

CTS Sample Paper

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SECTION I - 8 questions based on series.

1. These questions involve interchange of letters in a word at particular locations and also interchanging letters adjacent to those particular locations. Certain other conditions may also be given

For eg.

Let the word be ABBAABA

If we apply 25 on this, it means we have to interchange the letters at positions 2 and 5, also we have to change the letters adjacent to positions 2 and 5 i.e. from A to B and B to A.

A B B A A B after Step 1 i.e interchange of 2 and 5 becomes AABABB

Now change adjacent elements of 2 and 5...finally answer becomes

Ans: B A A B B A

Questions 1-5 are based on the pattern with changed numbers as described above

Questions 6-8 are of the following type

To get AAABBD from BBBAAB what number should be applied:-

- a) 25
- b) 34
- c) 25 & 34
- d) none

SECTION II

1. Given the following functions

$$(1) f(n a b c) = ac \text{ if } n=1$$

$$(2) f(n a b c) = f(n-1 a c b) + f(1 a b c) + f(n-1 b a c) \text{ if } n > 1$$

Then what is the value $f(2 a b c) = ?$

Ans: $f(2 a c b) = ab + ac + bc.$

2. Similar question on functions.

3. [Based on the function in the first question] For the function $f(4abc)$ the number of terms is...?

Hint $f(4abc) = f(3acb) + f(1abc) + f(3bac)$ etc.

4. What is the value of the function $f(5abc) = ?$

SECTION III

Permutations and Combinations.

8 Questions.

1. r = number of flags; n = number of poles;

Any number of flags can be accommodated on any single pole.

1) $r=5, n=5$ The no. of ways the flags can be arranged ?

Questions 2-5 are based on the above pattern

6. $r = 5, n = 3$. If first pole has 2 flags, third pole has 1 flag

How many ways can the remaining be arranged?

Questions 7 & 8. are similar to Question 6.

SECTION IV

Question consisting of figures - Pattern-matching type.

Refer R.S Agarwal's book on Analytical Reasoning & TMHs Quantitative ability book by Edgar Thorpe.

SECTION V

In this section first part of compound word is given. Select meaning of the second part from the choice given:

1. Swan
2. Swans
3. Fool
4. Fools

5. Stare

6. Lady

For all above 4 choices are given.....

Eg. Swan ---> Swansong (compound word)

a) category b) music c) television d) none

Ans: Swansong is compound word. But song is not given as an option. so (b) music is the answer.