## CODING-DECODING

Coding-Decoding is one of the important topic of Reasoning. Coding-Decoding questions are frequently asked in SSC CGL exam.

Let us discuss about Coding-Decoding. Coding is a method of transmission of signals or messages between sender and receiver, it is done confidentially, specially for security reasons so that the third person cannot understand, comprehend or decoded the sent message. The coded message can be decoded or decrypted by the receiver as he knows the pattern or method as how to interpret the message.

Now the question arises that why a student needs to study the chapter CodingDecoding. So, the answer for this question is that Coding-Decoding is taught to the students to check or test their abilities to decrypted the pattern which is applied on coded message, break the code and come out with the real message.

## > Importance of Coding-Decoding:

It is used in:
(a) Alphabet Analogy
(b) Alphabet Classification
(c) Alphabet Series
> Weightage of Coding-Decoding:

| Topic | Coding-Decoding | Alphabet <br> Analogy | Alphabet <br> Classification |
| :--- | :---: | :---: | :---: |
| No. of Questions | $2-3$ | $1-2$ | $1-2$ |
| Marks | $4-6$ | $2-4$ | $2-4$ |

## Types of Coding-Decoding:

## > Word Coding-Decoding:

In word coding-decoding, the original alphabets of word are replaced by certain different alphabets according to some specific rule
Example: If RACE is coded as XGIK, then how HAIR will be Coded.
In above example, each letter of the word XGIK is 6 letters ahead of the letters of word RACE, so the code for HAIR will be NGOX.

## > Number Coding-Decoding:

In number coding-decoding, alphabets are replaced by according to their place values, it may be Direct Place Value or Reverse Place Value. For example, 'A' has a direct place value ' 1 ' and reverse place value ' 26 '.
Example: MNOP is coded as 4567.
In this example, Place value of $M$ is 13.
Now, $\mathrm{M} \rightarrow 13 \rightarrow 1+3 \rightarrow 4$
Similarly, $\mathrm{P} \rightarrow 16 \rightarrow 1+6 \rightarrow 7$
> Symbol Coding-Decoding:
In symbol coding-decoding, analysis is done according to the given word. The letters or alphabets of the given word are replaced by certain symbols like $\beta, \bigcirc, \pi, \%$ etc.
Example: In a certain language if WAVE is coded as $5 \% 3 \beta$ and WINS is coded as $59 @ @$, then how SANE will be coded in that language.
In above example, as we considered both the given words we found that code for S is $\complement_{\text {, }}$ for $A$ is $\%$, for $N$ is @ and for $E$ is $\beta$.
Therefore, the code for the word SANE is ©\%@ $\beta$.

