MODEL ACTIVITY TASKS
CLASS – XI
MATHEMATICS

Answer the following questions :

1. If S= { a, b, c, p, q, r} be a universal set and A, B, C are the subsets of S, where A = {a, c, p, r} and $B \cap C = \{a, b, r\}$, then find

   (i) $B^c \cup C^c$ (ii) $(A \cup B) \cap (A \cup C)$

2. Using set theory, show that, $(A \cap S) \cap (\phi \cup A^c) = \phi$, where ϕ is a null set, S is a universal set and A is a finite set.

3. Analytically prove that $(A \cup B)^c = A^c \cap B^c$, where A and B are two finite sets.

4. With the help of algebra of sets, prove that, $A \Delta B = (A \cup B) - (A \cap B)$, where A and B are two finite sets.