Coding(Encryption)

Decoding(Decryption)

Types:-

- Type1: Letter Coding.
- Type2: Number Coding.
- Type3: Mixed coding
- Type4: Mixed number coding
- Type5:Decoding
- Type6:Symbols Coding

Alphabets in natural series are :

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

The Word **EJOTY** is very helpful in finding the position of the alphabet as:

E	J	O	T	Y
5	10	15	20	25

For example, if we want to find the position of the alphabet ‘S’, then as we know that ‘T’ is 20, so ‘S’ is 20 - 1 = 19. Also, we can find the position of an alphabet from the end by subtracting its value from 27. For example, the position of D from the end is 27 – 4 = 23.

The pattern below is very useful to find many types of question in Alphabet Series when we write the last 13 alphabets in front of the first 13 alphabets of the English:

A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N

1.Letter coding

A particular letter stands for another letter.

Ex 1: If COURSE is coded as FRXUVH, how is RACE coded as?

(A) ABHF

(B) UDFH

(C) DUHF

(D) WQYF

Answer: B

Logic: In this, each letter is moved three letters forward.

So, the code for the given word RACE is UDFH.

Ex 2: In a certain code, MONKEY is written as XDJMNL. How is TIGER written

in that code ?

(A) QDFHS

(B) FHSQD

(C) DQSFH

(D) STFDQ

Answer: A

Logic: The letter of the word are written in a reverse order and then each letter is moved one step backward to obtain the code.

Ex 3: If BOMBAY is written as MYMYMY, how will TAMIL NADU be written in that code ?

(A) YMNYMNYMN

(B) ABHABHABH

(C) ABCDABCDA

(D) MNUMNUMNU

Answer: D

Logic: The letters at the third and sixth places are repeated thrice to code BOMBAY as MYMYMY. Similarly, the letters at the third, sixth and ninth places are repeated thrice to code TAMIL NADU as MNUMNUMNU.

Ex 4: In a certain code, TOGETHER is written as RQEGRJCT. In the same code, what will PAROLE be written as?

(A) PQJGNC

(B) CNGJPQ

(C) NCPQJG

(D) NCJQPG

Answer: C

Logic: The letters at odd positions are each moved two steps backward and those at even positions are each moved two steps forward to obtain the corresponding letters of the code.

Ex 5: If in a certain language, COUNSEL is coded as BITIRAK, how is GUIDANCE written in that code ?

(A) OHYFZJBB

(B) OFHBJZYB

(C) BJZYBHFO

(D) FOHYZJBB

Answer: D

Logic:

The letters at odd positions are each moved one step backward, while the letters at even positions are respectively moved six, five, four, three, two and so on steps backward to obtain the corresponding letters of the code.

2.Number coding

In this, either the numerals are assigned to the alphabets of the given code or the alphabets are assigned to the numerals. The candidate has to observe the direction of solving the problem.

Ex 1: If in a certain code, TWENTY is written as 863985 and ELEVEN is written as 323039, how is TWELVE written in that code ?

(A) 203863
(B) 368302
(C) 863203
(D) 320368

Answer: C

Logic: The alphabets are coded as shown :

T W E N Y L V
8 6 3 9 5 2 0

So, In TWELVE , T is coded as 8,
W as 6,
E as 3,
L as 2,
V as 0.

Thus, the code for TWELVE is 863203.

Ex 2: In a certain code, if LOGIC is coded as 1512201824, how is PEARL coded as?

(A) 112226915

(B) 113331596

(C) 112226710

(D) 113336734

Answer: A

Logic: Each letter's reverse alphabet number. So, PEARL is coded as 112226915.

Ex 3: If APPLE is written as 24991320, how is LOVELY coded as?

(A) 13101310130

(B) 1310320130

(C) 13101350140

(D) 13101340120

Answer: B

Logic: '2' is subtracted from the reverse alphabet numbers of the corresponding letters. Hence, LOVELY is coded as 13101320130.

Ex 4: If ENGLAND is written as 1234526 and FRANCE is written as 785291, how is GREECE coded ?

(A) 117186

(B) 381191

(C) 131871

(D) 112235

Answer: B

Logic: Answer is 381171.

The alphabets are coded as,

E N G L A D F R C

1 2 3 4 5 6 7 8 9

So, G is coded as 3,

R as 8,

E as 1 and

C as 9.

Thus, GREECE is coded as 381191.

3. Mixed coding

In this, three or more complete messages are given. The procedure to solve is any two messages bearing the common word are picked up. Proceeding similarly, all possible combinations of two messages are analyzed.

Ex 1: If **tee see pee** means **drink fruit juice**,
see kee lee means **juice is sweet**,
lee ree mee means **he is intelligent**,
then which word means **sweet**?

(A) See
(B) Pee
(C) Tee
(D) Kee

Answer: D

Logic: Comparing first two, **see** is common and **juice** is common. So, **see** stands for **juice**. Comparing next two, **lee** stands for **is**. So, **sweet** stands for **kee.**

Ex 2: If white is called blue, blue is called red, red is called yellow, yellow is called green, green is called black, black is called violet and violet is called orange, what would be the color of human blood?

(A) Blue
(B) Yellow
(C) Black
(D) Violet

Answer: B

Logic: The color of the human blood is 'red' but `red' is called 'yellow'. So, the color of human blood is 'yellow'.

Ex 3: If the animals which can walk are called swimmers, animals who crawl are called flying, those living in water are called snakes and those which fly in the sky are called hunters, then what will a lizard be called ?

(A) Flying
(B) Swimmer
(C) Snakes
(D) Hunters

Answer: A

Logic: Clearly, a lizard crawls and the animals that crawl are called 'flying'. So, 'lizard' is called 'flying'.

Ex 4: In a certain code language, 'col tip mot' means 'singing is appreciable', 'mot baj min' means 'dancing is good' and 'tip nop baj' means 'singing and dancing' , then, which of the following means 'good' in that code language ?

(A) Mot
(B) Bai
(C) Min
(D) Nop

Answer: C

Logic:

In the first and second statements, the common code word is 'mot' and the common word is 'is'. So, 'mot' means 'is'.
In the second and third statements, the common code word is 'baj' and the common word is 'dancing'. So, 'baj' means 'dancing'.
Thus, in the second statements, 'mint' means 'good'.

4. Mixed number coding

It is the same as mixed coding but instead of alphabetical codes numerical codes are given.

Ex 1: In a certain code language, '851' means 'good sweet fruit', '783' means 'good red rose' and '341' means 'rose and fruit'. Which of the following digits stands for 'sweet' in that language ?

(A) 2
(B) 3
(C) 4
(D) 5

Answer: D

Logic:

In the first and second statements, the common code digit is '8' and the common word is 'good'. So, '8' means 'good'.
In the first and third statements, the common code digit is '1' and the common word is 'fruit'. So, '1' means 'fruit'.
Thus, in the first statement, '5' means 'sweet'.

Ex 2: In a certain code, **2** is coded as **P**, **3** as **N**, **9** as **Q**, **5** as **R**, **4** as **A** and **6** as **B**. How is **599423** coded in that code?

(A) QRQPAN
(B) RQQAPN
(C) AQPQRN
(D) QRANPA

Answer: B

Logic: Clearly as given **5** is coded as **R**, **9** as **Q**, **4** as **A**, **2** as **P, 3** as **N**. So, **599423** is coded as **RQQAPN.**

Ex 3: In a certain code language, '123' means 'hot filtered coffee' , '356' means 'very hot day' and '589' means 'day and night'. Which digit stands for 'very' ?

(A) 3
(B) 6
(C) 9
(D) 7

Answer: B

Logic: In the first and second statements, the common code digit is '3' and the common word is 'hot'. So, '3' means 'hot'.
In the second and third statements, the common code digit '5' and the common word is 'day'. So, '5' means 'day'.
Thus, in the second statements, '6' means 'very'.

Ex 4: In a certain code, '256' means 'you are good' ; '637' means 'we are bad' and '358' means 'good and bad'. Which of the following represents 'and' in that code ?

(A) 5
(B) 6
(C) 7
(D) 8

Answer: D

Logic: In the first and third statements, the common code digit is '5' and the common word is 'good'. So, '5' means 'good'.
In the second and third statements, the common code digit is '3' and the common word is 'bad'. So, '3' means 'bad'.
Thus, in third statement, '8' means 'and'.

5. Decoding

Conversion of the coded numbers or alphabets to the original text. The procedure to decode is the same as coding. That is, find the pattern that is followed in the given series.

Ex 1: If in a certain language NZTUJGZ is coded as MYSTIFY , how is OFNFTJT decoded in that language?

(A) REGULAR

(B) MORNING

(C) MINDFUL

(D) NEMESIS

Answer: D

Logic: Each letter in the word NZTUJGZ is moved one step backward to obtain the corresponding letter of the code.

So, in FNFTJT,F will be coded as N, N as E, F as M and so on. Thus, the code becomes NEMESIS.

Ex 2: In a certain code, SQHOOKD is written as TRIPPLE. How CHRONRD is written in that code ?

(A) GLITTER

(B) TROUSER

(C) JANUARY

(D) DISPOSE

ANSWER: D

Logic:

Each letter in the word is moved one step forward to obtain the corresponding letter of the code.

Ex 3: If HUMJTK is coded as FRIEND, how is EDRIRL written in that code ?

(A) SUNDAY

(B) MONDAY

(C) BEAUTY

(D) CANDLE

ANSWER: D

Logic:

The first, second, third, fourth, fifth and sixth letters of the word are respectively moved two, three, four, five, six and seven steps backward to obtain the corresponding letters of the code.

Ex 4: In a certain code language TUTDNES is written as STUDENT. How will SUORECS be written in that code language?

(A) BATTERY
(B) FASHION
(C) SOURCES
(D) LIMITED

Answer: C

Logic:

There are 7 letters in the word.
The middle letter has been right intact.
The first and the last letters of the word have interchanged their position.
Similarly, the second and the third letters and the fifth and sixth letters have interchanged their position.

6.SYMBOLS CODING

In this type of coding, symbols like !, @, # and so on will be used for coding the numbers or alphabets.

Ex 1: In a certain code 'TOME' is written as '@ $ * ?' and ARE is written as ' • £ ? ' How can 'REMOTE' be written in that code?

(A) ?*$@? £

(B) *$@? £?

(C) £?*$@?

(D) *$? £@?

Answer: C

Logic: From the data we have T@ ,O$, M*, E? and A•, R£, E?

Hence, REMOTE is coded as £ ? * $ @ ?

Ex 2: ZA5, Y4B, XC6, W3D, _____

(A) E7V

(B) V2E

(C) VE5

(D) VE7

Answer: D

Logic: There are three series to look for here. The first letters are alphabetical in reverse: Z, Y, X, W, V. The second letters are in alphabetical order, beginning with A. The number series is as follows: 5, 4, 6, 3, 7.

Ex 3: DEF, DEF2, DE2F2, _____, D2E2F3

(A) DEF3
(B) D3EF3
(C) D2E3F
(D) D2E2F2

Answer: D

Logic: In this series, the letters remain the same as DEF.
The subscript numbers follow this series as,
111, 112, 122, 222, 223, 233, 333, ...

Ex 4: In a certain code 'PALM' is coded as '!@?$' and 'ARM' is written as '@*$', how can 'ALARM' be written in that code?

A. @!@?$
B. @$?!@
C. ?@@!$
D. NONE OF THESE

Answer: D

Logic: The corresponding symbols for the letters in the given question is not matching.