

Coding-Decoding

In this segment of commonsense reasoning, secret messages or words have to be decoded. They are coded as per a definite pattern/ rule which should be identified first. Then the same is applied to decode another coded word. Under this segment you come across two types of coding letter coding and number coding. Based on these two types of coding-decoding various types of problems comes your way. This chapter makes you familiar with every types of problems based on coding-decoding.

Type I : (Coding by Letter Shifting)

Pattern 1: Coding in Forward Sequence

Example 1. If 'GOOD' is coded as 'HPPE', then how will you code 'BOLD'?

Sol. Here, every letter of the word 'GOOD' shifts one place in forward alphabetical sequence. Let us see:

G	O	O	D
+1↓	+1↓	+1↓	+1↓
H	P	P	E

Similarly, every letter in the word 'BOLD' will move one place in forward alphabetical sequence as given below:

B	O	L	D
+1↓	+1↓	+1↓	+1↓
C	P	M	E

∴ Code for 'BOLD' will be 'CPME'.

Pattern 2: Coding in Backward Sequence.

Example 2. If 'NAME' is coded as 'MZLD', then how will you code 'SAME'?

Sol. Here, every letter of the word 'NAME' moves one place in backward alphabet sequence. Let us see:

N	A	M	E
-1↓	-1↓	-1↓	-1↓
M	Z	L	D

Similarly, every letter of the word 'SAME' will move one place in backward alphabet sequence. Let us see :

S	A	M	E
-1↓	-1↓	-1↓	-1↓
R	Z	L	D

∴ Code for 'SAME' will be 'RZLD'.

Pattern 3: Coding Based on Skipped Sequence.

Example 3. If the word 'FACT' is coded as 'IDFW'; then how will you code 'DEEP'?

Sol. Here, you see that 2 letters are omitted in alphabetic sequence. The following diagram gives you the more clear picture :

F	A	C	T
+3↓	+3↓	+3↓	+3↓
I	D	F	W

Clearly, 'F' (skip 2 letters) 'I'
 'A' (skip 2 letters) 'D'
 'C' (skip 2 letters) 'F'
 'T' (skip 2 letters) 'W'

Similarly, 'DEEP' can be coded. Let us see :

D	E	E	P
+3↓	+3↓	+3↓	+3↓
G	H	H	S

∴ Code for 'DEEP' will be 'GHHS'.

Type II : (Coding by Analogy)

Example 4. If 'RPTFA' stands for 'BLADE', how will you code 'BALE'.

Sol. Here, 'BLADE' has been coded as 'RPTFA'. You will see that all the letters in the word 'BALE', which have to be coded, are also there in the word 'BLADE'. Hence, all that needs to be done is to choose the relevant code letters from the code word 'RPTFA'. Therefore, B becomes R, A becomes T, L becomes P, and E becomes A. Therefore, 'BALE' will be coded as 'RTPA'.

∴ Correct answer is 'RTPA'.

Type III : (Coding by Reversing Letters)

Example 5. If 'TEMPERATURE' is coded as 'ERUTAREPMET', then how will you code 'EDUCATION' following the same scheme.

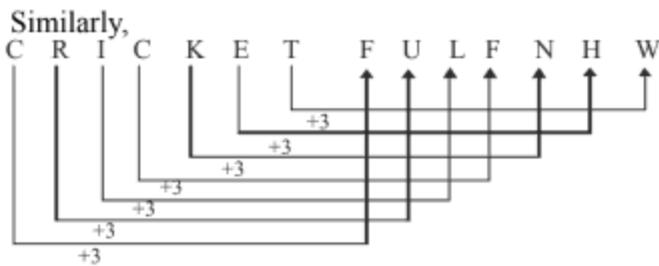
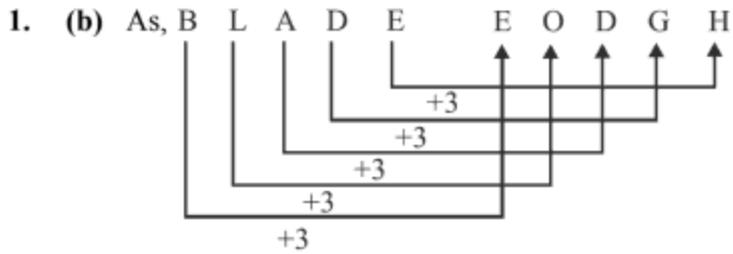
Sol. Here, the word 'TEMPERATURE' has been reversed. Hence, the code for 'EDUCATION' will be 'NOITACUDE'.

EXERCISE

- If EODGH is the code for BLADE, what is the code for CRICKET?
(a) WHNFLUF (b) FULFNHW
(c) DSJDLFU (d) ETKEMGV
- If EARTH is coded as 41590 and PALE as 2134, what is the code for PEARL?
(a) 12345 (b) 54123
(c) 21534 (d) 24153
- In a secret way of writing 'GANDHI WAS A GREAT LEADER OF INDIA' is written as 'RUFZOJ SUV U RDTUB QTUZTD EP JFZJU'. Keeping this in mind, pick the code for each word given below from the choices given:
(i) STRONG
(a) VBDERE (b) VBDEER
(c) VBEDFR (d) VBDEFR
(ii) ISLAND
(a) JVQUFZ (b) ZFUQVJ
(c) QUFZJV (d) FUZJVQ
- In a given code SISTER is coded as 535301. UNCLE as 84670 and BOY as 129. How is RUSTIC written in that code?
(a) 633185 (b) 185336
(c) 363815 (d) 581363
- If 'word' is coded as 2315184 then how will 'simple' be coded as?
(a) 199237612 (b) 1991316125
(c) 21237643 (d) 22145783
- If wall is called window, window is called door, door is called floor, floor is called roof and roof is called ventilator, what will a person stand on?
(a) Door (b) Ventilator
(c) Roof (d) Floor
- In a certain code language 'La Ke Ta' means 'go and swim', 'Ne La Se' means 'you swim here' and 'Pe Ke Ne Ta' means 'he and you go'. Which of the following is the code for 'here' in that code language?
(a) Cannot be determined (b) La
(c) Ne (d) None of these
- If 'spoon' is called 'plate' 'plate' is called 'knife', 'knife' is called 'jug', 'jug' is called 'glass', 'glass' is called 'saucer' and 'saucer' is called 'spoon', by what do we cut fruit?
(a) spoon (b) jug
(c) glass (d) saucer
- If 'A' is substituted by 26, 'B' by 25 and so on upto 'Z' which is substituted by 1, what will be the sum of the numbers substituted for the word 'WAXY'?
(a) 33 (b) 35
(c) 37 (d) 73
- If E is coded as V, D is coded as Q, N is coded as Z, G is coded as T, R is coded as I and A is coded as M, which of the following will be the correct form of the word DANGER?
(a) QMZTIV (b) QMZTVI
(c) QMZITV (d) QZMTVI
- If 'A' is substituted by 1, 'B' by 2 and so on upto 'Z' which is substituted by 26, what will be, the sum of the numbers substituted for the word DECAY?
(a) 38 (b) 41 (c) 40 (d) 37
- If AMONG is written as NAOGM and SPINE is written as NSIEP, then LAMON will be written as
(a) OALNM (b) MLONA
(c) OLMNA (d) OLNMA
- In a certain code RETAIL is written as UFSBJM, how is EXPECT written in that code?
(a) FQYFDU (b) QYFIJOF
(c) FYQFDU (d) QYFFDU
- In a certain code NAMES is written as TFNBO. How is CRANE written in that code?
(a) FMBQD (b) DSBOF
(c) FOBSD (d) FBODS
- In a certain code DAYLONG is written as ZBEKHOP. How is CORDIAL written in that code?
(a) SPDCMBJ (b) SPDEMBJ
(c) DPSCMBJ (d) SPDCJBM
- In a certain code language 'do re me' means 'he is late', 'fa me la' means 'she is early' and 'so ti do' means 'he leaves soon'. Which code in that language means 'late'?
(a) la (b) do
(c) me (d) None of these
- In a certain code 'MOTHER' is written as OMHURF. How will 'ANSWER' be written in that code?
(a) NBWRRF (b) MAVSPE
(c) NBWTRD (d) NBXSSE
- In a certain code DUPLICATE is written as MRV FJFVBE. How is CARTOUCHE written in that code?
(a) UTBEPWDJF (b) UTBFQFJDW
(c) UTBEQFJDW (d) UTBEPFJDW
- In a certain code CHITON is written as IHCNOT. How will DILATE be written in that code?
(a) ETALID (b) LIDATE
(c) LIDETA (d) ETADIL
- If 8 is written as B, 1 as R, 6 as K, 9 as O, 4 as M, 7 as W and 3 as T, then how, would WROMBT be Written in the numeric form?
(a) 714983 (b) 719483
(c) 769483 (d) 719486

21. In a certain code HOUSE is written as FTVPI how is CHAIR written in that code?
 (a) DIBJS (b) SBJID
 (c) SHBGD (d) SJBID
22. In a certain code language 'in ba pe' means 'he has won', 'le ki ba' means 'she has lost' and 'in se pe' means 'he always won'. Which word in that language means 'he'?
 (a) in (b) pe
 (c) se (d) Data inadequate
23. If 1 is coded as \$, 5 is coded as %, 9 is coded as ★, 3 is coded as +, 7 is coded as # and 4 is coded as ?, what will be the correct code of the number 435971?
 (a) ? + % ★ # \$ (b) ? + % \$ # ★
 (c) ? + ★ % # \$ (d) \$ # ★ % + ?
24. In a certain code SOLDIER is written as JFSCRNK. How is GENIOUS written in that code?
 (a) PVTHHFO (b) PVTHFDM
 (c) PVTHMDF (d) TVPHFDM
25. In a certain code MEADOW is written as BFNVNC. How is CORNER written in that code?
 (a) DPSQDM (b) SPDMDQ
 (c) SPDQDM (d) DPSMDQ
26. If in a certain code, LUTE is written as MUTE and FATE is written as GATE, then how will BLUE be written in that code?
 (a) CLUE (b) GLUE
 (c) FLUE (d) SLUE
27. In a certain code, TWINKLE is written as SVHMJKD, then how would FILTERS be written in the same code?
 (a) EHKSDQR (b) EHKUDQR
 (c) EGKUDQR (d) GJMSFST
28. In a certain code, PRODUCTIONS is written as QQPCVEUHPMT. How is ORIENTATION written in that code?
 (a) PQJDOVBSJNO (b) PQJDOUBUJPO
 (c) PSJFOVBSJNO (d) NSHFVBSJNO
29. If, in a code, MIND becomes KGLB and ARGUE becomes YPESC, then what will DIAGRAM be in that code?
 (a) BGYEPYK (b) BGYPYEK
 (c) GLPEYKGB (d) LKBGYPK
30. If in a certain code, GLAMOUR is written as IJCNMWP and MISRULE is written as OGUSSNC, then how will TOPICAL be written in that code?
 (a) VMRJECN (b) VMRHACJ
 (c) VMRJACJ (d) VNRJABJ
31. In a certain code, 'SUCCESS' is written as 'TWFGJYZ'. How will the word 'MIRACLE' be written in that language?
 (a) NKYEHL (b) NKUEHRL
 (c) NKTEHRL (d) NKUHHRL
32. In certain code MAIL is written as ZNVY then how will FILM be written in that code?
 (a) MLIF (b) NORV
 (c) XLMP (d) SVYZ
33. Coding and decoding 9: 72 :: 8 : ?
 (a) 34 (b) 18
 (c) 64 (d) 43
34. If in a code language, 'ABANDON' is written as 'aramoim'; 'BORE' is written as 'rits' and 'BASIL' is written as 'rabut's then what is the original word for the code: 'bituo'?
 (a) SOFIA (b) SOLID
 (c) NASIA (d) SOMAD
35. If "VOLKSWAGEN" is written as "UQKMRYZIDP" then "SWITZERLAND" is written as _____?
 (a) RVHSYDFPMOD (b) TXJUAFSMBOE
 (c) RYHYVGQNZPE (d) RYHVGQNZPC
36. If 'DECEMBER' is 'AUGUST', 'MARCH' is 'MAY', 'SEPTEMBER' is 'SEPTEMBER' and 'OCTOBER' is 'JULY', then 'JUNE' is?
 (a) February (b) April
 (c) January (d) November
37. If TEACHER is coded as CAHEETR and STUDENT is coded as DUETNST, then what is the code for SUCCESS?
 (a) CECSUSS (b) CCEUSSS
 (c) SCUSCES (d) UCSECS
38. If in a certain code language 'BETTER' is written as 'EHWQBO', then how will 'LAWYER' be written in that language?
 (a) ODZVBO (b) OBZVDO
 (c) DOZVBO (d) OVZOBD
39. If in a certain code language 'PERFECT' is written as '116', then how will 'DIVORCE' be written in that code?
 (a) 111 (b) 120
 (c) 113 (d) 117
40. If in English Alphabet 'e' and every alternate letter from 'e' onwards is written in Capitals, then how will sixth month from March will be coded
 (a) SEPTEmbER (b) SEptEMbEr
 (c) SepTeMber (d) SEPTEmbER

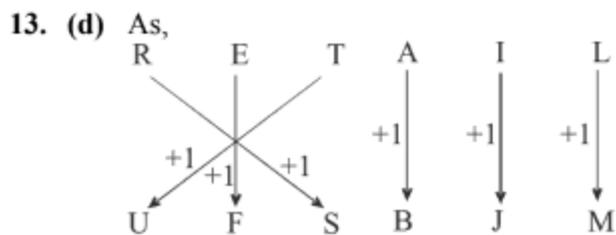
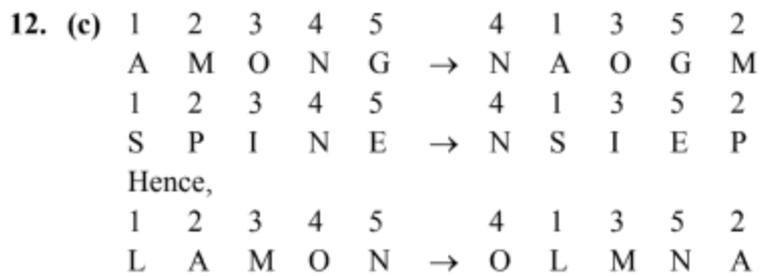
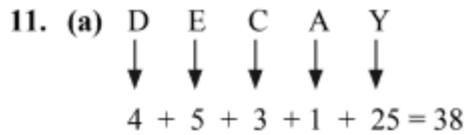
Hints & Solutions



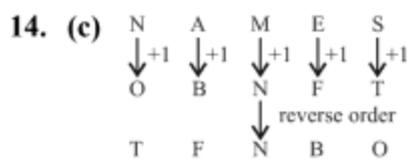
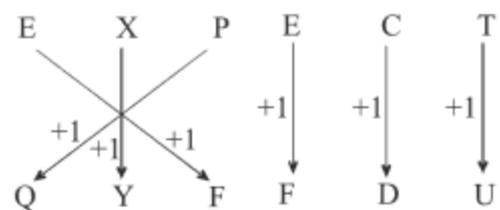
2. (d) Codes for letters are: P=2, E=4, A=1, R=5 and L=3
Hence, code of PEARL is 24153
3. Here each letter of the original sentence is coded from different letter in a code as shown below:

Sentence	GANDHI	WAS	A	GREAT	LEADER	OF	INDIA
Code	RUFZOJ	SUV	U	RDTUB	QTUZTD	EP	JFZJU

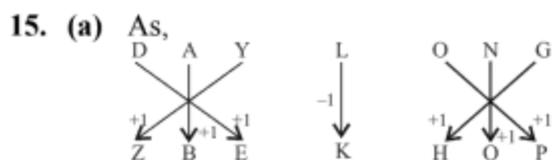
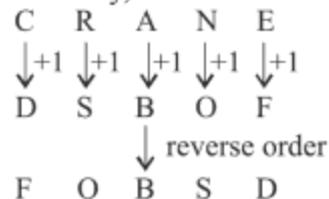
- (i) (d) Hence, code for STRONG is VBDEFR
(ii) (a) And code for ISLAND is JVQUFZ
4. (b) In this code the alphabets are coded as follows
SISTER UNCLE BOY
5 3 5 3 0 1 8 4 6 7 0 1 2 9
If we apply this method, the code comes out to be 185336
5. (b) Here we observe that 'W' has been replaced by its position code that is by 23. Similarly 'O' has been replaced by 15 therefore the word 'SIMPLE' will be coded as
S - 19, I - 9, M - 13, P - 16, L - 12, E - 5
Hence required will be code 1991316125
6. (c) A person stands on the floor and in the given code language, floor is called roof.
Hence, roof will be the correct answer.
7. (d) La Ke Ta → go and swim
Ne La Se → you swim here
Pe ke Ne Ta → he and you go
Hence, the code for 'here' is 'Se'
8. (b) We cut fruit with knife and knife is called jug, hence correct answer is jug.
9. (b) W A X Y
↓ ↓ ↓ ↓
4 + 26 + 3 + 2 = 35



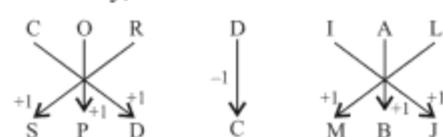
Similarly,



Similarly,



Similarly,



29. (a)
$$\begin{array}{cccc} M & I & N & D \\ -2 \downarrow & -2 \downarrow & -2 \downarrow & -2 \downarrow \\ K & G & L & B \\ \\ A & R & G & U & E \\ -2 \downarrow & -2 \downarrow & -2 \downarrow & -2 \downarrow & -2 \downarrow \\ Y & P & E & S & C \\ \\ D & I & A & G & R & A & M \\ -2 \downarrow & -2 \downarrow \\ B & G & Y & E & P & Y & K \end{array}$$

30. (c)
$$\begin{array}{cccccc} G & L & A & M & O & U & R \\ +2 \downarrow & +2 \uparrow & +2 \downarrow & +1 \downarrow & +2 \uparrow & +2 \downarrow & +2 \uparrow \\ I & J & C & N & M & W & P \\ \\ \& \\ M & I & S & R & U & L & E \\ +2 \downarrow & +2 \uparrow & +2 \downarrow & +1 \downarrow & +2 \uparrow & +2 \downarrow & +2 \uparrow \\ O & G & U & S & S & N & C \\ \\ SO, \\ T & O & P & I & C & A & L \\ +2 \downarrow & +2 \uparrow & +2 \downarrow & +1 \downarrow & +2 \uparrow & +2 \downarrow & +2 \uparrow \\ V & M & R & J & A & C & J \end{array}$$

31. (b) As,
$$\begin{array}{ccccccc} S & U & C & C & E & S & S \\ +1 \downarrow & +2 \downarrow & +3 \downarrow & +4 \downarrow & +5 \downarrow & +6 \downarrow & +7 \downarrow \\ T & W & F & G & J & Y & Z \end{array}$$

Similarly,

$$\begin{array}{ccccccc} M & I & R & A & C & L & E \\ +1 \downarrow & +2 \downarrow & +3 \downarrow & +4 \downarrow & +5 \downarrow & +6 \downarrow & +7 \downarrow \\ N & K & U & E & H & R & L \end{array}$$

32. (d) As,
$$\begin{array}{cccc} M & A & I & L \\ +13 \downarrow & +13 \downarrow & +13 \downarrow & +13 \downarrow \\ Z & N & V & Y \end{array}$$

Similarly,

$$\begin{array}{cccc} F & I & L & M \\ +13 \downarrow & +13 \downarrow & +13 \downarrow & +13 \downarrow \\ \boxed{S} & \boxed{V} & \boxed{Y} & \boxed{Z} \end{array}$$

33. (c) As, $9 \times 8 = 72$ Similarly, $8 \times 8 = \boxed{64}$

34. (b) As,
$$\begin{array}{cccccccc} A & B & A & N & D & O & N & & B & O & R & E \\ \downarrow & & \downarrow & \downarrow & \downarrow & \downarrow \\ a & r & a & m & o & i & m & , & r & i & t & s \\ \text{and } B & A & S & I & L \\ & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ & r & a & b & u & t \end{array}$$

By direct substitution :

$$\begin{array}{cccccc} b & i & t & u & o \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ \boxed{S} & \boxed{O} & \boxed{L} & \boxed{I} & \boxed{D} \end{array}$$

(Here, 't' was the code for 'R' and 'L' both, however, none of the options had R for the same).

35. (d)

36. (b) April
December is an eight letter word and August is 8th month. March is a five letter word and May is 5th month of the year. Hence, April is correct as June is four letter word and April being the 4th month.

37. (b)

38. (a)
$$\begin{array}{ccc|ccc} B & E & T & T & E & R \\ 2 & 5 & 20 & 20 & 5 & 18 \\ +3 \downarrow & +3 \downarrow & +3 \downarrow & -3 \downarrow & -3 \downarrow & -3 \downarrow \\ E & H & W & Q & B & O \\ 5 & 8 & 23 & 17 & 2 & 15 \\ \\ L & A & W & Y & E & R \\ 12 & 1 & 23 & 25 & 5 & 18 \\ +3 \downarrow & +3 \downarrow & +3 \downarrow & -3 \downarrow & -3 \downarrow & -3 \downarrow \\ O & D & Z & V & B & O \\ 15 & 4 & 26 & 22 & 2 & 15 \end{array}$$

39. (c) Here, A = 26, B = 25 z = 1

Now,

PERFECT = $11 + 22 + 9 + 21 + 22 + 24 + 7 = 116$

Similarly,

DIVORCE = $23 + 18 + 5 + 12 + 9 + 24 + 22 = 113$

40. (b) E f G h I J K l M n O p Q r S t U v W x Y z A b C d
Six month from the March will be September and month will be written in code as SEpTEMbEr