ZIAUDDIN UNIVERSITY
EXAMINATION BOARD

EXAMINATION SYLLABUS 2020-2021

Grades XII **SUBJECT: PHYSICS**

This exam syllabus is produced to facilitate teachers, students and the test setters to teach, learn and assess subject specific learning. This syllabus is condensed to align the course content with the teaching learning time during. COVID 19.

DETAILED SYLLABUS

TOPICS / THEMES	SUB TOPIC	Page no:	COGNITIVE LEVELS		
			K	U	A
HEAT	THERMAL EXPANSION	4	✓	✓	
	LINEAR AND VOLUMETRIC THERMAL EXPANSION	4 to 7		✓	
	BOYLES LAW	8, 9	✓		
	CHARLES LAW	9	✓	✓	
	GENERAL GAS EQUATION	10 to 12		✓	
	SPECIFIC HEAT CAPACITY	17, 18	✓	✓	✓
	MOLAR SPECIFIC HEAT	20, 21	✓		✓
	FIRST LAW OF THERMODYNAMICS	23	✓	✓	
	APPLICATION OF FIRST LAW OF THERMODYNAMICS	25 to 28	✓	✓	
	SECOND LAW OF THERMODYNAMICS	30 to 32	✓		✓
	CARNOTT ENGINE	32 to 35	✓		✓
ELECTROSTATICS	COULOMS LAW	40 to 44	✓		✓
	INTENSITY OF ELECTRIC FIELD	45 to 47	✓		✓
	GAUSS'S LAW	52, 53	✓		✓
	ELECTRIC POTENTIAL	57 to 59	✓	✓	✓
	PARALLEL PLATE CAPACITOR & COMBINATION OF CAPACITORS	67 to 73	✓	✓	✓
CURRENT ELECTRICITY	ELECTRIC CURRENT	82 to 85	✓	✓	✓
	ELECTRIC RESISTANCE & OHMS LAW	86, 87	✓	✓	✓
	COMBINATION OF RESISTORS	93 to 98	✓	✓	✓
	ELECTROMOTIVE FORCE	101 to 104	✓	✓	✓
MAGNETISM & ELECTROMAGNETISM	MAGNETIC FIELD DUE TO CURRENT	110 to 112	✓	✓	✓
	FORCE ON A CURRENT CARRYING	112 to 114	✓	✓	✓

	CONDUCTOR IN A UNIFORM MAGNETIC FIELD				
	AMPERES LAW	**124 to 130**	✓	✓	✓
	ELECTROMAGNETIC INDUCTION	**130, 131**	✓	✓	✓
	LAWS OF ELECTROMAGNETIC INDUCTION (FARADAYS LAW)	**131**	✓	✓	✓
	SELF INDUCTION	**133, 134**	✓	✓	✓
	MUTUAL INDUCTION	**134, 135**	✓	✓	✓
	TRANSFORMER	**146 to 148**	✓	✓	✓
ELECTRICAL MEASURING INSTRUMENT	**THE MOVING COIL GALVANOMETER**	**155 to 159**	✓	✓	✓
	THE AMMETER	**160 to 163**	✓	✓	✓
	THE VOLTMETER	**163 to 166**	✓	✓	✓
ELECTROMAGNETIC WAVES AND ELECTRONICS	**AMPLITUDE MODULATION**	**188**	✓	✓	✓
	FREQUENCY MODULATION	**190, 191**	✓	✓	✓
	TRANSISTOR	**210**	✓	✓	✓
ADVENT OF MODERN PHYSICS	**FRAME OF REFERENCE**	**219 to 223**	✓	✓	
	THE PRINCIPLE OF RELATIVITY	**227, 228**	✓	✓	
	POSTULATES &CONSEQUENCES OF SPECIAL THEORY OF RELATIVITY	**228 to 236**	✓	✓	
	THE PHOTOELECTRIC EFFECT	**243 to 245**	✓	✓	
	THE COMPTON EFFECT	**251 to 253**	✓	✓	
	PAIR PRODUCTION AND ANNIHILATION OF MATTER	**254 to 257**	✓	✓	
THE ATOMIC SPECTRA	**BOHRS MODEL HYDROGEN ATOM**	**275 to 283**	✓	✓	
	X-RAY SPECTRA	**285, 286**	✓	✓	
	INTRODUCTION OF LASER & ITS PRINCIPLES	**291 to 293**	✓	✓	
THE ATOMIC NUCLEUS	**RADIOACTIVITY AND NUCLEAR ENERGY**	**302 to 304**	✓	✓	
	THE LAW OF RADIOACTIVEDECAY	**307, 308**	✓	✓	
	THE HALF PERIOD OR THE HALF LIFE OF THE RADIOACTIVE NUCLIDE	**308, 309**	✓		
	NUCLEAR FISSION	**317 to 319**	✓	✓	
	NUCLEAR FUSION	**320 to 322**	✓	✓	
NUCLEAR RADIATIONS	**WILSON CLOUD CHAMBER**	**334 to 337**	✓		