## XI Mathematics Commerce Part I Competency statements

Sr. No	Area	Topic	Competency Statements
1	Sets and Relations	Sets	The student will be able to  work with sets and set functions.  construct sets from given conditions/description/rule.  solve problems using set theory.
		Relations	<ul> <li>identify the types of relations.</li> <li>use relations to associate different sets.</li> <li>verify equality, equivalence or other relationships between given sets.</li> </ul>
2	Functions	Functions	<ul> <li>work with function defined on different domains.</li> <li>identify different types of functions.</li> <li>carry out complicated operations on functions.</li> </ul>
3	Complex Numbers	Complex Numbers	simplify algebraic expressions involving complex numbers.
4	Sequence and series	Sequence	<ul> <li>identify the type of a given sequence.</li> <li>find the general term of given sequence.</li> </ul>
		Series	<ul> <li>identify the type of a given series</li> <li>find the n<sup>th</sup> term of a given series</li> <li>find the sum of the first n terms of a given series</li> <li>find the sum to infinite terms of a given series</li> </ul>
5	Locus and Straight Line	Locus and Straight Line	<ul> <li>find equation of a straight line satisfying given conditions</li> <li>identify properties of given set of straight lines</li> </ul>
6	Determinats	Determinants	<ul> <li>find value of a determinant.</li> <li>simplify determinant.</li> <li>solve linear equations in 2/3 variables, find area of triangle using determinants.</li> </ul>
7	Limits	Limits	<ul> <li>find limit of a function</li> <li>determine whether a given function has a limit</li> </ul>
8	Continuity	Continuity	<ul> <li>determine whether a given function is continuous at a given point</li> <li>determine whether a given function is continuous over a specified interval</li> <li>identify points of discontinuity of a given function</li> </ul>
9	Differentiation	Differentiation	differentiate algebraic functions

1

## INDEX Page Topic Sr. No. No. Sets and Relations 1 1 20 **Functions** 2 Complex Numbers 33 3 44 Sequences and Series 4 65 Locus and Straight Line 5 81 Determinants 6 97 Limits 7 107 Continuity 8 115 Differentiation 9 126 Answers 10