

**Indian Institute of Engineering Science & Technology,  
Shibpur**

**Department of Computer Science & Technology.**

**8<sup>th</sup> Semester Artificial Intelligence Laboratory.**

**ASSIGNMENT- 3**

**(Cut, List Processing-II, Set)**

**Duration- 4 periods.**

**Full Marks (including Viva Voce)-10**

Write PROLOG programs

1. To add an element to a list provided it is not present in the list.
2. To delete first occurrence of an element from a list.
3. To delete all occurrences of an element from a list.
4. \*To remove the first occurrence of an element X in L with Y giving the result in L1.
5. \*To substitute all occurrences of an element by another element in a list.
6. To determine whether a list is a sub list of another list.  
A list is a sub list of another list if it's elements are present in another list consecutively and in the same order.
7. To determine whether an element is a member of a set.
8. \*To determine whether a set is a subset of another set.
9. To determine intersection of two sets.
10. To determine union of two sets.
11. To determine difference of two sets.
12. \*To determine symmetric difference of two sets.
13. \*To delete n<sup>th</sup> element in L, leaving the rest in L1.
14. \*To replace n<sup>th</sup> element by another element X in L, leaving the resultant list in L1.

\*marked programs are not done in the class.