50-52Secondary physics (M.N Patel) pages 111-115 |  |
| 5 | 1-2 | Current Electricity Ii | Electric currentScale reading | By the end of the lesson, the learner should be able to:Define potentialDifferentiate and state its SI unitsMeasure potential difference and current in a circuit | Defining potential differenceMeasuring P.dDiscussion on p.d and currentExperiments to illustrate p.d and current | AmmeterVoltmeterBatteryConnecting wires | Comprehensive secondary physics students book 3 pages 54-55Comprehensive secondary physics teachers book 3 pages 24-28Secondary physics KLB students book 3 page 161-164Physics made easier vol. 2 pages 53Secondary physics (M.N Patel) pages 116-117 |  |
|  | 3-4 | Current Electricity | Ammeters and voltmeters | By the end of the lesson, the learner should be able to:Measure potential difference and current in a circuit using the ammeters | Scale readingConverting units of measurementsDiscussing simple electric circuits | AmmetersVoltmetersBatteryWiresRheostat  | Comprehensive secondary physics students book 3 pages 54-55Comprehensive secondary physics teachers book 3 pages 24-28Secondary physics KLB students book 3 page 164-168Physics made easier vol. 2 pages 53Secondary physics (M.N Patel) pages 118-119 |  |
|  | 5 | Current Electricity Ii | Ohm’s Law | By the end of the lesson, the learner should be able to:Derive and verify ohm’s lawState ohm’s law | Experiments verifying ohm’s lawStating ohm’s law | AmmeterVoltmeterRheostatWiresDry cells | Comprehensive secondary physics students book 3 pages 55-57Comprehensive secondary physics teachers book 3 pages 24-28Secondary physics KLB students book 3 page 168-171Physics made easier vol. 2 pages 53-54Secondary physics (M.N Patel) pages 120-124 |  |
| 6 | 1-2 | Current Electricity | Voltage-current relationships | By the end of the lesson, the learner should be able to:Define resistance and state its SI unitDetermine experientially the voltage currentRelationship for resistance in series and parallel | Defining resistanceExperiments to determine the relationship between voltage-current | Resistance wireRheostatBatteryVoltmeterAmmeterConnecting wires | Comprehensive secondary physics students book 3 pages 57-59Comprehensive secondary physics teachers book 3 pages 26-28Secondary physics KLB students book 3 page 171-177Physics made easier vol. 2 pages 53-54Secondary physics (M.N Patel) pages 122-124 |  |
|  | 3-5 | Current Electricity Ii | Measurement of resistance | By the end of the lesson, the learner should be able to:Describe experiment to measure resistance using – voltmeter methodThe Wheatstone bridge methodThe meter bridge | Experiments to measure resistance of materials | AmmetersVoltmetersRheostatsConnecting wiresResistance wireDry cellsSwitchesMeter bridgeWheatstone bridgeResisters with known resistance | Comprehensive secondary physics students book 3 pages 57-59Comprehensive secondary physics teachers book 3 pages 26-28Secondary physics KLB students book 3 page 177-180Physics made easier vol. 2 pages 54-55Secondary physics (M.N Patel) pages 122-124 |  |
| 7 | 1-3 | Current Electricity | Effective resistance for registers in series and parallel | By the end of the lesson, the learner should be able to:Derive effective resistance | Discussions on deriving the effective resistanceDeriving effective resistance of registers in parallel and series | CellsResistorsAmmetersVoltmeterswires | Comprehensive secondary physics students book 3 pages 60-66Comprehensive secondary physics teachers book 3 pages 24-28Secondary physics KLB students book 3 page 180-189Physics made easier vol. 2 pages 56-57Secondary physics (M.N Patel) pages 124-131 |  |
|  | 4-5 | Current Electricity | E.m.f and internal resistance (E=V+1r) | By the end of the lesson, the learner should be able toDetermine e.m.f Explain the internal resistance of a cell | Explanation on internal resistanceDemonstration on e.m.f and internal resistanceDiscussion on e.m.f | VoltmetersAmmeterCellsConnecting wires | Comprehensive secondary physics students book 3 pages 62-63Comprehensive secondary physics teachers book 3 pages 24-28Secondary physics KLB students book 3 page 190-195Physics made easier vol. 2 pages 56-59Secondary physics (M.N Patel) pages 124 |  |
| 8 | 1-5 | Current Electricity | Revision | By the end of the lesson, the learner should be able to:Solve numerical problems involving the ohm’s lawResistors in series and parallel | Problem solvingQuestions and answersDiscussions on the questions askedExperiments to solve questions of sound | Exercise in the students book 3Marking scheme Past paper containing questions on current electricity | Comprehensive secondary physics students book 3 pages 64-66Comprehensive secondary physics teachers book 3 pages 24-28Secondary physics KLB students book 3 page 195-197Physics made easier vol. 2 pages 60-63Secondary physics (M.N Patel) pages 131-133 |  |
| 9 | 1-2 | Waves II | Properties of waves | By the end of the lesson, the learner should be able to:State and explain the properties of waves experimentallySketch wave fronts to illustrate the reflections | Stating and explaining the properties of wavesSketching wave fronts illustrate reflection | Rope/wireVarious reflections | Comprehensive secondary physics students book 3 pages 67-69Comprehensive secondary physics teachers book 3 pages 29-32Secondary physics KLB students book 3 page 198-203Physics made easier vol. 2 pages 64-65Secondary physics (M.N Patel) pages 134-142 |  |
|  | 3-5 | Waves II | Diffraction, refraction and interference of waves | By the end of the lesson, the learner should be able to:Sketch various wave fonts to illustrate their diffraction, refraction and interference | Sketching various wave fontsExperiments to illustrate refraction, diffraction and interference | WaterBasinRippleTank | Comprehensive secondary physics students book 3 pages 70-73Comprehensive secondary physics teachers book 3 pages 29-32Secondary physics KLB students book 3 page 203-212Physics made easier vol. 2 pages 65-66Secondary physics (M.N Patel) pages 142-144 |  |
| 10 | 1-2 | Waves II | Constructive and distractive waves | By the end of the lesson, the learner should be able to:Explain constructive and destructive interference | Discussion on constructive and destructive interferenceExperiments constructive and destructive interference | Ripple tankRope/wire | Comprehensive secondary physics students book 3 pages 73-74Comprehensive secondary physics teachers book 3 pages 29-32Secondary physics KLB students book 3 page 203-212Physics made easier vol. 2 pages 65-66Secondary physics (M.N Patel) pages 144-147 |  |
|  | 3-5 | Waves II | Stationary waves | By the end of the lesson, the learner should be able to:Describe experiments to illustrate stationary waves | Demonstration and explaining of stationery waves | Wires under tension | Comprehensive secondary physics students book 3 pages 74Comprehensive secondary physics teachers book 3 pages 29-32Secondary physics KLB students book 3 page 212-215Physics made easier vol. 2 pages 66-67Secondary physics (M.N Patel) pages 147-148 |  |
| 11 | 1-5 | Waves II | Vibrating air columns | By the end of the lesson, the learner should be able to:Describe and explain closed pipe and open pipe | Describing vibrations in close and open pipes | Open and closed pipes | Comprehensive secondary physics students book 3 pages 74Comprehensive secondary physics teachers book 3 pages 29-32Secondary physics KLB students book 3 page 218-220Physics made easier vol. 2 pages 67-73Secondary physics (M.N Patel) pages 148-149 |  |
| **12** |  | **TOPICAL REVISION** |  |
| **13** |  | **END OF TERM EXAMS** |  |
| **14** |  | **PREPARATION OF REPORTS AND CLOSING** |  |

**PHYSICS SCHEMES OF WORK**

**FORM THREE**

**TERM III**

**REFERENCES:**

1. Secondary Physics KLB
2. Comprehensive Secondary Physics
3. Principles of Physics
4. Golden Tips
5. Teacher’s Book

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **L/ACTIVITIES** | **L/T AIDS** | **REFERENCE** | **REMARKS** |
| **1** | **1-5** | **REPORTING AND REVISION OF LAST TERM’S EXAMS** |  |
| 2 | 1-2 | Electrostatics Ii | Electric field patterns | By the end of the lesson, the learner should be able toSketch electric field patterns around charged bodies | Discussion on electric field patternsObserving and plotting field patterns | Charts on magnetic fields | Comprehensive secondary physics students book 3 pages 76-77Comprehensive secondary physics teachers book 3 pages 34-39Secondary physics KLB students book 3 page 222-225Physics made easier vol. 2 pages 76-77Secondary physics (M.N Patel) pages 151-152 |  |
|  | 3-5 | Electrostatics Ii | Charge distribution on conductors | By the end of the lesson, the learner should be able toDescribe charge distribution on conductors:Spherical and pear shaped conductors | Discussions on charge distribution on conductorsExperiment is demonstrated/illustrate charge distribution on conductors | Vande Graaf generatorChart showing charge distribution on different conductorsGold leaf electroscope | Comprehensive secondary physics students book 3 pages 77-78Comprehensive secondary physics teachers book 3 pages 34-39Secondary physics KLB students book 3 page 225-228Physics made easier vol. 2 pages 77-78Secondary physics (M.N Patel) pages 153-154 |  |
| 3 | 1-2 | Electrostatics Ii | Lighting arrestor | By the end of the lesson, the learner should be able to:Explain how lightning arrestor works | Discussions on the lighting arrestorExplanations on the lighting arrestor | Improvised lighting arrestorPhotographs of lightning arrestor | Comprehensive secondary physics students book 3 pages 79-80Comprehensive secondary physics teachers book 3 pages 34-39Secondary physics KLB students book 3 page 229-230Physics made easier vol. 2 pages 79Secondary physics (M.N Patel) pages 155 |  |
|  | 3-5 | Electrostatics Ii | Capacitance  | By the end of the lesson, the learner should be able to:Define capacitance and state its SI unitsDescribe the charging and discharging of a capacitorState and explain the factors that affect the capacitance of a parallel plate capacitor | Experiments on charging and discharging capacitorDiscussion on factors affecting capacitanceDefining capacitance | Complete circuitscapacitors | Comprehensive secondary physics students book 3 pages 80-82Comprehensive secondary physics teachers book 3 pages 34-39Secondary physics KLB students book 3 page 230-237Physics made easier vol. 2 pages 79-80Secondary physics (M.N Patel) pages 155-158 |  |
| 4 | 1-2 | Electrostatics Ii | Combinations of capacitors | By the end of the lesson, the learner should be able to:Derive the effective capacitance of capacitors in series and parallel | Deriving effective capacitance of capacitors in series and parallelSolving problemsDiscussion in the effective capacitance | Capacitors in series and parallel connectionsCharts showing complete circuits | Comprehensive secondary physics students book 3 pages 80-82Comprehensive secondary physics teachers book 3 pages 34-39Secondary physics KLB students book 3 page 237-241Physics made easier vol. 2 pages 81-82Secondary physics (M.N Patel) pages 155-158 |  |
|  | 3 | Electrostatics Ii | Energy stored in a charged capacitor | By the end of the lesson, the learner should be able to:Describe the energy stored in a charged capacitor | Describing the energy stored in a charged capacitor | CapacitorsDry cellsCharts on capacitors used | Comprehensive secondary physics students book 3 pages 82Comprehensive secondary physics teachers book 3 pages 34-39Secondary physics KLB students book 3 page 244Physics made easier vol. 2 pages 82Secondary physics (M.N Patel) pages 159-160 |  |
|  | 4 | Electrostatics | Application of capacitors | By the end of the lesson, the learner should be able toState and explain the applications of capacitors | Discussions on applications of capacitorsStating and explaining applications of capacitors | Charts on the use of capacitors capacitors | Comprehensive secondary physics students book 3 pages 82-84Comprehensive secondary physics teachers book 3 pages 34-39Secondary physics KLB students book 3 page 244Physics made easier vol. 2 pages 82-83Secondary physics (M.N Patel) pages 161 |  |
|  | 5 | Electrostatics Ii | Revision | By the end of the lesson, the learner should be able to solve numerical problems involving capacitors using the formulaeQ= CVC1=C1+C11/C1= 1/C1+1/C2 | Problem solving | Questions in the students Book 3 | Comprehensive secondary physics students book 3 pages 84-87Comprehensive secondary physics teachers book 3 pages 38-39Secondary physics KLB students book 3 page 244-245Physics made easier vol. 2 pages 85-88Secondary physics (M.N Patel) pages 161 |  |
| 5 | 1-3 | The Heating Effect Of Electric Current | Electric current heating effect | By the end of the lesson, the learner should be able to:Perform and describe experiments to illustrate the heating effect of electric current | Experiments to illustrate heating effect of electric current Discussions on heating effect of electric current | Complete circuit Water in a beakerMetallic rodThermometer | Comprehensive secondary physics students book 3 pages 88Comprehensive secondary physics teachers book 3 pages 39-41Secondary physics KLB students book 3 page 246-247Physics made easier vol. 2 pages 89Secondary physics (M.N Patel) pages 162-165 |  |
|  | 4-5 | The Heating Effect Of An Electric Current | Factors affecting electric current | By the end of the lesson, the learner should be able to:State and explain the factors affecting electrical energy | Discussions on the factors affecting electrical energyExperiments on electrical energyStating and explaining factors affecting the electrical energy | Complete circuitWiresRheostat Ammeterbattery | Comprehensive secondary physics students book 3 pages 88-90Comprehensive secondary physics teachers book 3 pages 39-41Secondary physics KLB students book 3 page 247-255Physics made easier vol. 2 pages 89-90Secondary physics (M.N Patel) pages 165-166 |  |
| 6 | 1-2 | The Heating Effect Of Electric Current | Heating devicesfuses | By the end of the lesson, the learner should be able to:describe the working of electric iron, bulb filament and an electric water | discussion on electric devicesobservations and experiments on heating devices | electric ironselectric bulbelectric kettleelectric heaterfuses | Comprehensive secondary physics students book 3 pages 90-91Comprehensive secondary physics teachers book 3 pages 39-41Secondary physics KLB students book 3 page 255-258Physics made easier vol. 2 pages 90-91Secondary physics (M.N Patel) pages 166-170 |  |
|  | 3-5 | The Heating Effect Of Electric Current | Revision | By the end of the lesson, the learner should be able toSolve problems involving electrical energy and electric power | Problem solvingExercises assignmentDiscussion on problems involving electrical energy and electrical power | Set questionsMarking scheme | Comprehensive secondary physics students book 3 pages 90-92Comprehensive secondary physics teachers book 3 pages 41Secondary physics KLB students book 3 page 246-258-259Physics made easier vol. 2 pages 92Secondary physics (M.N Patel) pages 171 |  |
| 7 | 1-2 | Quantity Of Heat | Heat capacitySpecific heat capacityUnits of heat capacity | By the end of the lesson the learner should be able toDefine heat capacity and specific heat capacity and derive their SI units | Experiments on heat capacity and specific heat capacityDiscussion on heat capacity and specific h eat capacityDefining heat capacity and heat specific heat capacity | Source of heatWaterLagged canThermometer | Comprehensive secondary physics students book 3 pages 93-96Comprehensive secondary physics teachers book 3 pages 42-46Secondary physics KLB students book 3 page 246-260-271Physics made easier vol. 2 pages 93-94Secondary physics (M.N Patel) pages 172-174 |  |
|  | 3-4 | Quantity Of Heat | Change of state | By the end of the lesson the learner should be able to define and explain latent heat of fusion, specific latent heat of fusionDefine and explain latent heat of vaporization, specific latent heat of vaporizationState the SI units of latent heat of fusion and latent heat of vaporization | Experiments on latent heat of fusion and latent heat of vaporization Discussion on latent heat of fusion and latent heat of vaporization  | FileWaterThermometerWeighing balanceSource of heat  | Comprehensive secondary physics students book 3 pages 96-97Comprehensive secondary physics teachers book 3 pages 42-46Secondary physics KLB students book 3 page 246-271-281Physics made easier vol. 2 pages 95-96Secondary physics (M.N Patel) pages 188-199 |  |
|  | 5 | Quantity Of Heat | Boiling and melting | By the end of the lesson, the learner should be able to:Distinguish between boiling and meltingState the factors affecting melting points and boiling points of a substanceDescribe the working of a pressure cooker and a refrigerator  | Distinguishing between boiling and melting pointsStating factors affecting boiling and melting pointsExperiments to illustrate boiling and melting point | Pressure cookerRefrigeratorCharts on melting and boiling pointsIceHeatSufuriawater | Comprehensive secondary physics students book 3 pages 97-101Comprehensive secondary physics teachers book 3 pages 42-46Secondary physics KLB students book 3 page 246-282-288Physics made easier vol. 2 pages 96-98Secondary physics (M.N Patel) pages 186-187 |  |
| 8 | 1-5 | Quantity Of Heat | Revision | By the end of the lesson, the learner should be able to:Solve problems involving quantity of heat | Problem solving | QuizzesPast examsExercisesCalculatorsMathematical tables | Comprehensive secondary physics students book 3 pages 101-102Comprehensive secondary physics teachers book 3 pages 42-46Secondary physics KLB students book 3 page 288-289Physics made easier vol. 2 pages 100-104Secondary physics (M.N Patel) pages 183-185, 200-202 |  |
| 9 | 1-2 | The Gas Laws | Pressure law | By the end of the lesson, the learner should be able to:State and verify the gas laws for an ideal gas experimentally | Experiments to verify pressure lawDemonstrations on pressure lawDiscussion on pressure law | WaterThermometerMeasuring cylinderSyringeNarrow glass tube | Comprehensive secondary physics students book 3 pages 103-104Comprehensive secondary physics teachers book 3 pages 47-50Secondary physics KLB students book 3 page 299-302Physics made easier vol. 2 pages 106Secondary physics (M.N Patel) pages 203-207 |  |
|  | 3-4 | The Gas Laws | Charles’s law | By the end of the lesson, the learner should be able to:State and verify Charles’s law experimentally | Experiments to verify Charles’s lawDiscussion on Charles’s law | WaterThermometer Measuring cylinderSyringeNarrow glass tube | Comprehensive secondary physics students book 3 pages 105-106Comprehensive secondary physics teachers book 3 pages 47-50Secondary physics KLB students book 3 page 295-298Physics made easier vol. 2 pages 107Secondary physics (M.N Patel) pages 203 |  |
|  | 5 | The Gas Laws | Boyle’s law | By the end of the lesson, the learner should be able to:State and verify Boyle’s law experimentally | Experiments verifying and explain Boyle’s lawDiscussion on Boyle’s law | WaterThermometerSyringeMeasuring cylinder Narrow glass tube | Comprehensive secondary physics students book 3 pages 106-107Comprehensive secondary physics teachers book 3 pages 47-50Secondary physics KLB students book 3 page 290-294Physics made easier vol. 2 pages 107Secondary physics (M.N Patel) pages 203 |  |
| 10 | 1-2 | The Gas Law’s | The kinetic theory of gases | By the end of the lesson, the learner should be able to:Explain law absolute zero temperature may be obtained from pressure and temp. graphs | Discussions on the absolute zero temperature from pressure using kinetic theory of gases | Graph paperClinical thermometerWorking out sums | Comprehensive secondary physics students book 3 pages 108-110Comprehensive secondary physics teachers book 3 pages 47-50Secondary physics KLB students book 3 page 303Physics made easier vol. 2 pages 107Secondary physics (M.N Patel) pages 207-209 |  |
|  | 3-4 | The Gas Laws | The kinetic theory of gases | By the end of the lesson, the learner should be able toExplain the gas laws using the kinetic theory of gases | Discussion on gas laws using kinetic theory of gasesWorking out sums | Graph papersClinical thermometers | Comprehensive secondary physics students book 3 pages 68-110Comprehensive secondary physics teachers book 3 pages 49Secondary physics KLB students book 3 page 303Physics made easier vol. 2 pages 107Secondary physics (M.N Patel) pages 209-210 |  |
|  | 5 | The Gas Laws | The kinetic theory of gases | By the end of the lesson, the learner should be able to:Convert Celsius scales to Kelvin scale of temperature and state basic assumptions of kinetic theory of gases | Discussion on basic assumptions of kinetic theory of gasesConversion of Celsius to Kelvin scales | Graph paperClinical thermometer | Comprehensive secondary physics students book 3 pages 110-111Comprehensive secondary physics teachers book 3 pages 50-51Secondary physics KLB students book 3 page 107Physics made easier vol. 2 pages 107Secondary physics (M.N Patel) pages 214 |  |
| 11 | 1-5 | The Gas Laws | Revision | By the end of the lesson, the learner should be able to:Solve numerical problems involving gas laws | Solving problems involving gas lawsDiscussion on the problems involving gas laws | QuizzesPast examinationExercise in the Book 3 | Comprehensive secondary physics students book 3 pages 110-111Comprehensive secondary physics teachers book 3 pages 50-51Secondary physics KLB students book 3 page 303-305Physics made easier vol. 2 pages 109-110Secondary physics (M.N Patel) pages 215-217 |  |
| **12** |  | **END OF YEAR EXAMS** |  |