

## CODING AND DECODING

### Introduction:

Almost every test of reasoning contains questions on coding. In such questions, generally one word and its code are given, and the students are required to find the code for the other word. The student is required to apply the same logic, as was applied in the given words.

### Commonly asked questions based on coding:

- Some of the major types of coding logics are
- Constant addition in the position of letters.
- Constant subtraction in the position of letters.
- Denoting the position of letters in the whole alphabetical order.
- Addition of the positions of all the letters to make code for the word.
- Constant addition and subtraction alternatively in the position of all the letters.
- Square of the number of letters in the word.
- Arranging the letters in the alphabetical order.
- Arrangement of letters in the word given in reverse order.
- Interchanging each pair of the letters, in the given word.
- Constant addition and then reversal of the letters to form the final word.

### Basic points you need to remember before solving any question of this topic:

Alphabets' positions (A = 1, B = 2, ....., Y = 25, Z = 26)

Opposite position of alphabet (A = 26, B = 25, ....., Z = 1)

Opposite of each alphabet (A is opposite to Z, B is opposite to Y and so on)

### Letter Coding:

In a certain code, "PARKING" is written as "RYTIKLI". How will FLOWERS be written in that code?

### Explanation:

Find out the pattern by comparing the 1<sup>st</sup> letter of PARKING with the 1<sup>st</sup> letter of RYTIKLI.

We observe that P is converted to R. R is two positions after P.

Now A is converted to Y. So, we can conclude that A is two positions before Y.

So, PARKING is coded as +2 and -2 alphabets in an alternate manner.

Using the same logic, we can decode flowers

F – (+2) – H

L – (-2) – J, as so on

The correct answer is 'HJQUHPQ'.

### SUBSTITUTION:

In such questions, names/words are substituted with different names/words. We have to carefully trace the substitution to arrive at the correct answer.

For instance: If 'Parrot' is known as 'Peacock', 'Peacock' is known as 'Swallow', 'Swallow' is known as 'Pigeon', 'Pigeon' is known as 'Sparrow', what would be the name of the national bird?

**Explanation:** We know 'peacock' is the national bird. But in the given question, 'Peacock' is coded as 'Swallow'. So 'Swallow' is the correct answer.

### MIXED LETTER CODING:

In a certain code language,

'new banking system' means 'ss tp na'

'officer in uniform' means 'or mu at'

'new bank officer' means 'or bk na'

'systems in bank' means 'bk at ss'

What is the code for 'in'?

### Explanation:

In statements (2) and (4), the common code word is 'in' and the common code is 'at'.

What does the code 'bk' stand for?

### Explanation:

In statements (3) and (4), the common code word is 'bk' and the common word for that is 'bank'.

### MIXED NUMBER CODING:

In a certain code,

'467' means 'leaves are green',

'485' means 'green is good'

'639' means 'they are paying'.

What is the number code for 'leaves'?

### Explanation:

In statements 1 and 3, the common word is 'green' and the common number is '4'. So, '4' is for 'green'. Now, in statements 1 and 2, 'are' is common and '6' is common. So, '6' stands for 'are'.

In statement 1, only 'leaves' and '7' are remaining, therefore 'leaves' corresponds to '7'.

## CLASS WORK

- In a certain code, MOUSE is written as PRUQC. How is SHIFT written in that code?  
 (a) VKIRD (b) VKIDR  
 (c) VJIDR (d) VIKRD  
 (e) None of these
- In a certain code PRISM is written as OSHTL and RUBLE is written as QVAMD. How will WHORL be written in that code?  
 (a) XIPSM (b) VINSK  
 (c) UINSK (d) XGPQM  
 (e) None of these
- If in a certain code language HONESTY is written as ABCXZDQ, then how will TONY be written in that language?  
 (a) DBCQ (b) QDCX  
 (c) CBXZ (d) CQDC
- If in a certain code language BEAUTIFUL is written as CDOGHJKMN, then how will LEAF be written in that language?  
 (a) NDOK (b) KNND  
 (c) ODNK (d) DKON
- If in a certain code language STAG is written as HGZT, HORN is written as SLIM, then how will NORTH be written in that language?  
 (a) NLGMI (b) MLIGS  
 (c) MGLIS (d) NLGIS
- If in a certain code language COULD is written as BNTKC and MARGIN is written as LZQFHM, then how will MOULDING be written in that language?  
 (a) LNTKCHMF (b) CNMFINTK  
 (c) LNKTCMHF (d) NITKHCMP
- If in a certain code language PARENT is written as BDFGJK and CHILDREN is written as MOXQUFGJ, then how will REPRINT be written in that language?  
 (a) FGBFXGD (b) BGBFXJK  
 (c) FGBUXJK (d) FGBFXJK
- In a certain code, CERTAIN is coded as XVIGZRM, SEQUENCED is coded as HVJFVMXVW. How would REQUIRED be coded?  
 (a) FJIVWVIR (b) VJIFWTRV  
 (c) WVJRIFVI (d) IVJFRIVW
- If WATER is written as YCVGT, then what is written as HKTG?  
 (a) IRFE (b) FIRE  
 (c) REFI (d) ERIF
- If in a certain code language POPULAR is written as QPQVMB, then what word will be written for the code GBNPVT?  
 (a) FASOUM (b) FAMOUS  
 (c) FAMOSU (d) FAMSUO
- If FOUGHT is coded as EQRKCZ, how is MALE coded?  
 (a) LCII (b) NZMD  
 (c) KCM I (d) NBIF  
 (e) LBID
- If 'ski rps tri' stands for 'nice Sunday morning', 'tpk sti rps' stands for 'every Tuesday morning', and 'ski ptr qlm' stands for 'nice market place', what would 'Sunday' stand for?  
 (a) ski (b) rps  
 (c) tri (d) qlm
- If train is called bus, bus is called tractor, tractor is called car, car is called scooter, scooter is called bicycle, bicycle is called moped, which is used to plough a field?  
 (a) Train (b) Bus  
 (c) Tractor (d) Car  
 (e) Moped
- In a certain code, ROSE is written as #43\$ and FIRST is written as 5\*#37. How is STORE written in that code?  
 (a) 473\$# (b) 473##  
 (c) 374#\$ (d) 347##  
 (e) None of these
- If in a certain code language ORIENTAL is written as DHQNMBUO, then how will SCHOLED be written in that language?  
 (a) RBGNPMFE (b) NGBREFMP  
 (c) RBGNEFMP (d) NGBRPMFE  
 (e) None of these
- If in a certain code language CROWNED is written as PSDVEFO, then how will STREAMS be written in that language?  
 (a) SUTDBNT (b) TUSDTNB  
 (c) SUTDTNB (d) QSRDTNB  
 (e) None of these
- If in a certain language SOLDIER is written as JFSCRNK, then how will GENIOUS be written in that language?  
 (a) PVTHHFO (b) PNTHFDM  
 (c) PVTHMDF (d) TVPHFDM  
 (e) None of these

18. If in a certain code language DENIAL is coded as MDCMBJ, then how will SOURCE be written in that language?
- (a) TNRFDS (b) RNTFDS  
(c) TNRSDF (d) TRNDBQ  
(e) None of these
19. In a certain code, TERMINAL is written as NSFUMBOJ and TOWERS is written as XPUTSF. How is MATE written in that code?
- (a) FUBN (b) UFNB  
(c) BNFU (d) BNDS  
(e) None of these
20. If GERMANY is written as '7, 5, 18, 13, 1, 14, 25', how can FRANCE be written in that code?
- (a) 6, 18, 1, 14, 3, 5 (b) 6, 3, 18, 14, 1, 5  
(c) 8, 2, 14, 5, 13, 6 (d) 8, 16, 14, 3, 1, 5
21. If in a certain code language SSC is written as 19193, then how will BBC be written in that language?
- (a) 113 (b) 221  
(c) 223 (d) 213
22. If in a certain code language BRACKET is written as 9341285, DEAR is written as 6843, then how will TRADE be written in that language?
- (a) 59468 (b) 34568  
(c) 53468 (d) 53648  
(e) None of these
23. If in a certain code language ORIENT is written as 532146 and SOUL is written as 7598, then how will LINE be written in that language?
- (a) 9241 (b) 7341  
(c) 8241 (d) 6241  
(e) None of these
24. If in a certain code language BEAUTIFUL is coded as 573041208 and BUTTER is coded as 504479, then how will FUTURE be coded in that language?
- (a) 204097 (b) 201497  
(c) 704092 (d) 204079
25. If BAD is coded as YZW and FIGHT is coded as URTSG. How will you encode HIGH?
- (a) TRST (b) SRTS  
(c) STSR (d) TSRT