DSA SETS **TUTORIAL 1**

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QUESTION 1

1. 3 Ɛ {1,3,5} - True – it's very clear 3 is a member of {1,3,5}
This Statement is True.3 is already in the given set and it is an element.

2. Let A = {{ a, b}}

I. a Ɛ A – False (Here set {a,b} is the only member of set A therefore a Ɛ A)

II. A Ɛ A – False

III. {a,b} Ɛ A – True ({a,b} Altogether is an element in A)

IV. There are 2 elements in A - False there is only one element {a,b} in A

V. {3} Ɛ {1,3,5} - False The statement will be true if the set will be {1,{3},{5}}

3. **In a class of 106 students, each student studies at least one of the three subjects Maths, Physics and Chemistry. 48 of them study Maths, 51 studies Physics and 53 Chemistry.16 studies Maths and Physics, 17 study Maths and Chemistry and 18 study Physics and Chemistry.**

1. The number of students who exactly study two subjects is?
Lets define the sets . [m :-Students who studies maths , p ;- students who studies physics, c :- students who studies chemistry]

P(M)=48 , P(P)=51 , P(C)=53 , P(M&P)=16, P(M&C)=17, P(P&C)= 18
Exactly 2 subjects – 11+12+13 =36 (According to Calculation P(M&P&C)=11)

2: The number of Students who study more than two subjects?
More than 2 Subjects 11+5+12+13 = 41
3: The number of students who study all the three subjects?
All Three Subjects - 5
4: The number of students who exactly study one subjects?
Exactly 1 :- 20+23+22 =65
5: The number of students who study Physics and Maths but not Chemistry?
=11