JAIPURIAR SCHOOL

SENIOR SECONDARY CBSE SCHOOL, SANPADA

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CLASS IX

SUBJECT - PHYSICS

YEARLY/ MONTHLY / WEEKLY ACADEMIC CALENDER 2023-24

MONTHS	NO. OF WORKI	CHAPTERS	WEEKS
APRIL	19	CHP-1 ELECTRIC CHARGE AND FIELDS CH- 2 ELECTROSTATIC POTENTIAL AND CAPACITANCE	WEEK 1 : INTRODUCTION, ELECTRIC CHARGE AND ELECTROSTATIC CONCEPT BASIC PROPERTIES OF ELECTRIC CHARGE, COULOMB'S LAW, VECTOR FORM, NUMERICALS
			WEEK 2 FORCES BETWEEN MULTIPLE CHARGES, ELECTRIC FIELD, ELECTRIC FIELD LINES, ELECTRIC FIUX, CONTINUOUS DISTRIBUTION OF CHARGES, GAUSS'S LAW, NUMERICALS
			WEEK 3 APPLICATION OF GAUSS'S LAW, ELECTRIC DIPOLE, DIPOLE IN UNIFORM EXTERNAL FIELD, NUMERICALS
			WEEK 4: CHAPTER 2 INTRODUCTION, ELECTROSTATIC POTENETIAL, POTENTIAL DUE TO A POINT CHARGE, POTENTIAL DUE TO A SYSTEM OF CHARGES
JUN	20	CH-2 ELECTROSTATIC POTENTIAL AND CAPACITANCE CH-3 CURRENT ELECTRICITY	WEEK 1 - VACATION
			WEEK 2 - POTENTIAL DUE TO AN ELECTRIC DIPOLE, EQUIPOTENETIAL SURFACES, POTENTIAL ENERGY OF SYSTEM OF CHARGES, POTENETIAL ENERGY IN AN EXTERNAL FIELD, ELECTROSTATICS OF A CONDUCTORS, DIELECTRICS AND POLARISATION, NUMERICALS
			WEEK 3 - CAPACITORS AND CAPACITANCE, THE PARALLEL PLATE CAPACITOR, EFFECT OF DIELECTRICS ON CAPACITANCE AND COMBINATION OF CAPACITORS, ENERGY STORED IN CAPACITORS, NUMERICALS
			WEEK 4- CH-3 CURRENT ELECTRICITY: INTRODUCTION, ELECTRIC CURRENT, FLOW OF ELECTRIC CHARGES IN A METALLIC CONDUCTOR, DRIFT VELOCITY, MOBILITY AND THEIR RELATION WITH ELECTRIC CURRENT; OHM'S LAW, V-I CHARACTERISTICS (LINEAR AND NON-LINEAR),
JULY	23	CH-3 CURRENT ELECTRICITY	WEEK 1 - ELECTRICAL ENERGY AND POWER, ELECTRICAL RESISTIVITY AND CONDUCTIVITY, TEMPERATURE DEPENDENCE OF RESISTANCE, INTERNAL RESISTANCE OF A CELL, POTENTIAL DIFFERENCE AND EMF OF A CELL,
			WEEK 2 - COMBINATION OF CELLS IN SERIES AND IN PARALLEL, KIRCHHOFF'S RULES, WHEATSTONE BRIDGE, NUMERICALS CH 4 - INTRODUCTION CONCEPT OF MAGNETIC FIELD, OERSTED'S EXPERIMENT,
		CH - 4 MOVING CHARGES AND MAGNETISM	WEEK 3 - BIOT - SAVART LAW AND ITS APPLICATION TO CURRENT CARRYING CIRCULAR LOOP, AMPERE'S LAW AND ITS APPLICATIONS TO INFINITELY LONG STRAIGHT WIRE, STRAIGHT SOLENOID, FORCE ON A MOVING CHARGE IN UNIFORM MAGNETIC AND ELECTRIC FIELDS,
			WEEK 4 - FORCE ON A CURRENT-CARRYING CONDUCTOR IN A UNIFORM MAGNETIC FIELD, FORCE BETWEEN TWO PARALLEL CURRENT-CARRYING CONDUCTORS-DEFINITION OF AMPERE, TORQUE EXPERIENCED BY A CURRENT LOOP IN UNIFORM MAGNETIC FIELD;
			WEEK 1-CURRENT LOOP AS A MAGNETIC DIPOLE AND ITS MAGNETIC DIPOLE MOMENT, MOVING COIL GALVANOMETER- ITS CURRENT SENSITIVITY AND CONVERSION TO AMMETER AND VOLTMETER, NUMERICALS

AUG	22	CH - 4 MOVING CHARGES AND MAGNETISM CH–5: MAGNETISM AND MATTER CH - 6: ELECTROMAGNETIC INDUCTION	WEEK 2- CH- 5: INTRODUCTION, BAR MAGNET, BAR MAGNET AS AN EQUIVALENT SOLENOID, MAGNETIC FIELD INTENSITY DUE TO A MAGNETIC DIPOLE (BAR MAGNET) ALONG ITS AXIS AND PERPENDICULAR TO ITS AXIS
			WEEK 3- TORQUE ON A MAGNETIC DIPOLE (BAR MAGNET) IN A UNIFORM MAGNETIC FIELD, MAGNETIC FIELD LINES, MAGNETIC PROPERTIES OF MATERIALS- PARA-, DIA- AND FERRO - MAGNETIC SUBSTANCES WITH EXAMPLES, MAGNETIZATION OF MATERIALS,
			WEEK 4 - EFFECT OF TEMPERATURE ON MAGNETIC PROPERTIES, NUMERICALS CH- 6 :INTRODUCTION TO EMI,FARADAY'S LAWS, INDUCED EMF AND CURRENT, LENZ'S LAW, SELF AND MUTUAL INDUCTION.
SEP	18	CH - 7: ALTERNATING CURRENT	WEEK 1- : INTRODUCTION ALTERNATING CURRENT, PEAK AND RMS VALUE OF ALTERNATING CURRENT/VOLTAGE, REACTANCE AND IMPEDANCE, LCR SERIES CIRCUIT (PHASORS ONLY), NUMERICALS
			WEEK 2- REVISION
		CH 8 : ELECTROMAGNETIC WAVES	WATTLESS CURRENT, AC GENERATOR, TRANSFORMER, NUMERICALS
			WEEK 4- BASIC IDEA OF DISPLACEMENT CURRENT, ELECTROMAGNETIC WAVES, THEIR CHARACTERISTICS, THEIR TRANSVERSE NATURE, ELECTROMAGNETIC SPECTRUM (RADIO WAVES, MICROWAVES, INFRARED, VISIBLE, ULTRAVIOLET, X-RAYS, GAMMA RAYS) INCLUDING ELEMENTARY FACTS ABOUT THEIR USES.
OCT	22	CH–9: RAY OPTICS AND OPTICAL INSTRUMENTS CH-10: WAVE OPTICS	WEEK 1- INRODUCTION REFLECTION OF LIGHT, SPHERICAL MIRRORS, MIRROR FORMULA, REFRACTION OF LIGHT, TOTAL INTERNAL REFLECTION AND OPTICAL FIBERS, REFRACTION AT SPHERICAL SURFACES, NUMERICALS
			WEEK 2 - LENSES, THIN LENS FORMULA, LENS MAKER'S FORMULA, MAGNIFICATION, POWER OF A LENS, COMBINATION OF THIN LENSES IN CONTACT, REFRACTION OF LIGHT, THROUGH A PRISM. NUMERICALS
			WEEK 3- MICROSCOPES AND ASTRONOMICAL TELESCOPES (REFLECTING AND REFRACTING) AND THEIR MAGNIFYING POWERS. CH- 10: WAVE OPTICS INTRODUCTION, WAVE FRONT AND HUYGEN'S PRINCIPLE, REFLECTION AND REFRACTION OF PLANE WAVE AT A PLANE SURFACE USING WAVE FRONTS. PROOF OF LAWS OF REFLECTION AND REFRACTION USING HUYGEN'S
			WEEK 4- INTERFERENCE, YOUNG'S DOUBLE SLIT EXPERIMENT AND EXPRESSION FOR FRINGE WIDTH, COHERENT SOURCES AND SUSTAINED INTERFERENCE OF LIGHT, DIFFRACTION DUE TO A SINGLE SLIT, WIDTH OF CENTRAL MAXIMA NUMERICALS.
NOV	16	CH: 11 -DUAL NATURE OF RADIATION AND MATTER CH - 12 ATOM CH-13 NUCLEI	WEEK 1- DUAL NATURE OF RADIATION, PHOTOELECTRIC EFFECT, HERTZ AND LENARD'S OBSERVATIONS, EINSTEIN'S PHOTOELECTRIC EQUATION-PARTICLE NATURE OF LIGHT, EXPERIMENTAL STUDY OF PHOTOELECTRIC EFFECT, MATTER WAVES-WAVE NATURE OF PARTICLES, DE-BROGLIE RELATION, NUMERICALS
			WEEK 2 -ALPHA-PARTICLE SCATTERING EXPERIMENT; RUTHERFORD'S MODEL OF ATOM; BOHR MODEL OF HYDROGEN ATOM, EXPRESSION FOR RADIUS OF NTH POSSIBLE ORBIT, VELOCITY AND ENERGY OF ELECTRON IN NTH ORBIT, HYDROGEN LINE SPECTRA, NUMERICALS
			WEEK 3 DIWALI VACATION

			WEEK 4- COMPOSITION AND SIZE OF NUCLEUS, NUCLEAR FORCE MASS-ENERGY RELATION, MASS DEFECT, BINDING ENERGY PER NUCLEON AND ITS VARIATION WITH MASS NUMBER, NUCLEAR FISSION, NUCLEAR FUSION, NUMERICALS.
DEC	18	CH- 14 SEMICONDUCTOR DEVICES	WEEK 1 - MATERIALS, DEVICES AND SIMPLE CIRCUITS ENERGY BANDS IN CONDUCTORS, SEMICONDUCTORS AND INSULATORS, INTRINSIC AND EXTRINSIC SEMICONDUCTORS- P AND N TYPE, P-N JUNCTION SEMICONDUCTOR DIODE - I-V CHARACTERISTICS IN FORWARD AND REVERSE BIAS, APPLICATION OF JUNCTION DIODE -DIODE AS A RECTIFIER
			WEEK 2-4 REVISION PREBOARD
JAN	22	REVISION	WEEK 1-4 REVISION, BOARD PRACTICALS
FEB	22	REVISION	WEEK 1-4 REVISION, EXAMS
MAR		EXAM	EXAMS