

13/Jul/21  
Tue

Test Paper 1 - Sets.

Score: to  
Time: 45 minutes

1) If  $A = \{x: x \text{ is a letter in the word MATHEMATICS}\}$

$B = \{y: y \text{ is a letter in the word STATISTICS}\}$

Find (i)  $A - B$

(ii)  $A \cap B$

[Score 2]

2) In a survey of 600 students in a school 150 students were found to be taking tea and 225 taking coffee, 100 were taking both tea and coffee. Find how many students were taking neither tea nor coffee? [Score 2]

3) Draw the Venn diagrams which represent  
i)  $(A \cup B)'$  (ii)  $A' \cup B'$  [Score 2]

4) If  $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

$$A = \{2, 4, 6, 8\}$$

$$B = \{2, 3, 5, 7\}$$

verify  $(A \cup B)' = A' \cap B'$  [Score 3]

5) If A and B are two disjoint sets with  $n(A) = 4$  and  $n(B) = 2$

then  $n(A - B) = \underline{\hspace{2cm}}$  [Score 1]