Pakistan Urdu School- Kingdom of Bahrain

Curriculum Implementation Plan for PHYSICS Grade XII

No.	Month/Week	Starting Date	Topics from Textbook or Others (Specify Unit Titles and Numbers)	National Curriculum References (Competency, Standards, Themes)	Total Period
			CHAPTER 12-ELECTROSTATISTICS (1st Chapter of Grade-XII		
1	**3rd & 4th WEEK of MAY**	**20/05/2018**	Coulombs law	Students will be able to display a sense of curiosity and wonder about the natural world and demonstrate an increasing awareness that this has lead to new developments in science and technology	**20**
2			Field of force		
3			Electric field lines		
4			Application of electrostatistics		
5			Electric flux		
6			Electric flux through a surface enclosing a charge		
7			Gauss law		
8			Applications of gauss law		
9	**1st WEEK of JUNE & 5th WEEK of AUGUST**		Electric potential		
10			Electric field as a potential gradient		
11			Electric potential at a point due to a point charge		
12			Electron volt		
13			Electric and gravitational forces		
14			Charge on an electron by Millikans method		
15			Capacitor		
16			Capacitance of a parallel plate capacitor		
17			Electric polarization of dielectrics		
18			Energy stored in a capacitor		
19			Charging and discharging capacitor		
			CHAPTER 13 - CURRENT ELECTRICITY		
1	**1st, 2nd & 3rd WEEK of SEPTEMBER**	**2/9/2018**	Electric current	Students will be able to describe and explain common properties, forms and interactions of energy and matter, their transformations and applications in physical systems	**15**
2			Sources of current		
3			Effects of current		
4			Ohms law		
5			Resistivity and its dependence upon temperature		
6			Color code for carbon resistances		
7			Rheostat		
			Thermistors		

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8			Electrical power and power dissipation in resistors		
9			Electromotive force and potential difference		
10			Kirchhoffs rule		
11			Wheatstone Bridge		
12			Potentiometer		
			CHAPTER 14 - ELECTROMAGNETISM		
1	**4th WEEK of SEPTEMBER & 1st & 2nd WEEK of OCTOBER**	**23/09/2018**	Magnetic field due to current in a long straight wire	Students will be able to describe and explain common properties, forms and interactions of energy and matter, their transformations and applications in physical systems	**15**
2			Force on a current carrying conductor in a uniform magnetic field		
3			Magnetic flux and flux density		
4			Amperes law and determination of flux density B		
5			Motion of charged particle in an electric and magnetic field		
6			Force on a moving charge in a magnetic field		
7			Determination of e/m of an electron		
8			Cathode ray oscilloscope		
9			Torque on a current carrying coil		
10			Galvanometer		
11			Ammeter and voltmeter, Ohmmeter		
12			AVO-meter or Multimeter		
			CHAPTER 15 - ELECTROMAGNETIC INDUCTION		
1	**3rd, 4th & 5th WEEK of OCTOBER**	**14/10/2018**	Induced EMF and induced current	Students will be able to describe and explain common properties, forms and interactions of energy and matter, their transformations and applications in physical systems	**18**
2			Motional EMF		
3			Faradays law and induced emf		
4			Lenzs law and direction of induced emf		
5			Mutual induction		
6			Self induction		
7			Energy stored in an inductor		
8			Alternating current generator		
9			D.C generator		
10			Back motor effect in generators		
11			Dc motor		
12			Back emf in motor		
13			Transformer		

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			CHAPTER 16 - ALTERNATING CURRENT		
1	**1st, 2nd & 3rd WEEK of NOVEMBER**	**4/11/2018**	Alternating current	Students will be able to demonstrate an understanding of the impact of science and technology on society and use science and technology to identify problems and creatively address them in their personal, social and professional lives	**18**
2			A.C circuits		
3			A.C through a resistor		
4			A.C through a capacitor		
5			A.C through an inductor		
6			Impedance		
7			R-C AND R-L series circuits		
8			Power in A.C circuits		
9			Series resonance circuits		
10			parallel resonance circuits		
11			Three phase a.c supply		
12			Principle of metal detectors		
13			Choke		
14			Electromagnetic waves		
15			Principle of generation of transmission and reception of		
16			Modulation		
DECEMBER EXAMINATION-2018 (27th NOVEMBER to 11th DECEMBER)					
			CHAPTER 17 - PHYSICS OF SOLIDS		
1	**1st WEEK of JANUARY**	**30/12/2018**	Classification of solids	Students will be able to display a sense of curiosity and wonder about the natural world and demonstrate an increasing wareness that this has lead to new developments in science and technology	**8**
2			Mechanical properties of solids		
3			Electrical properties of solids		
4			Superconductors		
5			Magnetic properties of solids		
			CHAPTER 18 - ELECTRONICS		**10**
1	**2nd & 3rd WEEK of JANUARY**	**8/1/2019**	Brief view of p-n junction and its characteristics	Student will be able to understand the processes of scientific investigation. They will be able to identify a problem, design and conduct experiments and communicate their findings using a variety of conventional and technological tools	
2			Rectification		
3			Specially designed p-n junctions		
4			Transistors		
5			transistor as an amplifier		
6			transistor as a switch		
7			operational amplifier		
8			op- amp as inverting amplifier		

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9			op-amp as non-inverting amplifier		
10			op-amp as a comparator		
11			Comparator As A Night Switch		
12			Digital Systems		
13			Fundamental Logic Gates		
14			Other Logic Gates		
15			Applications of Gates in Control Systems		
			CHAPTER 19 - DAWN OF MODERN PHYSICS		
1	**4th & 5th WEEK of JANUARY and 1st WEEK of FEBRUARY**	**20/01/2019**	Relative Motion	Students will be able to display a sense of curiosity and wonder about the natural world and demonstrate an increasing awareness that this has lead to new developments in science and technology	**20**
2			Frames Of Reference		
3			Special Theory Of Relativity		
4			Black Body Radiation		
5			Interaction Of Electromagnetic Radiation With Matter		
6			Annihilation Of Matter		
7			Wave Nature Of Particles		
8			Electron Microscope		
9			Uncertainty Principle		
			CHAPTER 20 - ATOMIC SPECTRA		
1	**2nd WEEK of FEBRUARY**	**10/2/2019**	Atomic Spectra	Students will be able to demonstrate an understanding of the impact of science and technology on society and use science and technology to identify problems and creatively address them in their personal, social and professional lives	**6**
2			Bohr's Model Of The Hydrogen Atom		
3			Inner Shell Transitions And Characteristic Of X-RAYS		
4			Uncertainty Within The Atom		
5			Laser		
			CHAPTER 21 - NUCLEAR PHYSICS		**12**
1	**3rd & 4th WEEK of FEBRUARY**	**17/02/2019**	Atomic Nucleus	Students will be able to describe and explain common properties, forms and interactions of energy and matter, their transformations and applications in physical systems	
2			Isotopes		
3			Mass Defect And Binding Energy		
4			Radioactivity		
5			Half Life		
6			Interaction Of Radiation With Matter		
7			Radiation Detectors		
8			Nuclear Reactions		

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9			Nuclear Fission		
10			Fusion Reaction		
11			Radiation Exposure		
12			Biological Effects Of Radiation		
13			Biological And Medical Uses Of Radiation		
14			Basic Forces Of Nature		
15			Building Blocks Of Matter		
REVISION - 1st WEEK of MARCH					
PRELIMINARY EXAMINATION-2019					