

(MATHS)

PERMUTATION AND COMBINATION**SBI-PO (PRE)**

Ques: How many numbers can be made with digits 0, 6, 7, 8 which are greater than 0 and less than one million?

Ans:

Since the number is greater than zero and less than one million, so all the numbers of single digit, two digit, three digit, four digit, five digit and six digit formed by the digits 0, 6, 7 and 8 will be considered.

Now, the number of ways for selecting single digit number = 3

Number of ways for selecting two digit number = $3 \times 4 = 12$

Number of ways for selecting three digit number = $3 \times 4 \times 4 = 48$

Number of ways for selecting four digit number = $3 \times 4 \times 4 \times 4$
= 192

Number of ways for selecting five digit number = $3 \times 4 \times 4 \times 4 \times 4$
= 768

Number of ways for selecting six digit number = $3 \times 4 \times 4 \times 4 \times 4 \times 4$
= 3072

Hence, the total number of ways = $3 + 12 + 48 + 192 + 768 + 3072$
= 4095