

Course: Project for Class XI

Full Marks: 20

Projects should be conducted regularly throughout the year. A project notebook is to be prepared by each and every student where all the below mentioned activities should be recorded. There should be a project assessment once a year (once in Class XI and once in Class XII) where the student will be asked to do one of the activities and write it in his/her script provided for the purpose. The student should carry his/her project notebook during the assessment. A viva should also be conducted during the assessment to test the knowledge of the student regarding the project activity.

List of Projects for Class XI

Sl. No.	Topics	Activities
1	Sequence and Series	To illustrate that the arithmetic mean of two different positive numbers is always greater than the geometric mean.
2	Complex Number	To interpret geometrically the meaning of $i = \sqrt{-1}$ and its integral powers.
3	Trigonometric Functions	To illustrate the values of sine and cosine functions for different angles which are multiples of $\frac{\pi}{2}$ and π .
4	Theory of Sets	To show that the total number of subsets of a given set with 'n' number of elements is 2^n .
5	Theory of Sets	Theoretic Operations using Venn Diagrams.
6	Relations and Functions	To verify that for two sets A and B, $n(A \times B) = pq$ and the total number of relations from A and B is 2^{pq} , where $n(A) = p$ and $n(B) = q$.
7	Limits and Derivatives	To find analytically $\lim_{x \rightarrow c} f(x) = \frac{x^2 - c^2}{x - c}$
8	Probability	To write the sample space, when a coin is tossed once, two times, three times.
9	Conic Sections	To recognize different types of conics and its parts.
10	Permutations and Combinations	To find out the number of permutations and combinations from a set of 3 different objects taking 2 at a time.

Marks Division for the Project Assessment

Sl. No.	Item	Marks
1	Project Notebook	10
2	Doing and writing a project during the project assessment	5
3	Viva	5
	Total	20