Project Maths (H) Paper 1 Topics which appear to be removed from the exam

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Project maths .com has been trying to find what exactly on the course for Paper 1(H) 2011 . As a result of some research and replies to questions put to the NCCA (answers in quotations) .We have come to the following conclusions.

The following concern strand 4 Algebra
(i)"***The abstract treatment of the connections between the roots and the coefficients of quadratic equations is not required***" **That is questions based on a and ß will not be asked .**
(ii)**The proof of the factor theorem is not required!"*students just must be able to use it".***
(iii)**The abstract treatment of the properties of b^2-4ac** is not required ,I presume this means that abstract questions based on real/equal/unreal roots will not be asked.

(iv)Complex numbers are in both strands 3 and 4 will there be 2 questions on Complex numbers?

Reply

"*The structure of the exam paper/questions is not as rigidly confined as in the past. The location of complex numbers in the different syllabus strands is reflective of the fact that, while they are 'numbers' and can undergo the usual number operations, their treatment also requires an algebraic approach. Their representation on a diagram is also clearly linked with coordinate geometry in strand 2.*"

Functions and Calculus :

"F*or the 2011 exam the section on functions and Calculus on page 10/11 of the old course remains unchanged !* Since the parametric equations of lines and circles have been removed from strand 2 can students be asked to differentiate parametric equations? We received the following reply .?

"*The procedural approach to **the first derivative of parametric functions is still on for those sitting the exam next June**. For these students only strands 1- 4 are 'new'; the section of the 'old' syllabus on Functions is retained (i.e. page 10 and the first part of page 11). This is not retained for subsequent cohorts, following the introduction of all 5 strands.*

Since there is no mention of Cosecant/Secant/Cotan in the syllabus and can they be asked to differentiate these functions? Reply ***"students are not expected to engage with these functions"***

Max and Min problems as in the former option question 8 paper 2 will not be asked on Paper 1

The proof by Induction of dx^n/dx **is on for exam in 2011** but gone for 2012

(v)**Sequences and Series**.

Telescopic Series are gone ,AP/GP are gone ,The Σn and $\sum n^2$series appears to be gone!

"The approach is one of looking at patterns and building towards expressions/functions. **Students would not be given the question 'cold' in the traditional form.**

Matrices : Are Gone !

The Binomial theorem :Is the Binomial theorem gone and questions based on the general term and Binomial Coefficients? **The binomial theorem, per se, is not required**.I This proof $Cos3a=4Cos^3A-3CosA$ **is not required** in the complex numbers section of strand 4, **only the *use* of this identity** is only required.

The conclusions are as follows for Paper 1 project H maths 2011

(i)Strand 3 **Number** :100 marks 50 marks Section A type Questions ,50 marks Section B type questions;

Complex numbers ,Series,Induction,Limits,logs and Indices ,surds,mortgage ,

Finiancial maths Pension payments(new),Present worth problems (new). Bond issues

The NCCA indicated that finiancial maths would dominate the sequence/series .

(ii)Strand 4 Algebra: 100 marks 50 marks type A questions ,50 marks type B.

Algebra very similiar to the old course with the exceptions listed above and Complex numbers in Polar For.

(iii)Differential Calculus as per (1994)syllabus pages 10/11.

Use only the SEC papers for practice .

Project Maths Paper 2 layout based on SEC sample papers

Two official sample papers and one actual paper have been produced by the State Examinations Commission
SEC 2010 and Sec 2011 and LC 2010 the layout of each is shown below

Question	Marks	SEC 2010 m130s	SEC 2011m230s	Leaving cert 2010 (M130)
		Section A	**Section A**	**Section A**
1	25	Probability Venn Diagrams	Probability Probability distribution table	Probability Venn Diagrams
2	25	Statistics Based on Histograms	Statistics Margin of error	Statistics Stem and leaf Frequency distribution
3	25	Coordinate Geometry of the Line Similiar to HJC	Coordinate Geometry of the Line Similiar to HJC	Geometry Construction
4	25	Coordinate Geometry of the Circle Similiar to LC H	Coordinate Geometry of the Circle Similiar to LC H	Coordinate Geometry of the Circle Similiar to LC H
5	25	Trigonometry Periodic Functions	Trigonometry Periodic function	Trigonometry Trig Equation Periodic function
6	25	Vectors (no longer on the course)	6A Geometry Proof and or Construction Based on new syllabus	Coordinate Geometry of the Line Similiar to HJC + Vectors
	25		6B Problem/cut based on Junior Cert Geometry	
		Section B	**Section B**	**Section B**
7	50	Statistics Scatter plot + lots of questions	Statistics (75 marks) Big question based on Statistics	Statistics Scatter Plot + Lots of questions
8	50	Trigonometry 3D problem based on Sine rule and right angled triangles	Trigonometry (75 marks) Sine Rule Diagram based on a tetrahedron	Trigonometry Similiar to LC Ord
9A	50	Probability/statistics Hypothesis test	.	Probability Hypothesis test
9B	50	Geometry Mixture of geometry and trig		Geometry Mixture of geometry and trig

The Sample **SEC 2011m230s** is the layout of the paper for June 2011 .
Note do 6A or 6B and now section B contains just two parts worth 75 marks each