

A code is a type of signal. Coding is a method of transmitting a message between the sender and the receiver without a third person knowing it. Before transmitting the data is encoded and at receiver side encoded data is decoded in order to obtain original data by determining common key in encoded data.

### Approach to solve the questions of this section

- observe alphabets or numbers given in the code keenly.
- Find the sequence it follows whether it is ascending or descending.
- Detect the rule in which the alphabets/numbers/words follow.
- Fill the appropriate letter/number/word in the blank given.

### Types of Coding and Decoding

1. Letter coding
2. Number coding
3. Substitution
4. Mixed letter coding
5. Mixed Number coding

## Solved Examples

### Letter Coding:

1. If in any coded language TIMBER is written as BERMIT then in same coded language what would stand for BANTER?

- (a) TERNAB                      (b) RETNAB  
(c) TENBAR                    (d) TABNER

**Sol. (a);**  

### Number Coding:

2. If 7, 15, 15, 4 is GOOD and 2, 1, 20, 20, 5, 18 is BATTER, what number represent BEST?

- (a) 2, 5, 19, 20                      (b) 2, 19, 4, 20  
(c) 2, 4, 19, 20                      (d) 2, 5, 20, 19

**Sol. (a);** Letters are coded according to their place value in English alphabet, So, BEST @ 2, 5, 19, 20.

### Substitution:

3. 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 colour of human blood?

- (a) Red                                  (b) Green  
(c) yellow                              (d) violet

**Sol. (c);** Yellow

The colour of human blood is 'red' and as it is given that 'red' is called 'yellow'. So, the colour of human blood is 'yellow'.

### Mixed letter coding:

4. In a certain code language:

- (1) 'pod na joc' means 'very bright boy';  
(2) 'tam nu pod' means 'the boy comes';  
(3) 'nu per ton' means 'keep the doll';  
(4) 'joc ton su' means 'very good doll'.

Which of the following means 'bright' in the same code language?.

- (a) joc                                      (b) pod  
(c) ton                                      (d) na

**Sol. (d);** na

From statement 1 and 2, pod is common and the common word is 'boy'. So, 'Pod' stands for 'boy'.

From statement 1 and 4, joc is common and the common word is 'very'.

So 'joc' stands for 'very'.

So, 'na' stands for 'bright'

### Mixed number coding:

5. In a certain code,

- '786' means 'study very hard'  
'958' means 'hard work pays'  
'645' means 'study and work'.

Which of the following is the code for 'very'?

- (a) 7    (b) 5  
(c) 8    (d) 6



**Sol. (a); 7**

In first and second statements, the common word is 'hard' and the common code digit is '8'. So, '8' means 'hard'.

In the first and third statements, the common word is 'study' and the common code digit is '6'. So, '6' means study. Thus, in the first statement '7' means 'very'.

## Exercise Questions

- In a certain code, BASIC is written as DDULE. How is LEADER written in that code?  
(a) NGCFGT (b) NHCGGU  
(c) OGDFT (d) OHDGHU
- In a certain code, SPRING is written as UNUFRC. How is MOBILE Written in that code?  
(a) KQEFPA (b) OMDGNC  
(c) OMDGPA (d) OMEFPA
- In a certain code, POETRY is written as QONDSQX and OVER is written as PNUDQ. How is MORE written in that code?  
(a) LNNQD (b) NNNQD  
(c) NLNQD (d) NLPQD
- In a certain code, GERMINATION is written as IMGRENNOAIT. How is ESTABLISHED written in that code?  
(a) BEATSLEIHS (b) BAETSLEDIHS  
(c) BATESLDEIHS (d) BAETSLDEIHS
- In a certain code language, COMPUTER is written as RFUVQNPC. How is MEDICINE written in that code?  
(a) EOJDEJFM (b) EOJDJEFM  
(c) MFEDJJOE (d) MFEJDJOE
- If in a certain language, COVALENT is written as BWPDUOFM and FORM is written as PGNS. How is SILVER be written in that language?  
(a) MJTUDQ (b) KHRSFW  
(c) MJTWFS (d) MJTSFW
- In a certain code, COMPATIBLE is written as BQNPDDKAHS. How is STABILISED written in that code?  
(a) TUBCJCDRHK (b) JCBUTEDTHM  
(c) JCBUTCDRHK (d) JCBUTEFTJM
- If in a certain language, CREATIVE is written as BDSBFUJS. How is TRIANGLE written in that language?  
(a) BHSSFKHM (b) BHSSMHHF  
(c) BSHSFHKM (d) BSSHFMKH
- If in a certain language, CLOUD is written is GTRKF. How is SIGHT written in that language?  
(a) UGHHT (b) UHJFW  
(c) WFJGV (d) WGJHV
- If 'DELHI' is coded as '73541' and 'CALCUTTA' is coded as '82589662' then how 'CALICUT' will be written in that code language?  
(a) 5978213 (b) 5279431  
(c) 8251896 (d) 8543691
- In a certain code "CERTAIN" is written as "QDBVOJB". How is "RELATED" written in that Code.  
(a) QDKCVFE (b) KDQCEFU  
(c) DKCQEFV (d) KDQCVFE
- In a certain code "MADRAS" is written as "NZEQBR" then "CALCUTTA" will be written as.  
(a) OZMBVSUB (b) BBKBTVSB  
(c) DZMBVUUZ (d) DZMBVSUZ
- In a certain code "BROWN" is written as "ZPMUL" then "VIOLET" will be written as.  
(a) TGMJCR (b) SGMTCQ  
(c) TGMJCQ (d) TGWCQ
- If "BRASS" is coded as "CTBUT", "AMIT" is coded as "BOJV" then what will be code of "ADITYA".  
(a) BEJUZB (b) CEKVZB  
(c) BFJZVC (d) BFJVZC
- In a certain code "UNDER" is written as "6152@" and "DEAF" is written as "52#7". How "FRAUD" is written is that code.  
(a) 7@6#5 (b) 72#65  
(c) 7@#65 (d) None of these
- In a certain code "89654" is written as "MNOPQ" and "1634" is written as "KOLQ". How "PNKLQ" will be written in that code.  
(a) 59134 (b) 58134  
(c) 59234 (d) 59143
- In a certain code "TREAD" is written as "7%#94" and "PREY" is written as "\$%#8".How is "ARTERY" written in that code?  
(a) 9#7%#8 (b) 9#%7#8  
(c) 9%7#%8 (d) 9%#7%8
- In a certain code "SHINE" is code as "FOJIT" and "AFTER" is coded as "SFUGB". How will "PRITY" written in that code?  
(a) QSJUZ (b) ZUJSQ  
(c) ZUSJQ (d) ZQUSJ



**Directions (19-24):** Study the following information to answer the given question:

ADITYA is related to AYTIDA, SHUKLA is related to ALKUHS.

19. NUMBER is related to  
(a) AEBMUN (b) REBMUN  
(c) NUMBER (d) ABCDE
20. PROVIDE is related to  
(a) EDIVORP (b) QSPWJEF  
(c) FEJWPSQ (d) None of these
21. SANJAY is related to  
(a) YJNAS (b) YBKOB T  
(c) TBOKBZ (d) None of these
22. FIRST is related to  
(a) TSRIG (b) JSTUJ  
(c) MNOPQ (d) None of these
23. SAURABH is related to  
(a) IBBSVBT (b) HBBRVAS  
(c) HBASVBS (d) None of these
24. NIKHIL is related to  
(a) LIHINK (b) LIHKIN  
(c) LIHNIK (d) Cannot be determined

**Directions (25-30):** In a certain code "MANISH" is written as "NCOKTI", "MRADULA" is written as "NSCEWMC", "PINKI" is written "QKOLK".

25. What will be the code for "ANUP"  
(a) COWQ (b) TQOCM  
(c) CEKUZ (d) BOVQ
26. What will be the code for "SONAL".  
(a) TPOBM (b) TQOCM  
(c) TQOBM (d) TPOCM
27. What will be the code for "ADITYA"  
(a) BEJUZB (b) CEKVAB  
(c) CEKUZC (d) OWUCO
28. What will be the code for "NUTAN".  
(a) OWUCO (b) PWVCP  
(c) OWCUP (d) OWUCP
29. What will be the code for "MADHU".  
(a) NCEIM (b) NCAIM  
(c) NCEIW (d) NCWIEC
30. What will be the code for "MANOJ".  
(a) NCORK (b) NCOQK  
(c) NCOCRK (d) NCROCK



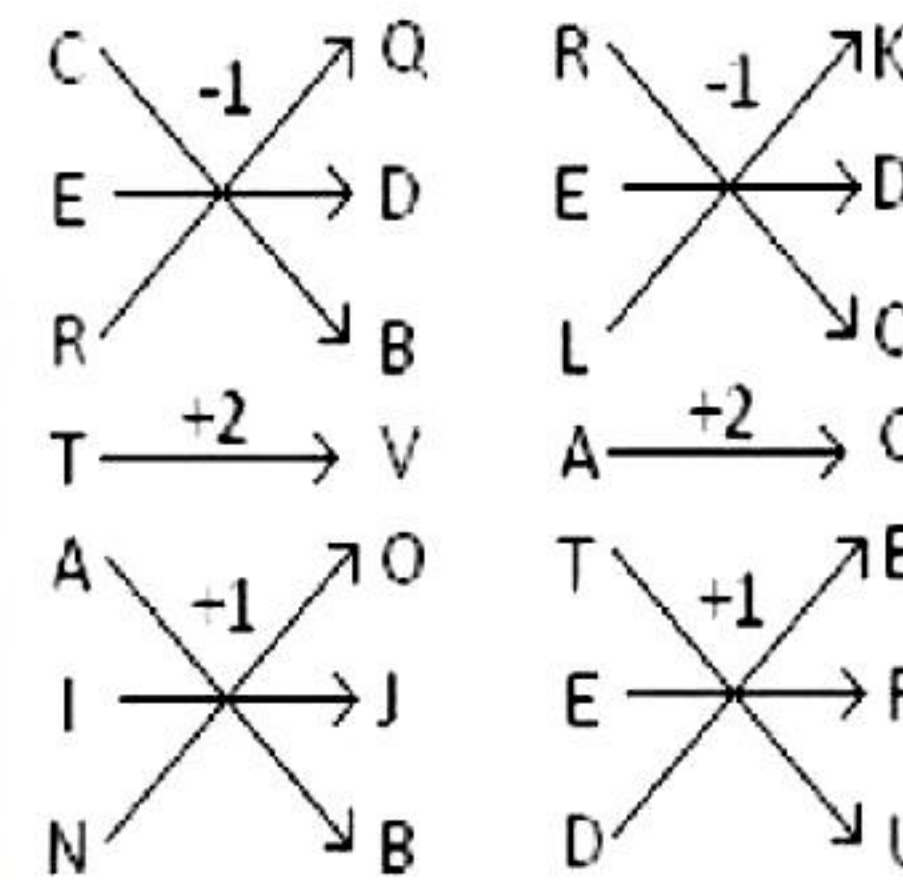
## Exercise Solutions

1. (b); The letters at the odd-numbered positions in the word are each moved two steps forward while those at the even-numbered positions are each moved three steps forward to obtain the corresponding letters of the code.
2. (d); The first, third and fifth letters of the word are each moved two, three and four steps forward respectively while the second, fourth and sixth letters are moved two, three and four steps backward respectively to obtain the corresponding letters of the code.
3. (c); The first letter of the word is replaced by a set of two letters – one following it and the other preceding it – in the code. The remaining letters of the word are each moved one step backward to obtain the remaining letters of the code, in order.
4. (d); The middle letter remains unaltered in the code. Let us label the five letters before the middle letter as well as those after it, from 1 to 5. Then, the code contains the letters of each group in the order, 5, 4, 1, 3, 2. Thus we have:  
ESTABLISHED → BAETSLDEIHS  
1 2 3 4 5 1 2 3 4 5      5 4 1 3 2 5 4 1 3 2
5. (b); Each letter of the word except the first and last letters, is moved one step forward and then the order of the letter is obtained, is reversed to get the code.
6. (d); The letters in the first half and second half of the word are written in the reverse order and then each letter of the group so obtained is moved one step forward to get the code. Thus, we have:  
SILVER → SIL/VER → LIS/REV → MJT/SFW
7. (c); The letters in the first half and second half of the word are written in the reverse order and in the group of letters so obtained each letter in the first half is moved one step forward while in the second half is moved one step backward, to get the code. Thus, we have: STABILISED → STABI/LISED → IBATS/DESIL → JCBUT/CDRHK
8. (a); The letters of the first half and the second half the words are written in the reverse order and then in the group of letters so obtained, the first, third, fifth and seventh letters are each moved one step forward while the second, fourth, sixth and eighth letters are each moved one step backward to get the code.  
Thus, we have: TRIANGLE → TRIA/NGLE →

AIRT/ELGN → BHSSFKHM

9. (d); The letters of the word are written in the reverse order and in the group of letters so obtained, the first, third, fifth letters are each moved three steps forward while the second and fourth letters are each moved one step backward to get the code.
10. (c); As; D - 7      and      C - 8      similarly  
E - 3                  A - 2      C - 8  
L - 5                  L - 5      A - 2  
H - 4                  C - 8      L - 5  
I - 1                  U - 9      I - 1  
                                T - 6      C - 8  
                                T - 6      U - 9  
                                A - 2      T - 6

11. (b);



So, KDQCEFU

12. (d); M → N (+1)      C → D (+1)  
A → Z (-1)      A → Z (-1)  
D → E (+1)      L → M (+1)  
R → Q (-1)      C → B (-1)  
A → B (+1)      U → V (+1)  
S → R (-1)      T → S (-1)  
                                T → U (+1)  
                                A → Z (-1)

So, DZMBVSUZ

13. (a); Each letter of the word BROWN has been coded two letters behind in the alphabetic order. So code of VIOLET is TGMJCR.



14. (d);  $B \xrightarrow{+1} C$     $A \xrightarrow{+1} B$     $A \xrightarrow{+1} B$   
 $R \xrightarrow{+2} T$     $M \xrightarrow{+2} O$     $D \xrightarrow{+2} F$   
 $A \xrightarrow{+1} B$     $I \xrightarrow{+1} J$     $I \xrightarrow{+1} J$   
 $S \xrightarrow{+2} U$     $T \xrightarrow{+2} V$     $T \xrightarrow{+2} V$   
 $S \xrightarrow{+1} T$     $Y \xrightarrow{+1} Z$   
 $A \xrightarrow{+2} C$

15. (c); compare UNDER and DEAF you see that DE is common and in code "52" is common in same pattern you find that code as follows:

$U \longrightarrow 6$     $D \longrightarrow 5$     $F \longrightarrow 7$   
 $N \longrightarrow 1$     $E \longrightarrow 2$     $R \longrightarrow @$   
 $D \longrightarrow 5$     $A \longrightarrow \#$     $A \longrightarrow \#$   
 $E \longrightarrow 2$     $F \longrightarrow 7$     $U \longrightarrow 6$   
 $R \longrightarrow @$     $D \longrightarrow 5$

16. (a); from given code we find that code of PNKLQ will be "59134"

17. (c);  $T \longrightarrow 7$     $P \longrightarrow \$$   
 $R \longrightarrow \%$     $R \longrightarrow \%$   
 $E \longrightarrow \#$     $E \longrightarrow \#$   
 $A \longrightarrow 9$     $Y \longrightarrow 8$   
 $D \longrightarrow 4$

So ARTERY is coded as 9%7#%8

18. (b); from reverse order each letter change to its next letter. so PRITY is coded ZUJSQ.

Logic (19-24): Each word of the series is rearrange in reverse order.

19. (b); REBMUN

20. (a); EDIVORP

21. (d); YAJNAS

22. (d); TSRIF

23. (d); HBARUAS

24. (b); LIHKIN

Logic (25-30): Each constant in series change to next letter while each vowel change to two letter next. So,

25. (a); COWQ

26. (b); TQOCM

27. (c); CEKUZC

28. (a); OWUCO

29. (c); NCEIW

30. (b); NCOQK