




PHYSICAL SCIENCES
SCOPE FOR EXAMINATIONS 2026: GRADE 12

MARCH CONTROLLED TEST (100 marks)			
PAPER	TOPICS	MARK	DURATION
ONE PAPER ONLY	Mechanics Momentum & Impulse: <ul style="list-style-type: none"> ✓ Momentum, Newton's second law expressed in terms of Momentum, ✓ Conservation of momentum and Elastic and Inelastic collisions. Vertical projectile motion in one dimension (1D): <ul style="list-style-type: none"> ✓ represented in words, diagrams, equations and graphs Grade 11 Work <ul style="list-style-type: none"> ✓ Newton's Laws (Newton 1, 2, 3) ✓ Newton's Law of Universal Gravitation ✓ Applications of Newton's Laws NB: PLEASE NOTE GRAPHS AND IT'S INTERPRETATION CAN BE ASSESSED ACROSS ALL TOPICS.	50	2 hours
	Matter and Materials Organic molecules: <ul style="list-style-type: none"> ✓ Organic molecular structures - functional groups, saturated and unsaturated structures, isomers ✓ IUPAC naming and formulae ✓ Structure physical property relationships ✓ Applications of organic chemistry - Substitution, addition and elimination. (ONLY alkanes, alkenes, alkynes, alcohols, halo alkanes, carboxylic acids, and esters) Grade 11 Work <ul style="list-style-type: none"> ✓ Inter-molecular forces NB: Quantitative aspects of chemical change may be assessed across chemistry. NB: PLEASE NOTE GRAPHS AND IT'S INTERPRETATION CAN BE ASSESSED ACROSS ALL TOPICS.	50	



JUNE EXAMS (2 PAPERS)			
PAPER	TOPICS	MARKS	DURATION
PAPER 1	<p><u>Mechanics</u></p> <p>Momentum & Impulse:</p> <ul style="list-style-type: none"> ✓ Momentum, Newton's second law expressed in terms of Momentum, ✓ Conservation of momentum and Elastic and Inelastic collisions. <p>Vertical projectile motion in one dimension (1D):</p> <ul style="list-style-type: none"> ✓ represented in words, diagrams, equations and graphs <p>Grade 11 Work</p> <ul style="list-style-type: none"> ✓ Newton's Laws (Newton 1, 2, 3 and Universal Gravitational Law) ✓ Applications of Newton's Laws ✓ Electrostatics ✓ Electric Circuits <p>Work, Energy & Power:</p> <ul style="list-style-type: none"> ✓ Definition of Work, ✓ Work –Energy Theorem ✓ Conservation of energy with non-conservative forces ✓ Power <p><u>Waves, Sound and Light : Doppler Effect</u></p> <ul style="list-style-type: none"> ✓ Doppler Effect Calculations ✓ Application with sound and ultrasound, ✓ Application with light – blue shifts and red shifts in the universe (Evidence for the expanding universe). 	150	3 Hours
PAPER 2	<p><u>Organic molecules:</u></p> <ul style="list-style-type: none"> ✓ Organic molecular structures - functional groups, saturated and unsaturated structures, isomers ✓ IUPAC naming and formulae ✓ Structure physical property relationships ✓ Applications of organic chemistry - Substitution, addition and elimination. (ONLY alkanes, alkenes, alkynes, alcohols, haloalkanes, carboxylic acids, and esters) <p><u>Chemical Change</u></p> <p>Rate and Extent of Reaction:</p> <ul style="list-style-type: none"> ✓ Rates of reaction ✓ factors affecting rate (nature of reacting substances, concentration [pressure for gases], temperature and presence of a catalyst) ✓ Measuring rates of reaction; Mechanism of reaction and of catalysis <p>Chemical Equilibrium:</p> <ul style="list-style-type: none"> ✓ Chemical equilibrium ✓ Factors affecting equilibrium ✓ Equilibrium constant ✓ Application of equilibrium principles. 	150	3 Hours

	Acids and Bases ✓ Definitions, strong and weak, concentrated and dilute, conjugate acid-base pairs, neutralization, titrations ✓ Comparison of K_a and K_b values of strong and weak acids and bases ✓ pH calculations ✓ Dilution and neutralization ✓ Acid-base reactions ✓ Calculations (Quantitative aspects of chemical changes)		
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PREPARATORY EXAMINATIONS

FORMAT OF QUESTION PAPERS

Paper 1: Physics 3 hours	Paper 2: Chemistry 3 hours
SECTION A: Multiple-choice questions	SECTION A: Multiple-choice questions
SECTION B: Conceptual questions assessing all themes	SECTION B: Conceptual questions assessing all themes
Total: 150 marks	Total: 150 marks

Note: Full Papers will be written, including selected examinable Grades 10 & 11 Topics (p149 CAPS Document)

MARK ALLOCATION PER KNOWLEDGE AREA: PREPARATORY EXAMINATIONS GR 12

	Knowledge Area	Theme	Marks
PAPER 1	Mechanics ($\pm 43,3\%$)	Newton's Laws (1,2,3) and Law of Gravitation	65
		Momentum (1D), Impulse and change in momentum	
		Vertical projectile motion (1D)	
		Work, power and energy	
	Waves, sound and light ($\pm 10\%$)	Doppler effect	15
	Electricity and Magnetism ($\pm 36,7\%$)	Electrostatics (Grade 11)	55
		Electric circuits (Grades 11 & 12)	
		Electrodynamics Grade 12	
		Electromagnetic radiation Grade 12	
	Matter and materials (10%)	Optical phenomena and properties of materials	15
		TOTAL	150
PAPER 2	Matter and materials ($\pm 38,7\%$)	Organic molecules	58
	Chemical change ($\pm 61,3\%$)	Rate and extent of reaction, Chemical Equilibrium	92
		Electrochemical reactions	
		Acids and Bases	
		TOTAL	150

COGNITIVE LEVELS

Cognitive level description	Weighting %	
	Paper 1	Paper 2
Remembering	15	15
Understanding	35	40
Applying and Analysing	40	35
Evaluating	10	10