# <u>HIGHER SECONDARY SECOND YEAR</u> <u>PHYSICS IMPORTANT TWO MARKS AND THREE MARKS</u> (BASED ON REDUCED SYLLABUS)

S.NO	LAWS OF PHYSICS	LESSON	
1	COLU OMBIGLIANI	NO	NUMBER
1	COULOMB'S LAW	1	4
2	GAUSS LAW	1	40
3	OHM'S LAW	2	104
4	KRICHOFF'S CURRENT RULE AND VOLTAGE	2	105
	RULE		
5	COULOMB'S INVERSE SQUARE LAW	3	135
6	BIOT – SAVART LAW	3	154
7	AMPERE CIRCUITAL LAW	3	162
8	FLEMING'S LEFT HAND AND RIGHT HAND RULE	3 and 4	177
9	AMPERE'S MAXWELL LAW	5	204
10	LAW OF REFLECTION AND LAW OF	6	2 and 14
	REFRACTION(SNELL LAW)		
11	REYLEIGH SCATTERING LAW	6	44
12	HUYGENS PRINCIPLE	7	55
13	BREWSTER LAW	7	85
14	MAUL'S LAW	7	81
15	LAWS OF PHOTOELECTRIC EFFECT	8	116
16	ALPHA , BETA, GAMMA DECAY	9	169,171,173
17	LAW OF RADIACTIVITY / RADIOACTIVE OF	9	174
	DECAY LAW		
18	DEMORGAN'S THEOREM	10	231
18			_

## PROPERTIES, APPLICATION AND CONDITIONS OF PHYSICS

1	APPLICATION OF CAPACITOR	1	57
2	APPLICATION OF SEEBACK EFFECT	2	114
3	PROPERTIES OF MAGNETIC FIELD LINES	3	133
4	MENTION THE WAYS OF PRODUCING INDUCED EMF	4	219
5	ADVANTAGES AND DISADVANTAGES OF AC OVER DC	4	251
6	PROPERTIES OF ELECTROMAGNETIC WAVES	5	273
7	PROPERTIES AND APPLICATION OF INFRA RED RAYS	5	276
8	PROPERTIES AND APPLICATION OF ULTRA VIOLET AND	5	276 and
	MICROWAVE RAYS		277
9	CHARACTERISTICS OF THE IMAGE FORMED BY PLANE	6	4
	MIRROR		
10	WRITE THE CONDITION FOR TOTAL INTERNAL	6	19
	REFLECTION		
11	CONDITION FOR OBTAINING CLEAR AND BROAD	7	65
	INTERFERENCE FRINGES		
12	APPLICATION OF POLAROIDS	7	84
13	APPLICATION OF PHOTO ELECTRIC CELL	8	122
14	PROPERTIES OF CATHODE RAYS	9	143
15	DEFECTS OF RUTHERFORD AND BOHR ATOM MODEL	9	150 and
			163
16	APPLICATION OF ZENER DIODE	10	211
17	APPLICATION AND LIMITATIONS OF AMPLITUDE	10	234
	MODULATION		
18	APPLICATION AND LIMITATIONS OF FREQUENCY	10	235
	MODULATION		

### **DIFFERENCE BETWEEN QUESTIONS**

1	COULOMB'S FORCE AND GRAVITATIONAL FORCE	1	5
2	DRIFT VELOCITY AND MOBILITY	1	84,84
3	ELECTRIC POWER AND ELECTRIC ENERGY	2	97,98
4	STEP UP AND STEP DOWN TRANSFORMER	4	230
5	POLARISED AND UN POLARISED LIGHT	7	80
6	INTERFERENCE AND DIFFRACTION	7	74
7	N TYPE AND P TYPE SEMICONDUCTOR	9	200,201
8	INTRINSIC AND EXTRINSIC SEMICONDUCTOR	9	198,200
9	ZENER AND AVALANCHE BREAKDOWN	10	209,210
10	NANOSCIENCE AND NANOTECHNOLOGY	11	255

## **REASON TYPE OF QUESTIONS FOR PHYSICS**

			•
1	ELECTRIC CURRENT IS A SCALAR .WHY	2	86
2	IS AN AMMETER CONNECTED IN SERIES OR PARALLEL IN	3	183
	A CIRCUIT? WHY		
3	WHY IS THE PATH OF A CHARGED PARTICLE NOT A	3	171
	CIRCLE WHEN ITS VELOCITY IS NOT PERPENDICULAR TO		
	THE MAGNETIC FIELD?		
4	WHAT FOR AN INDUCTOR USED? GIVE SOME EXAMPLE.	4	211
5	WHY ARE ELECTROMAGNETIC WAVES NOT MECHANICAL	5	273
6	WHY DO WE STARS TWINKLE	6	18
7	HOW ARE RAINBOWS FORMED	6	42
8	HOW DOES SKY APPEARS BLUE	6	44
9	WHY DO CLOUDS APPEARS WHITE	6	44
10	WHAT IS THE REASON FOR REDDISH APPEARENCE OF SKY	6	44
	DURING SUNSET AND SUNRISE		
11	WHO DO METALS HAVE A LARGE NUMBER OF FREE	8	109
	ELECTRONS		
12	WHY WE DO NOT SEE THE WAVE PROPERTIES OF A BASE	8	
	BALL		
13	A PROTON AND AN ELECTRON HAVE SAME KINETIC	8	
	ENERGY. WHICH ONE HAS GREATER DE BROGLIE WAVE		
	LENGTH JUSTIFY(EXAMPLE 8.8)		
14	AN ELECTRON AND ALPHA PARTICLE HAVE SAME	8	
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	WAVELENGTHS ASSOCIATED WITH THEM RELATED?		
15	IN ALPHA DECAY, WHY THE UNSTABLE NUCLEUS EMITS	9	170
	He NUCLEUS? WHY IT DOES NOT EMIT FOUR SEPARATE		
	NUCLEONS?		
16	WHY IS TEMPERATURE COEFFICIENT OF RESISTANCE	10	198
	NEGATIVE FOR SEMICONDUCTOR?		

	STATEMENT QUESTION FOR PHYSICS		
1	QUANTIZATION OF CHARGES	1	4
2	ELECTRIC DIPOLE AND DIPOLE MOMENT	1	20 & 21
3	CAPACITANCE AND UNIT	1	54
4	CORONA DISCHARGE (OR) ACTION AT A POINT	1	64
5	ELECTRIC FLUX AND UNIT	1	36
6	CURRENT DENSITY AND UNIT	2	85
7	ELECTRICAL RESISTIVITY	2	88
8	SUPER CONDUCTORS AND CRITICAL	2	96
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9	STATEMENT OVESTION FOR PHYSICS  QUANTIZATION OF CHARGES  ELECTRIC DIPOLE AND DIPOLE MOMENT  CAPACITANCE AND UNIT  CORONA DISCHARGE (OR) ACTION AT A POINT  ELECTRIC FLUX AND UNIT  CURRENT DENSITY AND UNIT  ELECTRICAL RESISTIVITY  SUPER CONDUCTORS AND CRITICAL  TEMPERATURE  SEEBECK EFFECT, PELDIER EFFECT, THOMSON  EFFECT  LORENTZ FORCE OF MAGNETISM  GALVANOMETER TO AMMETER, VOLTMETER  MAGNETIC DIPOLE MOMENT  SELF INDUCTANCE, MUTUAL INDUCTANCE  MEAN VALUE OF AC & RMS VALUE OF AC &Q -  FACTOR& POWER FACTOR  DISPLACEMENT CURRENT  FRAUNHOFER LINES  PRINCIPLE OF REVERSIBILITY  RELATIVE REFRACTIVE INDEX  REYLEIGH CONDITION  COHERENT SOURCES  BANDWIDTH OF INTERFERENCE  PLANE POLARISED, UN POLARIZED, AND  PARTIALLY POLARISED  WORK FUNCTION OF A METAL  PHOTO ELECTRIC CELLS AND TYPES  PHOTOELECTRIC EFFECT  STOPPING POTENTIAL  SURFACE BARRIER  BREMSSTRALUNG  IONISATION ENERGY, IONIZATION POTENTIAL  EXCITATION ENERGY AND EXCITATION POTENTIAL  BINDING ENERGY OF NUCLEUS  WHAT IS MEANT BY ACTIVITY (OR) DECAY RATE  RECTIFICATION  CIRCUIT DIAGRAM (I) CB MODE (2) CE MODE (3) CC  MODE  FORBIDDEN ENERGY GAP, GIVE THE EXAMPLE OF  NANO MATERIAL	2	114&115
10	LORENTZ FORCE OF MAGNETISM	3	168
11	GALVANOMETER TO AMMETER, VOLTMETER	3	183 &185
12	MAGNETIC DIPOLE MOMENT	3	130
13	SELF INDUCTANCE, MUTUAL INDUCTANCE	4	212 & 215
14	MEAN VALUE OF AC & RMS VALUE OF AC &O –	4	235&234&24
	FACTOR& POWER FACTOR		250
15	DISPLACEMENT CURRENT	5	270
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18	RELATIVE REFRACTIVE INDEX	6	16
19	REYLEIGH CONDITION	6	44
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21	BANDWIDTH OF INTERFERENCE	7	65
22	PLANE POLARISED, UN POLARIZED, AND	7	81
	PARTIALLY POLARISED		
23	WORK FUNCTION OF A METAL	8	109
24	PHOTO ELECTRIC CELLS AND TYPES	8	121
25	PHOTOELECTRIC EFFECT	8	113
26	STOPPING POTENTIAL	8	115
27	SURFACE BARRIER	8	109
28	RREMSTRALLING	8	131
29	IONISATION ENERGY IONIZATION POTENTIAL	9	158
30	EXCITATION ENERGY AND EXCITATION POTENTIAL	9	158
31	DEFINE IMPACT PARAMETER DISTANCE OF CLOSET	9	150
31	APPROACH		150
32	ATOMIC MASS UNIT	9	164
33	MASS DEFECT	9	166
34	BINDING ENERGY OF NUCLEUS	9	166
35	ONE CURIE	9	175
36	HALF LIFE AND MEAN LIFE OF NUCLEUS	9	175&176
37	WHAT IS MEANT BY ACTIVITY (OR) DECAY RATE	9	174
38	RECTIFICATION	10	207
39	CIRCUIT DIAGRAM (1) CR MODE (2) CF MODE (3) CC	10	216&217
3)	MODE	10	2100217
40	FORBIDDEN ENERGY GAP, GIVE THE EXAMPLE OF	10	197&256
	NANO MATERIAL	&11	

#### **EQUATIONS OF PHYSICS**

1	WRITE DOWN THE VECTOR FORM OF COULOMB'S LAW AND MENTION WHAT EACH TERM REPRESENTS	1	4
2	MICROSCOPIC AND MACROSCOPIC OHM'S LAW	2	85&87
3	DERIVE THE EXPRESSION FOR POWER P=VI IN ELECTRIC CIRCUIT	2	97
4	WRITE DOWN THE VARIOUS FORM OF EXPRESSION FOR POWER IN ELECTRICAL CIRCUIT	2	98
5	INTEGRAL FORM OF MODIFIED AMPERE CIRCUITAL LAW	5	270
6	EQUATION OF CRITICAL ANGLE	6	19
7	LENS MAKERS FORMULA TO LENS EQUATION	6	31
8	LATERAL MAGNIFICATION OF THIN FILMS	6	31
9	RELATION B/W PATH DIFFERENCE AND PHASE DIFFERENCE	7	60
10	FRESNAL DISTANCE AND EQUATION	7	73
11	WRITE THE RELATIONSHIP OF DE BROGLIE WAVELENGTH $\lambda$ ASSOCIATED WITH A PARTICLE OF MASS $m$ IN TERMS OF ITS KINETIC ENERGY $K$	8	125
12	WRITE THE EXPRESSION FOR THE DE BROGLIE WAVELENGTH ASSOCIATED WITH A CHARGED PARTICE OF CHARGE q MASS m, WHEN IT IS ACCELERATED	8	124
	THROUGH A POTENTIAL V.		54
13	CALCULATE THE EQUAL TO THE ENERGY OF ONE ATOMIC MASS UNIT	9	167

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