

GEMS ASIAN SCHOOLS

PATHFINDER : 2011-12



PATHFINDER – Making a Choice



Pathfinder helps students and school determine the

Streaming options for Science and Commerce Group



Grade X- Pathfinder

DESCRIPTION	DETAILS	
History	In 2010-2011 when CBSE introduced CCE and allowed schools to conduct their own exam	
Model Based On	Proficiency tests, in line with CBSE	
Subjects Tested	Mathematics & Science (P/C/B)	
Date of Examination	G Science	Maths
	THURSDAY 16 Feb 2012	SUNDAY 19 Feb 2012



Subjects tested for the Pathfinder

- Physics
- Chemistry
- Biology
- Math



Students need to give their preference of stream in the school specified form in advance .

Students opting for the Science Stream need to take all the 4 papers – Maths, Physics, Chemistry and Biology. Those who do not write the test for Biology/Math, will not be eligible to opt for the group with Biology/Math.

School will release the list of selected candidates based on the availability of seats in the preferred stream as per merit.

School reserves the right to grant admission



The Pathfinder will be conducted in

	SUBJECT /AREAS TESTED	MAX.MARKS	DURATION OF EXAM	DATE OF EXAM
1	Physics	25 Marks	45 Minutes	THURS DAY 16 FEB 2012
	Chemistry	25 Marks	45 Minutes	
	Biology	25 Marks	45 Minutes	
	TOTAL	75 Marks		
2	Mathematics	50 Marks	2 Hours	SUNDAY 19 FEB 2012



WEIGHTAGE FOR SELECTION

SE NO	DESCRIPTION	MODE	WEIGHTAGE
1	FORMATIVE ASSESSMENTS FA - 1/2/3/4	School Based	20%
2	SUMMATIVE ASSESSMENT SA1	School Based	20%
3	PATHFINDER	CASE	60%
TOTAL			100%



Selection Criteria

- Based on the Merit List
- Number of seats available
- A minimum qualifying mark to be attained in the subjects tested is 40%



RESULTS

- Will be published by 1st week of March?
- Will be intimated by Admissions office?



Type of Questions tested in Pathfinder

SENO	TYPE OF QUESTIONS
1	MULTIPLE CHOICE QUESTIONS
2	NUMERICALS
3	DESCRIPTIVE QUESTIONS



Syllabus for Pathfinder

- Based on CBSE Grade X syllabus.
- Important concepts of Grade X



PATHFINDER 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 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



Weightage / Type of Questions TESTED



Weightage/Type of Questions tested in Pathfinder -2012

MATHEMATICS

Proposed Marks / Weightage		
Skill	Marks	Weightage
K/U	15	30%
A	20	40%
C	05	10%
HOTS	10	20%

SENO	TYPE OF QUESTIONS
1	Fill in the blanks/Multiple choice questions (1 Mark each)
2	Column Matching (1 Mark each)
3	Numericals (2 Marks Each)
3	Decision making / Proving mathematical relations (4 Marks Each)

Blue print of Assessment limits tested in Pathfinder - 2012

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 Application of AP in real life 	2A	1K	1U	1H	1A	10 MARKS
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



Type of Questions tested in Pathfinder

SCIENCE –

SENO	TYPE OF QUESTIONS
1	MULTIPLE CHOICE QUESTIONS
2	NUMERICALS
3	DESCRIPTIVE QUESTIONS



Chapter /Concept	Type	K	MARKS	A	MARKS	C	MARKS	H	MARKS
Light - Reflection & Refraction	I	√	2M						
•Image formation in spherical mirror and lenses •Solve numerical using mirror and lens formula	III(a)			√	3M				
• Combination of lenses • Rectification of refractive defects of Human eye	I					√	2M		
• Dispersion of light • Atmospheric refraction	II	√	1M	√	1M	√	1M		
CURRENT & ELECTRICITY	I	√	2M						
•Ohm's Law •Factors affecting resistance of a conductor and resistivity of the material	I							√	1M
• Heating effects of electric current • Electric Power	I			√	1M			√	1M
Series and parallel circuits	III(b)			√	2M				
Magnetic effect of electric current	I							√	2M
•Magnetic field due to current carrying conductor	I	√	1M						
•Force experienced by a current carrying conductor in a magnetic field	I			√	1M	√	1M		
•Electro magnetic induction •Domestic electric circuits	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 •Balancing of chemical equations •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 •Indicators •chemical properties of acids and bases •pH and its applications •Salts-preparation, properties and uses	I	√	1M			√	1M	√	1M
	II			√	1M				
	III (a)								
	III (b)								
Metals & Non-metals •Chemical properties of metals •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 •Covalent bonding •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 •Modern periodic table only •Trends in properties	I	√	2M 1x2q	√	2M 1x2q			√	1M
	II								
	III (a)								
	III (b)								
TOTAL MARKS		-	7M	-	9M	-	3M	-	6M



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 double circulation, heart beat systole/diastole) path of blood flow Respiration- Mechanism of breathing/gaseous exchange/aerobic and anaerobic (cellular respiration) 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. 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, speciation Homologous and analogous organs 	I	✓	1 M	✓	1 M			✓	2 M
	II								
	III (a)			✓	3 M				
	III (b)					✓	2 M		
Our Environment <ul style="list-style-type: none"> 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

