

- If the letters of the word MOTHER are written in all possible orders and these words are written out as in a dictionary, then the rank of the word MOTHER is -  
 (1) 240 (2) 261  
 (3) 308 (4) 309
- If the letters of the word PARKAR are written down in all possible manner as they are in a dictionary, then the rank of the word PARKAR is  
 (1) 98 (2) 99  
 (3) 100 (4) 101
- In how many ways can the letters of the word PERMUTATIONS be arranged if the  
 vowels are all together  
 (1) 2419200 (2) 241900  
 (3) 2419400 (4) 2418800
- Find the number of ways in which a selection of 100 balls, can be made out of 100 identical red balls, 100 identical blue balls & 100 identical white balls.
- The Number of ways of choosing 10 objects out of 31 objects of which 10 are identical and the remaining 21 are distinct, is:  
 (1)  $2^{20}$  (2)  $2^{21}$   
 (3)  $2^{20} + 1$  (4)  $2^{20} - 1$
- Sum of all the odd divisors of 720 is  
 (1) 76 (2) 78  
 (3) 80 (4) 84
- For  $N = 12600$ , the number of even divisors is  
 (1) 72 (2) 54  
 (3) 18 (4) None of these
- Number of divisors of the form  $(4n + 2), n \geq 0$  of the integer 240 is  
 (1) 4 (2) 8  
 (3) 10 (4) 3
- If the number of ways of selecting two distinct numbers from the set  $\{1, 2, \dots, 12\}$  whose sum is divisible by 3 is equal to k, then k - 16 is equal to .....
- Out of 10 white, 8 black and 6 red balls, the number of ways in which one or more balls can be selected is (assuming balls of the same colour are identical)  
 (1) 681 (2) 691  
 (3) 679 (4) 692