

PATHFINDER 2011-2012

SYLLABUS

Grade X: Maths

Linear equation in 2 variables
Quadratic Equation
Co-ordinate Geometry
Arithmetic Progression
Statistics (Mean / Median/Mode)
Probability
Introduction to Trigonometry

PATHFINDER 2011-2012

SYLLABUS

Grade X: SCIENCE

PHYSICS	CHEMISTRY	BIOLOGY
Light-reflection and refraction	Chemical reactions and equations	The world of living – Life processes
He human eye and colourful world	Metals and non-metals	The world of living – Control and coordination
Electricity	Acids, bases and salts	The world of living – Reproduction
Magnetic effect of electric current	Carbon and its compounds	The world of living – Heredity and Evolution
	Periodic classification of elements	Natural Resources – Our environment

Blue print of Assessment limits tested in Pathfinder - 2012

Mathematics

Chapter /Concept	1 Mark	1 Mark	1 Mark	2 Marks	4 MARKS	Total Marks
	Fill in the blanks	MCQ	Match the following	Numerical Problem	Decision making	
Linear Equations <ul style="list-style-type: none"> • Graphical Solutions • Word Problems 	1K	1A	-	1H	-	4 MARKS
Quadratic equations <ul style="list-style-type: none"> • Solution of Q.E by factorization • Solution of Q.E by Quadratic formula 	2 u	-	1K	1A	1H	9 MARKS
Introduction to Trigonometry <ul style="list-style-type: none"> • Trigonometric Ratio • Trigonometric ratios of some specific angle • Complimentary Angles • Trigonometric Identities 	2U	1K	1U	1H	1A	10 MARKS
Co-ordinate Geometry <ul style="list-style-type: none"> • Distance formula , Section formula 	1A	1U	1K	-	1A	7 MARKS
Arithmetic Progression <ul style="list-style-type: none"> • Finding nth term, • Sum of n terms 	2A	1K	1U	1H	1A	10 MARKS

<ul style="list-style-type: none"> Application of AP in real life 						
Statistics <ul style="list-style-type: none"> Mean, median, mode Cumulative frequency (less than ogive and more than ogive) 	1K	-	-	1A	1H	7 MARKS
Probability <ul style="list-style-type: none"> Outcome, Events, Probability 	1U	1H	1A	-	-	3 MARKS
No. of questions TOTAL (30)	1 X 10	1 X 5	1 X 5	2 X 5	4 X 5	50 MARKS

Proposed Marks / Weightage		
Skill	Marks	Weightage
K	15	30%
A	20	40%
C	5	10%
H	10	20%

Fill in the blanks (1 mark each)	Numericals (2 mark each)
MCQ (1 mark each)	Decision Making /Proving mathematical relations (4 marks each)
Column Matching (1 mark each)	

Blue print of Assessment limits tested in Pathfinder – 2012(Revised – Physics)

Chapter /Concept	Type	K	MARKS	A	MARKS	C	MARKS	H	MARKS
Light – Reflection & Refraction <ul style="list-style-type: none"> • Image formation in spherical mirror and lenses • Solve numerical using mirror and lens formula 	I	√	2M						
	III(a)			√	3M				
<ul style="list-style-type: none"> • Combination of lenses • Rectification of refractive defects of Human eye • Dispersion of light • Atmospheric refraction 	I					√	2M		
	II	√	1M	√	1M	√	1M		
CURRENT & ELECTRICITY <ul style="list-style-type: none"> • Ohm’s Law • Factors affecting resistance of a conductor and resistivity of the material 	I	√	2M						
	I							√	1M
<ul style="list-style-type: none"> • Heating effects of electric current • Electric Power 	I			√	1M			√	1M
	III (b)			√	2M				
Series and parallel circuits Magnetic effect of electric current <ul style="list-style-type: none"> • Magnetic field due to current carrying conductor • Force experienced by a current carrying conductor in a magnetic field • Electro magnetic induction • Domestic electric circuits 	I							√	2M
	I	√	1M						
	I			√	1M	√	1M		
	I			√	2M			√	1M
TOTAL MARKS		—	6M	—	10M	—	4M	—	5M

Blue print of Assessment limits tested in Pathfinder – 2012(Chemistry)

Chapter /Concept	Type	K	MARKS	A	MARKS	C	MARKS	H	MARKS
Chemical reactions & Equations <ul style="list-style-type: none"> • Balancing of chemical equations <ul style="list-style-type: none"> • Types of chemical reactions • Redox reaction (in terms of oxygen & Hydrogen) 	I	√	1M			√	1M	√	1M
	II			√	1M				
	III (a)								
	III (b)								
Acids, Bases and salts <ul style="list-style-type: none"> • Indicators • chemical properties of acids and bases <ul style="list-style-type: none"> • pH and its applications • Salts-preparation, properties and uses 	I	√	1M			√	1M	√	1M
	II			√	1M				
	III (a)								
	III (b)								
Metals & Non-metals <ul style="list-style-type: none"> • Chemical properties of metals <ul style="list-style-type: none"> • Ionic compounds • Reactivity Series • Extraction of metals • Corrosion and methods of prevention 	I	√	1M	√	2M 1x2q			√	1M
	II			√	1M				
	III (a)								
	III (b)								
Carbon & its compounds <ul style="list-style-type: none"> • Covalent bonding <ul style="list-style-type: none"> • Homologous series • Saturated and unsaturated compounds • Chemical properties of alkanes, alkenes alcohol(ethanol) and ethanoic acid 	I	√	1M	√	1M				
	II								
	III (a)								
	III (b)	√	1M	√	1M	√	1M	√	2M 2x1q
Periodic classification of elements <ul style="list-style-type: none"> • Modern periodic table only • Trends in properties 	I	√	2M 1x2q	√	2M 1x2q			√	1M
	II								
	III (a)								
	III (b)								
TOTAL MARKS		-	7M	-	9M	-	3M	-	6M

Blue print of Assessment limits tested in Pathfinder – 2012(Biology)

Chapter /Concept	Type	K	MARKS	A	MARKS	C	MARKS	H	MARKS
Life processes <ul style="list-style-type: none"> • Structure and mechanism of digestion – based on the names of enzymes given in the text book • Photosynthesis- compare light and dark reaction • Transport – role of xylem cells in conducting water, or two ways transport in phloem <ul style="list-style-type: none"> • double circulation, heart beat systole/diastole) • path of blood flow • Respiration- Mechanism of breathing/gaseous exchange/aerobic and anaerobic (cellular respiration) <ul style="list-style-type: none"> • Excretion- Mechanism of urine formation(dialysis) • Excretory products in plants 	I			✓	2 M				
	II	✓	1 M						
	III (a)								
	III (b)								
Control & Coordination <ul style="list-style-type: none"> • parts of brain, reflex arc • Hormone & their function 	I	✓	1 M	✓	2 M	✓	1 M		
	II	✓	1 M						
	III (a)								
	III (b)								
Reproduction <ul style="list-style-type: none"> • Illustrate the female reproductive structure of a flower. <ul style="list-style-type: none"> • Significance of sexual reproduction • Preventing sexually transmitted disease • Asexual reproduction in plants (vegetative propagation, spore formation) 	I	✓	1 M	✓	1 M	✓	2 M		
	II	✓	1 M						
	III (a)								
	III (b)								
Heredity and Evolution <ul style="list-style-type: none"> • Cross based on law of segregation • Geographical distribution, genetic difference, 	I	✓	1 M	✓	1 M			✓	2 M
	II								
	III (a)				✓	3 M			

speciation • Homologous and analogous organs	III (b)					✓	2 M		
Our Environment • Food chain, food web, law of 10% • Pollution ,ozone layer	I	✓	1 M	✓	1 M			✓	1 M
	II								
	III (a)								
	III (b)								
TOTAL MARKS		—	7 M	—	10 M	—	5 M	—	3 M

Type I -MCQ	Type III (a)-Numeric Section
Type II -Column Matching (1 mark each)	Type III (b) - Descriptive Section