1

Coding-Decoding

Coding is a system of signals. This is a method of transmitting information in the form of codes or signals without it being known by a third person.

The person who transmits the code or signal, is called the sender and the person who receives it, is called the receiver. Transmitted codes or signals are decoded on the other side by the receiver—this is known as decoding.

In questions on coding-decoding, a word (basic word) is coded in a particular way and the candidates are asked to code other word in the same way. The coding and decoding tests are set up to judge the candidate's ability to decipher the rule that has been followed to code a particular word/message and break the code to decipher the message.

Order of the English Alphabet

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

Here, are some methods/techniques are given below to remember the positions of English alphabets in forward or backward order.

1. By using EJOTY and CFILORUX formulae, we can easily remember the position of letters of English alphabets.

3 6 9 12 15 18 21 24
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
C F I L O R U X

(sounds like a medicine name)

5 10 15 20 25
↓ ↓ ↓ ↓ ↓
E J O T Y

(sounds like a girl's name Joti)

- Backward order position of a letter = 27 − Forward order position of letter

  e.g., Backward order position of B = 27 − Forward order position of B = 27 − 2 = 25

Illustration 1. If CUP = 40, then KITE = ?

(a) 10 (b) 20 (c) 30 (d) 45

Solution (*d*) As, C U P (3 21 16) ⇒ 3 + 21 + 16 = 40

Similarly, K I T E (11 9 20 5) ⇒ 11 + 9 + 20 + 5 = 45

(using forward letter positions)

Illustration 2. What is the number place of G from right side?

(a) 10 (b) 20

(c) 25 (d) 30

Solution (*b*) 27 − G = 27 − 7 (from left)

= 20

2. By using V Q L G B and X U R O L I F C, we can easily remember the position of letters of alphabet in reverse order.

V Q L G B and X U R O L I F C
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
5 10 15 20 25 3 6 9 12 15 18 21 24

Illustration 3. If BAG = 71, then VICE = ?

(a) 69 (b) 70 (c) 75 (d) 90

Solution (*a*) As, B A G (2 26 20) ⇒ 25 + 26 + 20 = 71

Similarly, V I C E
↓ ↓ ↓ ↓
5 18 24 22

= 5 + 18 + 24 + 22 = 69

(using backward letter positions)

3. If the sum of two letters is 27, then both letters are at opposite position of each other. Some pairs of opposite letters can be remembered as given below

D W (DEW) 4 + 23 = 27

B Y (BY) 2 + 25 = 27

C X (SIX) 3 + 24 = 27

G T (GT Road) 7 + 20 = 27

I R (Indian Railway) 9 + 18 = 27

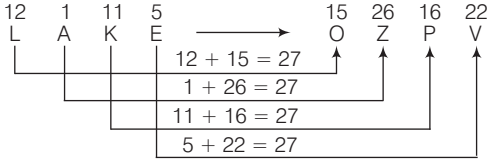
M N (MAN) 13 + 14 = 27

Illustration 4. In a certain code, LAKE is written as OZPV. How will BACK be in that same code?

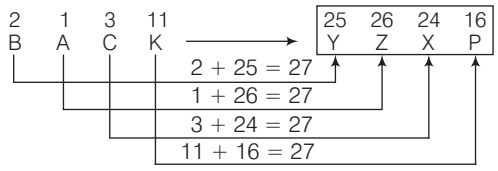
(a) ZYXP (b) ZYPX

(c) YZXP (d) YZPX

Solution (c) As,



Similarly,



Types of Questions

Following are the categories/types of questions which are generally asked in various competitive examinations.

Type 1 Letter Coding

In this type, we deal with questions, in which the letters of a word are replaced by certain other letters according to a specific pattern/rule to form a code. You are required to detect the coding pattern/rule and answer the question(s) that follow, based on that coding pattern/rule.

Illustration 5. In a certain code language, 'PICTURE' is written as 'QHDSVQF'. How would 'BROWSER' be written in that same code language?

(a) CQVVTDS (b) CQPVTDS
(c) CQPUTDS (d) CQVPPDS
(e) None of these

Solution (*b*) Clearly, the letters in the word PICTURE are moved alternately, one step forward and one step backward to obtain the letters of the code. Thus, we have

P $\xrightarrow{+1}$ Q
I $\xrightarrow{-1}$ H
C $\xrightarrow{+1}$ D
T $\xrightarrow{-1}$ S
U $\xrightarrow{+1}$ V
R $\xrightarrow{-1}$ Q
E $\xrightarrow{+1}$ F

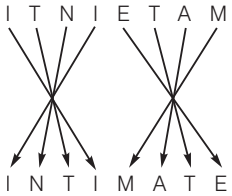
Similarly,

B $\xrightarrow{+1}$ C
R $\xrightarrow{-1}$ Q
O $\xrightarrow{+1}$ P
W $\xrightarrow{-1}$ V
S $\xrightarrow{+1}$ T
E $\xrightarrow{-1}$ D
R $\xrightarrow{+1}$ S

Illustration 6. In a certain code language, 'ITNIETAM' is code for 'INTIMATE', then which of the following words has the code for 'TREVNIETARBI'?

(a) INVRETIBRATE (b) INVERTIBARTE
(c) INVERTIBRETA (d) INVERTIBRATE
(e) INVERITBARTE

Solution (*d*) The letters of the first half and the next half of the code are separately reversed to obtain the word. Thus, we have



Similarly,

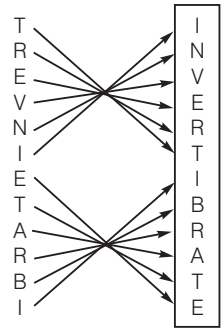
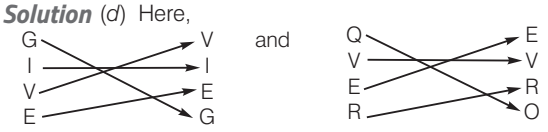


Illustration 7. In a certain code language, 'GIVE' is written as 'VIEG' and 'OVER' is written as 'EVRO'. How will 'DISK' be written in that same code?

(a) SIDK (b) KISD
(c) KDSI (d) SIKD
(e) None of these

Solution (*d*) Here,



Similarly,

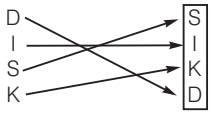
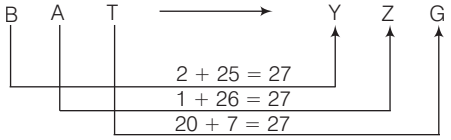


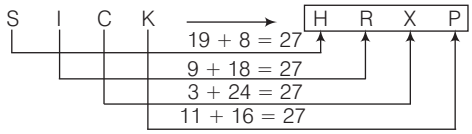
Illustration 8. In a certain code language, 'BAT' is written as 'YZG'. How will 'SICK' be written in that same code language?

(a) HRYV (b) HRZP (c) HRXP
(d) RHPX (e) None of these

Solution (c) As,



Similarly,



Important Points

- If more than one codes are given, then the required code can be derived from the question itself and you are not required to solve it mathematically. *e.g.,.* In a certain code LOCATE is written as 981265 and SPARK as 47230, the code for CASKET can be derived by common letters in LOCATE and SPARK.
- For a word in which a letter repeats at those same pattern repeats for 2nd letter in the word itself. *e.g.,* TASTE has code SZRSD, in this case, code for T is S in both cases. So, the coding pattern is -1 for T, then it will be same for all the letters.

Note Each letter is coded by the letter of its opposite position.

Type 2 Direct Letter Coding

In direct letter coding system, the code letters occur in the same sequence as the corresponding letters occur in the words. This is basically a direct substitution method.

Illustration 9. In a certain code language, 'STARK' is written as 'LBFMG' and 'MOBILE' is written as 'TNRSPJ'. How will 'BLAME' be written in that same code language?

(a) TSFRJ (b) RPFTJ (c) NJFTP
(d) TSFGJ (e) None of these

Solution (*b*) Using direct letter coding method,

S ⟶ L	and	M ⟶ T	
T ⟶ B		O ⟶ N	
A ⟶ F		B ⟶ R	
R ⟶ M		I ⟶ S	
K ⟶ G		L ⟶ P	
		E ⟶ J	

Similarly, from the direct codes

B ⟶	R
L ⟶	P
A ⟶	F
M ⟶	T
E ⟶	J

Illustration 10. In a certain coding system, 'SHEEP' is written as 'GAXXR' and 'BLEAT' as 'HPXTN'. How can 'SLATE' be written in that same coding system?

(a) GPTNX (b) GPTXN (c) GPXNT
(d) PTGXN (e) None of these

Solution (*a*) In both the words 'SHEEP' and 'BLEAT', the letter E is common and code for E is substituted X. Hence, using direct letter coding method, we have

S ⟶	G	and	B ⟶ H
H ⟶	A		L ⟶ P
E ⟶	X		E ⟶ X
E ⟶	X		A ⟶ T
P ⟶	R		T ⟶ N

Similarly, using the direct codes

S ⟶	G
L ⟶	P
A ⟶	T
T ⟶	N
E ⟶	X

Type 3 Number/Symbol Coding

In this type of questions, either numerical code values are assigned to a word or alphabetical code letters are assigned to the numbers.

Illustration 11. If 'WORK' is coded as '4-12-9-16', then how will you code 'WOMAN'?

(a) 4-12-14-26-13 (b) 4-26-14-13-12
(c) 23-12-26-14-13 (d) 23-15-13-1-14
(e) None of these

Solution (*a*) We have,

W ⟶ 4 Hence, W ⟶ 4
O ⟶ 12 O ⟶ 12
R ⟶ 9 M ⟶ 14
K ⟶ 16 A ⟶ 26
N ⟶ 13

Here, each letter is coded by the numerical obtained by subtracting its 'position value' in English alphabetical order, from 27, e.g., W, O, M, A, N are at 23rd, 15th, 13th, 1st and 14th position in alphabetical order. So, their codes are (27–23), (27–15), (27–13), (27–1), (27–14), *i.e.*, 4, 12, 14, 26, 13, respectively *i.e.,* their backward order position.

Illustration 12. If 'RAJU' is coded as 11-12-13-14 and 'JUNK' is coded as 13-14-10-9, then how will you code 'RANK'?

(a) 9-10-11-12 (b) 10-11-12-9
(c) 11-12-10-9 (d) 12-11-10-9
(e) None of these

Solution (c) We have,

R ⟶ 11 and J ⟶ 13
A ⟶ 12 U ⟶ 14
J ⟶ 13 N ⟶ 10
U ⟶ 14 K ⟶ 9

Similarly, R ⟶ 11
A ⟶ 12
N ⟶ 10
K ⟶ 9

Here, each letter is assigned a specific value.

Directions (Illustrations 13-15) *Study the following letters and their corresponding digits codes following by certain conditions of coding and then answer the questions given below them by finding out which of the digit combinations given in (a), (b), (c) and (d) is the coded form of the letter-groups given in each question and mark your answer accordingly.*

Letters	P	N	A	J	I	R	E	B	U	K
Digits/Codes	5	3	9	1	4	6	2	7	0	8

Conditions

(i) If both the first and the last letters in the group are vowels, both should be coded as $.

(ii) If both the first and the last letters in the group are consonants, both should be coded as #.

Illustration 13. KUNAJB

(a) 803917 (b) 0391
(c) #0391# (d) #0391$
(e) None of these

Illustration 14. RBUKAE

(a) #70892 (b) 670892
(c) 670982 (d) 607892
(e) None of these

Illustration 15. EBNAPI

(a) 273954 (b) 7395
(c) #7395# (d) $7395#
(e) None of these

Solutions (Illustrations 13-15) We know that, in English alphabets A, E, I, O, U letters are vowels and remaining letters are consonants.

13. (*c*) From condition (ii),

K U N A J B
↓ ↓ ↓ ↓ ↓ ↓
0 3 9 1

14. (*b*) R B U K A E
↓ ↓ ↓ ↓ ↓ ↓
6 7 0 8 9 2

Note This question does not follow any condition.

15. (*b*) From condition (i),

E B N A P I
↓ ↓ ↓ ↓ ↓ ↓
$ 7 3 9 5 $

Type 4 Deciphering Message Word Coding/Numeral Coding

In this type of questions to analyse such codes, any two messages bearing a common word/numeral are picked up. The common code word/numeral will represent that word/code. Proceeding similarly by picking up all possible combinations of two, the entire message can be decoded and the codes for every individual word/numeral can be found.

Illustration 16. In a certain code language, 'it pit sit' means 'I am boy', 'it nit sit' means 'I am girl', which of the following means 'girl'?

(a) it (b) pit (c) sit
(d) nit (e) None of these

Solution (*d*) We have,

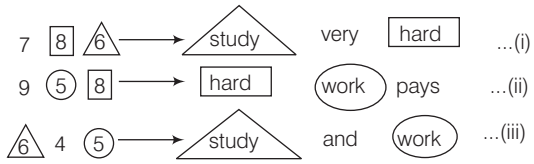
it pit sit ⟶ I am boy
it nit sit ⟶ I am girl

Here, 'it' and 'sit' is common in both the messages and 'I' and 'am' is common in both codes. Hence, code for girl will be 'nit'.

Illustration 17. In a certain code language, '786' means 'study very hard', '958' means 'hard work pays' and '645' means 'study and work'. Which of the following is the code for 'very'?

(a) 8
(b) 6
(c) 7
(d) Cannot be determined
(e) None of the above

Solution (*c*) Given,



In the first and second statements, the common code digit is '8' and the common word is 'hard'. So, '8' means 'hard'. In the first and third statements, the common code digit is '6' and the common word is 'study'. So, '6' means 'study'.

From Eqs. (i) and (ii), 8 ⟶ hard
From Eqs. (i) and (iii), 6 ⟶ study
Hence, very ⟶ 7

Type 5 Substitution Coding

In this type, some particular words are assigned with certain substituted names. Now, questions are formed based on that principles.

Illustration 18. 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', then what would be the colour of human blood?

(a) Red (b) Green
(c) Yellow (d) Violet
(e) Orange

Solution (*c*) We know that, the colour of the human blood is 'red' and given that 'red' is called 'yellow'. So, the colour of human blood will be 'yellow'.

Illustration 19. If 'Parrot' is known as 'Peacock', 'Peacock' is known as 'Swallow', 'Swallow' is known as 'Pigeon' and 'Pigeon' is known as 'Sparrow', then what would be the name of Indian National Bird?

(a) Parrot (b) Swallow
(c) Peacock (d) Pigeon
(e) Sparrow

Solution (*b*) We know that, Peacock is the Indian National Bird but here Peacock is known as Swallow. So, the answer is Swallow.

Let us Practice

A. Base Level Exercise

1. In a certain code, SOBER is written as RNADQ. How LOTUS can be written in that code? **[SSC (Multitasking) 2013]**

(a) KNSTR (b) MPUWT
(c) KMSTR (d) LMRST

2. If 'MEAT' is written as 'TEAM', then 'BALE' is written as **[SSC (CGL) 2013]**

(a) ELAB (b) EABL
(c) EBLA (d) EALB

3. If 'WATER' is written as 'YCVGT', then what is written as 'HKTG'? **[SSC (CGL) 2013]**

(a) IRFE (b) FIRE
(c) REFI (d) ERIF

4. If the word 'TABLECLOTH' is coded as 'XEMRANRIXT', how can 'HOTEL' be coded? **[RRB (ASM) 2011]**

(a) RIXAT (b) TIXAR
(c) TAXIR (d) RAXIT

5. If ' CARING' is coded as 'EDVGKC' , and SHARES is coded as 'UKEPBO', how will CASKET be coded as in the same code? **[SSC (CPO) 2013]**

(a) EDXIBP (b) EDWIAP
(c) EDWPAI (d) EDWIBP

6. If DEMOCRATIC is written as EDMORCATCI, how CONTINUOUS will be written in the same code? **[CG PSC 2013]**

(a) OCTNNIOUSU
(b) OTCNINUOUS
(c) OCNTNIUOSU
(d) OTNCINUOSU
(e) CONNITUOSU

7. In a certain code, P is #, A is %, C is ϕ and E is @. How is PEACE written in that code? **[IBPS (Clerk) 2012]**

(a) #@%@# (b) #@#ϕ@
(c) %#@ϕ% (d) #@%ϕ@
(e) None of these

8. In a certain code, 'BELIEF' is written as 'AFKKDH'. How would 'SELDOM' be written in that code?

(a) RDKCHL (b) RFKENM
(c) RFKFNO (d) TFKENP
(e) None of these

9. In a certain code language 'LIEUTENANT' is written as 1232212021411420, then how 'MANGO' can be written in that code language?

(a) 13114715 (b) 1311474
(c) 14141375 (d) 13114157

10. If 'DELHI' is coded as '73541' and 'CALCUTTA' as '82589662', how will 'CALICUT' be coded? **[MAT 2012]**

(a) 5279431 (b) 5978213
(c) 8251896 (d) 8543691

11. If in a certain code, 'DAUGHTER' is written as 'TERDAUGH', how will 'APTITUDE' be written in that code? **[SSC (Steno) 2012]**

(a) DEUAPTIT (b) UDEAPTIT
(c) DUEAPTIT (d) DAUEPTIT

12. In a certain code, 'TERMINAL' is written as 'NSFUMBOJ' and 'TOWERS' is written as 'XPUTSF'. How is 'MATE' written in that same code? **[IBPS (Clerk) 2012]**

(a) FUBN (b) UFNB
(c) BNFU (d) BNDS
(e) None of these

13. 165135 is to 'peace' as 1215225 is to **[IB (ACIO) 2013]**

(a) lead (b) love
(c) loop (d) aura

14. If PARK is coded as 5394, SHIRT is coded as 17698 adn PANDIT is coded as 532068, how would you code NISHAR in that code language?

(a) 266734 (b) 231954
(c) 201739 (d) 261739

15. If 'SYNDICATE' is written as 'SYTENDCAI', then how can 'PSYCHOTIC' be written?
(a) PSYICTCOH (b) PSYCOHTCI
(c) PSICYOCTH (d) PSICYCOTH

16. In a certain code, 'REFRIGERATOR' is coded as 'ROTAREGIRFER'. Which words from the following would be coded as 'NOITINUMMA'?
(a) ANMOMIUTMI (b) AMNTOMUIIN
(c) AMMUNITION (d) NMMUNITIOA
(e) None of these

17. In a certain code, 'CERTAIN' is coded as 'XVIGZRM' 'SEQUENCE' is coded as 'HVJFVMXV'. How would 'REQUIRED' be coded? **[SSC (CGL) 2012]**
(a) FJIVWVIR (b) VJIFWTRV
(c) WVJRIFVI (d) IVJFRIVW

18. In a certain code, 'BUILDER' is written as JVCKSFE. How is 'SEALING' written in that same code? **[RRB (TC/CC) 2009]**
(a) BFTKHOJ (b) JOHKBT
(c) TFBKHOJ (d) BFTKJOH

19. In a coded language, BRINJAL is written as LAJNIRB. How will LADYFINGER be written in that code? **[SSC (Multitasking) 2014]**
(a) RNEGIFYDAL (b) RINEGIFYDAL
(c) REGNIFYDAL (d) RGENIFYDAL

20. In a certain code language, 'CURATIVE' is written as 'BSVDDUHS'. How 'STEAMING' is to be written in the same code language?
(a) BFUTFMHL (b) TUFBFMHL
(c) BFUTLHMF (d) BFUTHOJN
(e) None of these

21. If 'NEUROTIC' can be written as 'TICRONEU', then how can 'PSYCHOTIC' be written?
(a) TICOCHPSY (b) TICCHOPSY
(c) TICCOHPSY (d) TICHCOPSY

22. In a certain code language, 'COMPUTRONE' is written as 'PMOCTUENOR'. How is 'ADVANTAGES' written in that same code? **[CMAT 2003]**
(a) IDUJLAIC (b) UJIDLAIC
(c) UJIDICLA (d) IDUJICLA
(e) None of these

23. If 'GLOSSORY' is coded as '97533562' and 'GEOGRAPHY' = '915968402', then 'GEOLOGY' can be coded as
(a) 915692 (b) 9157592
(c) 9057592 (d) 9157591

24. If 'REASON' is coded as 5 and 'BELIEVED' as 7, what is the code number for 'GOVERNMENT'? **[SSC (Multitasking) 2012]**
(a) 10 (b) 6 (c) 9 (d) 8

25. In a certain code, 'MOUSE' is written as 'PRUQC'. How is 'SHIFT' written in that same code? **[Vijaya Bank (Clerk) 2010]**
(a) VKIRD (b) VKIDR (c) VJIDR
(d) VIKRD (e) None of these

26. In a certain code 'CALANDER' is written as 'CLANAEDR'. How is 'CIRCULAR' written in that code?
(a) ICCRLURA (b) CRIUCALR
(c) CRIUCLRA (d) CRIARLCU

27. In a certain code, 'CLOCK' is written as 'XOLXP'. How will 'LOTUS' be written in that same code?
(a) OGLFH (b) OLGFH
(c) LOGFH (d) OLGHF
(e) None of these

28. In a certain code, 'LATE' is written as 'VGZO'. How will 'SHINE' be written in that same code?
(a) VRMSH (b) VMSHR
(c) VMRSH (d) MVRSH
(e) None of these

29. If LOFTY is coded as LPFUY, then DWARF will be written as
[RBI (Grade 'B') 2011]
(a) DXASF (b) DXBSG (c) DXATF
(d) DWBSG (e) None of these

30. In a coding system, 'JUNE' is written as 'PQRS' and 'AUGUST' is written as 'WQFQMN'. How can 'GUEST' be written in the same coding language?
(a) FQTMN (b) FPSMN
(c) FQSMN (d) FQSNM
(e) None of these

31. If in a code language, 'PARENT' is written as 'BDFGJK' and 'CHILDREN' is written as 'MOXQUFGJ', then how is 'REPRINT' written in that same code?
(a) FGBFXJK (b) FGBUXJK
(c) FGBFXGD (d) BGFXJK

32. Some letters are given below in the first line and numbers are given below them in the second line. Numbers are the codes for the alphabets and *vice-versa*. Choose the correct number-code for the given set of alphabets.

C	W	E	A	Z	X	J	Y	K	L
3	9	5	7	4	8	1	0	2	6

J W X C L Z
(a) 198364 (b) 198264
(c) 198354 (d) 197354

33. Some letters are given below in the first line and numbers are given below them in the second line. Numbers are the codes for the alphabets and *vice-versa*. Choose the correct letter-code for the given set of numbers.

E	M	K	B	Z	W	Q	U	D	J
5	9	1	6	4	8	2	0	7	3

4 2 9 7 5 3
(a) ZQMJDE (b) ZQMEDJ
(c) ZQMDEJ (d) ZQEDMJ

34. Some capital letters are given below in the first line and numbers are assigned to each of them in the second line. The numbers are the codes for the letters and *vice-versa*.

M	O	E	A	S	J	T	Z
3	5	7	6	2	9	4	0

Choose the correct number code for the given set of letters
EAST
(a) 7620 (b) 7623
(c) 7624 (d) 7625

35. If DISC is coded as 8749 and ACHE is coded as 3950, then HEAD is coded as
(a) 5038 (b) 5308
(c) 3508 (d) 3805

36. In a code language, 'PRINCE' is written as 'FLOWER' and 'PRINCESS' is written as 'FLOWERSS'. Which of the following word would be coded as 'SLOWER'?
(a) SRINCE (b) SIRNCE
(c) SRNICE (d) None of these

37. In a code language, 'ORGANISATION' is written as 'CBDWLQJWYQCL' and 'OPERATION' is written as 'CXFBWYQCL'. How would 'SEPARATION' be coded?
(a) EJXEBYQCL (b) JFQYWBCXQL
(c) JFXWBWYQCL (d) QCLYWBFXJE

Directions (Q. Nos. 38-41) *In a defence message,* GETAWAY, FIRE, BACK-WARDS, MOVE, SLOW *is coded as* BENCDCI, QHOE, PCTL-DCOXU, ZMWE, VFMD. *Based on this coding scheme, spot the codes of the following words*

38. OVER
(a) MWED (b) MWEO
(c) MWOE (d) MWZO

39. DEADLY
(a) XECXEI (b) XEEXCI
(c) XECXFI (d) XENXFI

40. REWARD
(a) OEDCOU (b) OEDCOX
(c) OEDNXE (d) OTDCOX

41. GREAT
(a) BOECN (b) BOENC
(c) BOEHC (d) BOEQN

42. In a certain code, 'ZOOM' is written as 'POON' and 'ROAD' is written 'QOBE'. How would 'NOMP' be coded in that code language?
(a) PONX (b) QOHB
(c) XONY (d) MONZ

43. If 'MUSICAL' is written as 'KWQKACJ', then how can 'SPRINKLE' be written? **[SSC (CGL) 2013]**
(a) QRBKCNJG (b) QNPGLIJC
(c) QRPKLMJG (d) URTKPMNG

44. In a certain code, 'STOVE' is written as 'FNBLK', then how will 'VOTES' be written in the same code? **[SSC (CPO) 2003]**
(a) FLKBN (b) LBNKF
(c) LKNBF (d) LNBKF

45. If 'MACHINE' is coded as 19-7-9-14-15-20-11, then how will you code 'DANGER' in the same code?
(a) 11-7-20-16-11-24 (b) 13-7-20-9-11-25
(c) 10-7-20-13-11-24 (d) 13-7-10-11-25

Directions (Q. Nos. 46-50) *Study the following information carefully and answer the given questions.* **[IDBI Bank (PO) 2010]**

In a certain code '318' means 'run very fast', '289' means 'to run away', '97' means 'to see' and '43' means 'very good'.

46. What is the code for 'see'?
(a) 3 (b) 7 (c) 4
(d) 9 (e) None of these

47. Which of the following represents, 'see good run away'?
(a) 8472 (b) 7914 (c) 7319
(d) 3289 (e) None of these

48. What is the code for 'run'?
(a) 3 (b) 8 (c) 1
(d) 9 (e) None of these

49. Which of the following may represent 'good to see away'?
(a) 7485 (b) 3149
(c) 5439 (d) 2479
(e) None of these

50. What does '4' represent in this code?
(a) very (b) fast
(c) run (d) good
(e) None of these

51. If 'LINGER' is '123456' and 'FORCE' is '56789', then 'FIERCE' will be
(a) 345667 (b) 456678
(c) 345677 (d) 556789
(e) Cannot be determined

52. In a certain code 'PRISM' is written as 'OSHTL' and 'RUBLE' is written as 'QVAMD'. How will 'WHORL' be written in that code? **[Allahabad Bank (PO) 2011]**
(a) XIPSM (b) VINSK
(c) UINSK (d) XGPQM

53. If A = 1, ACE = 9, then ART = ? **[SSC (10+2) 2013]**
(a) 10 (b) 39
(c) 29 (d) 38

54. In a certain code, FLOWERS is written as EKNVDQR. How is SUPREME written in that code? **[RRB (ASM) 2011]**
(a) TQDROLD (b) RTODQLD
(c) TQDDROL (d) RTOQDLD

55. If A = 1, ACT = 24, then FAT= ? **[SSC (10+2) 2013]**
(a) 26 (b) 25 (c) 27 (d) 24

56. If B = 2, BAG = 10, then BOX = ? **[SSC (10+2) 2013]**
(a) 36 (b) 39 (c) 41 (d) 52

57. If each of the letters in the English alphabet is assigned and even numerical value by giving A=2, B = 4 and so on, what would be the total value of the letters for the word 'Lady' when similarly coded? **[SSC (CGL) 2013]**
(a) 74 (b) 72
(c) 84 (d) 82

58. If in a certain code language 'DASHE' is '21845', then how would 'SHADE' be written in that same code language?
(a) 84125 (b) 84215
(c) 84152 (d) 84124

59. If 'ACNE' is coded as 1, 3, 14, 5, then 'BOIL' will be coded as
(a) 5, 31, 21, 25 (b) 2, 15, 9, 12
(c) 5, 29 19, 25 (d) 5, 29,19, 27

60. In a certain code language, 'DOME' is written as '8943' and 'MEAL' is written as '4321'. What group of letters can be formed for the code '38249'?
[SBI (Clerk) 2012]
(a) EOADM (b) MEDOA
(c) EMDAO (d) EDAMO
(e) None of these

61. If 'FLARE' is coded as 21, 15, 26, 9, 22, then how would 'BREIF' be coded in the same language?
(a) 25, 9, 22, 21, 18 (b) 5, 37, 11, 19, 13
(c) 13, 19, 11, 37, 5 (d) 25, 9, 22, 18, 21

62. If the word 'LEADER' is coded as 20-13-9-12-13-26, how would you write 'LIGHT'?
(a) 20-16-17-15-27 (b) 20-15-16-18-23
(c) 20-17-15-16-28 (d) 20-16-15-17-22

63. In a certain code language, 'SAFER' is written as '5@3#2' and 'RIDE' is written as '2© %#', how would 'FEDS' be written in that code? **[RBI (Grade 'B') 2009]**
(a) 3#©5 (b) 3@%5
(c) 3#%5 (d) 3#%2
(e) None of these

64. If in a certain code language, 'EAT' is written as '318' and 'CHAIR' is written as '24156', then how 'TEACHER' be written in that code language?
[Delhi Police (Constable) 2009]
(a) 8313426 (b) 8312436
(c) 8321436 (d) 8312346

65. If CAT = 12, then MAN =?
(a) 14 (b) 24 (c) 16 (d) 15
(e) None of these

B. Expert Level Exercise

Directions (Q. Nos. 1-5) *Study the following information carefully and answer the questions given below it.* **[IBPS (Clerk) 2012]**

Digits in the numbers are to be coded as follows

Digits	9	2	1	7	5	3	6	4	8
Codes	B	V	M	L	D	P	A	F	R

Conditions

(i) If the first as well as the last digits are even, both are to the coded by the code for the first digit.

(ii) If the first as well as the last digits are odd, both are to be coded by the code for the last digit.

1. 562183
(a) PAVMRP (b) DAVMRD
(c) PAVMRD (d) DAVMRP
(e) None of these

2. 627851
(a) PULRDM (b) AVLDRM
(c) AVLFDM (d) AVLRDM
(e) None of these

3. 812354
(a) RLVPDF (b) FMVPDF
(c) RMVPDR (d) None of these

4. 397416
(a) PBLFMP (b) ABLFMA
(c) PVLFMA (d) PBLFMA
(e) None of these

5. 734192
(a) DPFMBV (b) LPAMBV
(c) LPFMVB (d) LPFMBV
(e) None of these

Directions (Q. Nos. 6-10) *In each of the questions given below, given a group of digits followed by four combinations of letters/symbols numbered (a), (b), (c) and (d). You have to find out which of the combinations correctly represents the group of the digits based on the coding system and the conditions given below. Mark the number of that combination as your answer. If none of the combinations correctly represent the group of digits, mark (e), i.e., 'None of these' as your answer.*

Digits	5	1	3	4	9	6	8	2	7
Letters/ Symbols	P	A	K	%	R	@	D	©	M

Conditions

(i) If the first digit is odd and the last digit is even, the codes for the first and last digits are to be reversed.

(ii) If the first and the last digits are even, both are to be coded as ★.

(iii) If the first and the last digits are odd, both are to be coded as $.

6. 215349

(a) RAPK%© (b) ★APK%★
(c) $APK%$ (d) ©APK%R
(e) None of these

7. 671254

(a) @MA© P% (b) $MA©P$
(c) ★MA© P★ (d) %MA© P©
(e) None of these

8. 813469

(a) RAK%@D (b) DAK%@R
(c) DAP%@R (d) ★AK%@★
(e) None of these

9. 794821

(a) MR%D©A (b) AR%D©M
(c) M%RD©A (d) $R%D© $
(e) None of these

10. 591426

(a) @RA%©P (b) PRA%©@
(c) @AR%©P (d) $RA%©★
(e) None of these

Directions (Q. Nos. 11-15) *Study the following information carefully to answer the given questions.* **[IBPS (Clerk) 2013]**

In a certain code

'very large risk associated' is written as 'nu ta ro gi',

'risk is very low' is written as 'gi se nu mi',

'is that also associated' is written as 'ta mi po fu',

'inherent risk also damaging' is written as 'fu nu di yu'.

(All the codes are two letter codes only)

11. Which of the following represents 'risk also large'?

(a) nu fu po (b) nu gi ro
(c) ro po ta (d) fu nu ro
(e) ro yu fu

12. What is the code for 'very'?

(a) ta (b) fu (c) ro
(d) nu (e) gi

13. What is the code for 'associated'?

(a) mi (b) ta (c) ro
(d) gi (e) nu

14. What does the code 'di' stand for?

(a) Either 'damaging' or 'inherent'
(b) inherent
(c) also
(d) low
(e) risk

15. Which of the following represents 'that is low'?

(a) po mi di (b) se po mi
(c) ta mi po (d) se po nu
(e) ta mi se

16. In a certain language, 'sun shines brightly' is written as 'ba lo sul', 'houses are brightly lit' as 'kado ula ari ba' and 'light comes from sun' as 'dopi kup lo mo'. What are the codewords for 'sun' and 'brightly'?

(a) ba, sul (b) sul, lo
(c) lo, ba (d) ba, lo

17. In a certain code language, 'po ki top ma' means 'Usha is playing cards', 'kop j ki ma' means 'Asha is playing tennis', 'ki top sop ho' means 'they are playing foot-ball' and 'po sur kop' means' cards and tennis. Which word in that languages menas 'Asha'? **[GRPSC 2013]**

(a) ja (b) ma
(c) kop (d) top

18. In a certain language, 'me lo po' means 'anu weds vinay' and 'pe to lo' means 'vinay comes here', which word in that language means 'come'?

(a) pe (b) to (c) me
(d) po (e) pe or to

Directions (Q. Nos. 19-23) *In each question below, a group of digits/symbols is given, followed by four combinations of letters numbered (a), (b), (c) and (d). You have to find out which of the combinations (a), (b), (c) and (d) correctly represents the group of digits/symbols based on the following coding system and the conditions those follow and mark the number of that combination as your answer. If none of the four combinations correctly represents the group of digits/symbols, mark (e) i.e., 'None of these' as the answer.* **[Vijaya Bank (Clerk) 2012]**

Digits/ Symbols	5	9	@	©	3	8	1	$	%	4	2	6	★	7	δ	#
Letters/ Codes	B	E	P	A	K	D	F	H	Q	I	R	J	U	M	V	T

Conditions

(i) If the first unit in the group is an even digit and the last unit is a symbol, both these are to be coded as the code for the symbol.

(ii) If the first unit in the group is an odd digit and the last unit is an even digit their codes are to be interchanged.

(iii) If both the first and the last units in the group are symbols, both these are to be coded as 'X'.

19. @91$26

(a) JEFHRP (b) PEFHRP
(c) XEFHRX (d) PEFHRJ
(e) None of these

20. 387#©9

(a) KMDTAE (b) KDMATE
(c) EDMTAK (d) KDMTAE
(e) None of these

21. 4@312δ

(a) VPKFRV (b) VPKFRI
(c) XPKFRX (d) IPKFRV
(e) None of these

22. %4187★

(a) QIFDMU (b) UNIFDMQ
(c) XIFDMX (d) UIFDMU
(e) None of these

23. 9124δ6

(a) EFRIVJ (b) JFRIVE
(c) EFRIVE (d) XFRIVX
(e) None of these

24. In a certain code language, '123' means 'bright little boy', '145' means 'tall big boy' and '637' means 'beautiful little flower'. Which digit in that language means 'bright'?

(a) 1 (b) 2
(c) 3 (d) 4

25. In a certain code, '975' means 'throw away garbage', '528' means 'give away smoking' and '213' means 'smoking is harmful'. Which digit in that code means 'smoking'?

(a) 5 (b) 8
(c) 2 (d) 3

26. In a certain code, 'BASKET' is written as '5$3%#1' and 'TRIED' is written as '14★#2'. How is 'SKIRT' written in that code? **[IBPS (PO) 2011]**

(a) 3%★41 (b) 3★%41
(c) 3%#41 (d) 3#4%1
(e) None of these

27. In a certain code language, '3a, 2b, 7c' means 'truth is eternal', '7c, 9a, 8b, 3a' means 'enmity is not eternal' and '4d, 2b, 8b' means 'truth does not'. Which of the following means 'enmity' in that language?

(a) 3a (b) 7c
(c) 8b (d) 9a
(e) None of these

28. If 'Lily' is called 'Lotus', 'Lotus' is called 'Rose', 'Rose' is called 'Sunflower' and 'Sunflower' is called 'Marigold', then which will be the national flower of India?

(a) Lily (b) Lotus (c) Rose
(d) Marigold (e) Sunflower

29. In a certain code, the following numbers are coded by assigning signs

1	2	3	4	5	6	7	8	9
<	+	=	□	↑	→	>	≠	−

which number can be decoded from the given symbols? **[SSC (Constable) 2012]**

→ ≠ > = <

(a) 63181 (b) 68731
(c) 62781 (d) 63118

30. On another planet, the local terminology for 'earth', 'water', 'light', 'air' and 'sky' are 'sky', 'light', 'air', 'water' and 'earth', respectively. If someone is thirsty there, what would he drink?

(a) Light (b) Air
(c) Sky (d) Water

31. 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) Swimmers (b) Snakes
(c) Flying (d) Hunters
(e) None of these

32. If 'bucket' is known as 'tub', 'tub' is known as 'glass', 'glass' is known as 'saucer', 'saucer' is known as 'spoon', then which utensil will be used for drinking water?

(a) Tub (b) Saucer (c) Glass
(d) Spoon (e) None of these

33. If 'orange' is called 'butter', 'butter' is called 'soap', 'soap' is called 'ink', 'ink' is called 'honey' and 'honey' is called 'orange', then which of the following will be used for washing clothes?

(a) Honey (b) Butter (c) Orange
(d) Soap (e) Ink

34. In a certain code, the following alphabets are coded in a certain way by assigning numbers as follows

A D I L M N O R W
1 2 3 4 5 6 7 8 9

Which word can be decoded from the following? **[SSC (FCI) 2012]**

163514 97842

(a) ANIMAL WORLD
(b) ANIMAL LESS WORLD
(c) WORLD OF ANIMALS
(d) ANIMALS WORLD

Directions (Q. Nos. 35-39) *Study the following information carefully and answer the following questions.* **[SBI (PO) 2013]**

In a certain code language.

'economics is not money' is written as 'ka la ho ga'

'demand and supply economics' is written as 'mo ta pa ka'

'money makes only part' is written as 'zi la ne ki'

'demand makes supply economics' is written as 'zi mo ka ta'

35. What is the code for 'money' in the given code language?

(a) ga (b) mo
(c) pa (d) ta
(e) la

36. What is the code for 'supply' in the given code language?

(a) Only ta (b) Only mo
(c) Either pa or mo (d) Only pa
(e) Either mo or ta

37. What may be the possible code for 'demand only more' in the given code language?

(a) xi ne mo (b) mo zi ne
(c) ki ne mo (d) mo zi ki
(e) xi ka ta

38. What may be the possible code for 'work and money' in the given code language?

(a) pa ga la (b) pa la lu
(c) mo la pa (d) tu la ga
(e) pa la ne

39. What is the code for 'makes' in the given code language ?

(a) mo (b) pa
(c) ne (d) zi
(e) ho

Direction (Q. No. 40) *According to certain codes*

(i) 'min fin bin gin' means 'trains are always late'.

(ii) 'gin din cin hin' means 'drivers were always punished'.

(iii) 'bin cin vin rin' means 'drivers stopped all trains'

(iv) 'din kin fin vin' means 'all passengers were late'.

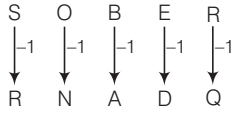
40. 'Drivers were late' would be written as

(a) min cin din
(b) cin din fin
(c) fin din gin
(d) gin hin min
(e) None of the above

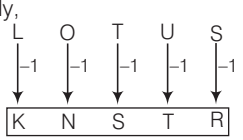
Answer *with* Explanations

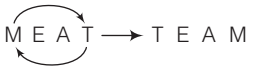
A. Base Level Exercise

1. (*a*) As,



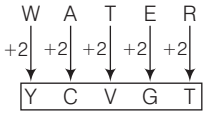
Similarly,



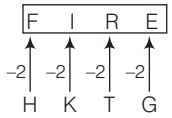
2. (*d*) 

Then, BALE will be written as EALB

3. (*b*)

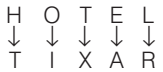


Now, word written for code HKTG is

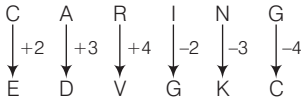


4. (*b*) As,

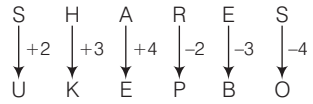
Similarly,



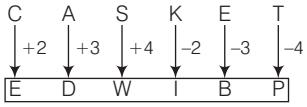
5. (*d*) As,



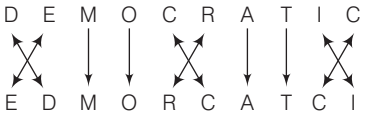
and



Similarly,



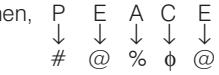
6. (*c*) As,



Similarly,

7. (*d*) If, 'P' means #, 'A' means %, 'C' means ϕ and 'E' means @.

Then,



8. (*c*) As, B $\xrightarrow{-1}$ A Similarly, S $\xrightarrow{-1}$ R

E $\xrightarrow{+1}$ F E $\xrightarrow{+1}$ F

L $\xrightarrow{-1}$ K L $\xrightarrow{-1}$ K

I $\xrightarrow{+2}$ K D $\xrightarrow{+2}$ F

E $\xrightarrow{-1}$ D O $\xrightarrow{-1}$ N

F $\xrightarrow{+2}$ H M $\xrightarrow{+2}$ O

9. (*b*) In the given code language, each consonant is shown as it's place value. Further vowels have an another sequence

$A \to 1, E \to 2, I \to 3, O \to 4, U \to 5$

$\therefore$ MANGO - 13 1 14 74

i.e., 1311474

10. (*c*) If D↓7 E↓3 L↓5 H↓4 I↓1

and C↓8 A↓2 L↓5 C↓8 U↓9 T↓6 T↓6 A↓2 Then,

C↓8 A↓2 L↓5 I↓1 C↓8 U↓9 T↓6

11. (*b*) As, 1 2 3 4 5 6 7 8 6 7 8 1 2 3 4 5

DAUGHTER→TERDAUGH

Similarly, 1 2 3 4 5 6 7 8 6 7 8 1 2 3 4 5

APTITUDE→UDEAPTIT

12. (*c*) If, T E R M I N A L

N S F U M B O J

+1 +1 +1 +1 +1 +1 +1 +1

and T O W E R S

X P U T S F

+1 +1 +1 +1 +1 +1

Then, M A T E

B N P U

+1 +1 +1 +1

13. (*b*) p e a c e

16 5 1 3 5

Place in th alphabetical order

So, 1215225 is decoded as love.

14. (*d*) P A R K S H I R T

5 3 9 4 1 7 6 9 8

P A N D I T So, N I S H A R

5 3 2 0 6 8 2 6 1 7 3 9

15. (*d*) As, S Y N D I C A T E

S Y T E N D C A I

Similarly,

P S Y C H O T I C

P S I C Y C O T H

16. (*c*) As, Similarly

R E F R I G E R A T O R → R O T A R E G I R F E R

A M M U N I T I O N → N O I T I N U M M A

Note All letters are coded in revese order.

17. (*d*) As, C↓X E↓V R↓I T↓G A↓Z I↓R N↓M

and S↓H E↓V Q↓J U↓F E↓V N↓M C↓X E↓V

Hence, R↓I E↓V Q↓J U↓F I↓R R↓I E↓V D↓W

Note The letters given here are opposite letters to each other.

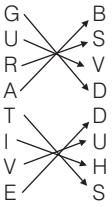
18. (*a*) As, Similarly,

B U I L D E R → J V C K S F E (+1, +1, −1)

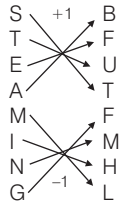
S E A L I N G → B F T K H O J (+1, −1, +1)

19. (*c*) Letters of the word are written in reverse order.

20. (*a*) As,



Similarly,



21. (*b*) As, N E U R O T I C

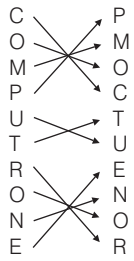
T I C R O N E U

Similarly,

P S Y C H O T I C

T I C C H O P S Y

22. (*e*) As,



Similarly,

23. (*b*)

G	L	O	S	S	O	R	Y
9	7	5	3	3	5	6	2

G	E	O	G	R	A	P	H	Y
9	1	5	9	6	8	4	0	2

∴ GEOLOGY = 9157592

24. (*c*) Given, REASON = 5

BELIEVED = 7

Here, Number of letters –1

Now, GOVERNMENT = 9

∴ Number of letter = 10 – 1 = 9

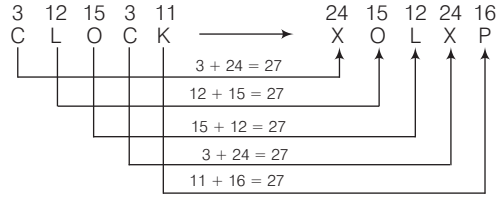
25. (*b*) As, M $\xrightarrow{+3}$ P, O $\xrightarrow{+3}$ R, U $\longrightarrow$ U, S $\xrightarrow{-2}$ Q, E $\xrightarrow{-2}$ C

Similarly, S $\xrightarrow{+3}$ V, H $\xrightarrow{+3}$ K, I $\longrightarrow$ I, F $\xrightarrow{-2}$ D, T $\xrightarrow{-2}$ R

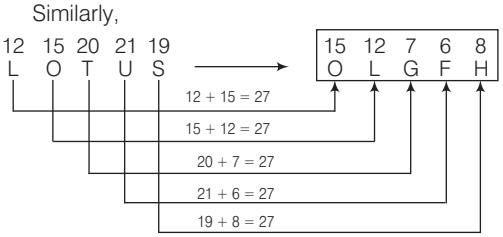
26. (*b*) As,

Similarly,

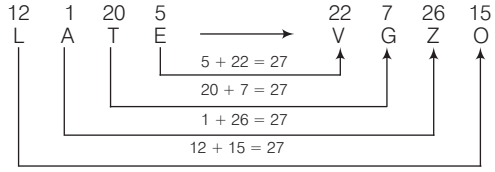
27. (*b*) As,



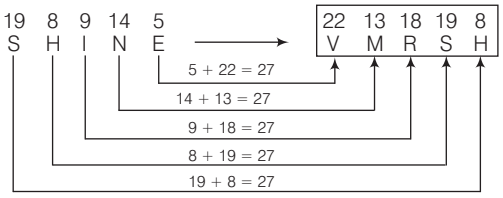
Similarly,



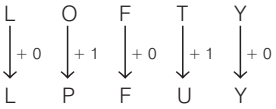
28. (*c*) As,



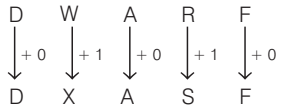
Similarly,



29. (*a*) Given,



Then,



30. (*c*) As, J ⟶ P and A ⟶ W Similarly, G ⟶ F

U ⟶ Q	U ⟶ Q	U ⟶ Q
N ⟶ R	G ⟶ F	E ⟶ S
E ⟶ S	U ⟶ Q	S ⟶ M
	S ⟶ M	T ⟶ N
	T ⟶ N	

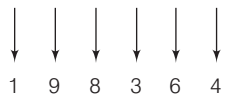
31. (*a*) As, P ⟶ B and C ⟶ M

A ⟶ D	H ⟶ O
R ⟶ F	I ⟶ X
E ⟶ G	L ⟶ Q
N ⟶ J	D ⟶ U
T ⟶ K	R ⟶ F
E ⟶ G	N ⟶ J

Similarly,

R ⟶ F
E ⟶ G
P ⟶ B
R ⟶ F
I ⟶ X
N ⟶ J
T ⟶ K

32. (*a*) J W X C L Z



1 9 8 3 6 4

33. (*c*) The correct letter code for the given set of number is Z Q M D E J.

34. (*c*) M O E A S J T Z
3 5 7 6 2 9 4 0 EAST = 7624

So, the correct number code for the given set of letters EAST is 7624.

35. (*a*)

Letters	D	I	S	C	A	H	E
Code	8	7	4	9	3	5	0

So, code of HEAD is 5038.

36. (*a*) As, P ⟶ F and P ⟶ F

R ⟶ L	R ⟶ L
I ⟶ O	I ⟶ O
N ⟶ W	N ⟶ W
C ⟶ E	C ⟶ E
E ⟶ R	E ⟶ R
	S ⟶ S
	S ⟶ S

Similarly,

S ⟶ S
R ⟶ L
I ⟶ O
N ⟶ W
C ⟶ E
E ⟶ R

37. (*c*) As, O ⟶ C and O ⟶ C

R ⟶ B	P ⟶ X
G ⟶ D	E ⟶ F
A ⟶ W	R ⟶ B
N ⟶ L	A ⟶ W
I ⟶ Q	T ⟶ Y
S ⟶ J	I ⟶ Q
A ⟶ W	O ⟶ C
T ⟶ Y	N ⟶ L
I ⟶ Q	
O ⟶ C	
N ⟶ L	

Similarly,

S ⟶ J
E ⟶ F
P ⟶ X
A ⟶ W
R ⟶ B
A ⟶ W
T ⟶ Y
I ⟶ Q
O ⟶ C
N ⟶ L

Solutions (Q. Nos. 38-41)

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

38. (*b*) O ⟶ M, V ⟶ W, E ⟶ E, R ⟶ O

39. (*c*) D ⟶ X, E ⟶ E, A ⟶ C, D ⟶ X, L ⟶ F, Y ⟶ I

40. (*b*) R ⟶ O, E ⟶ E, W⟶ D, A ⟶ C, R ⟶ O, D ⟶ X

41. (*a*) G ⟶ B, R ⟶ O, E ⟶ E, A ⟶ C, T ⟶ N

42. (*d*) As, Z ⟶ P, O ⟶ O, O ⟶ O, M ⟶ N and R ⟶ Q, O ⟶ O, A ⟶ B, D ⟶ E

Similarly, N ⟶ M, O ⟶ O, M ⟶ N, P ⟶ Z

43. (*c*) As, M U S I C A L → K W Q K A C J (–2, +2, –2, +2, –2, +2, –2)

Similarly, S P R I N K L E → Q R P K L M J G (–2, +2, –2, +2, –2, +2, –2, +2)

44. (*b*) As, S ⟶ F, T ⟶ N, O ⟶ B, V ⟶ L, E ⟶ K

Similarly, V ⟶ L, O ⟶ B, T ⟶ N, E ⟶ K, S ⟶ F

45. (*c*) As, M $\xrightarrow{+6}$ 19, A $\xrightarrow{+6}$ 7, C $\xrightarrow{+6}$ 9, H $\xrightarrow{+6}$ 14, I $\xrightarrow{+6}$ 15, N $\xrightarrow{+6}$ 20

Similarly, D $\xrightarrow{+6}$ 10, A $\xrightarrow{+6}$ 7, N $\xrightarrow{+6}$ 20, G $\xrightarrow{+6}$ 13, E $\xrightarrow{+6}$ 11, R $\xrightarrow{+6}$ 24, E $\xrightarrow{+6}$ 11

Solutions (Q. Nos. 46-50)

Code		Means
3 1 8	⟶	run very fast
2 8 9	⟶	to run away
9 7	⟶	to see
4 3	⟶	very good

46. (*b*) See ⟶ 7

47. (*a*) See Good Run Away ⟶ 8472

48. (*b*) Run ⟶ 8

49. (*d*) Good to See away ⟶ 2479

50. (*d*) 4 ⟶ Good

51. (*e*) As, L ⟶ 1 and F ⟶ 5
I ⟶ 2 O ⟶ 6
N ⟶ 3 R ⟶ 7
G ⟶ 4 C ⟶ 8
E ⟶ 5 E ⟶ 9
R ⟶ 6

Similarly, F ⟶ 5
I ⟶ 2
E ⟶ 9/5
R ⟶ 6/7
C ⟶ 8
E ⟶ 9/5

Hence, cannot be determined.

52. (*b*) Given,

P	R	I	S	M
−1	+1	−1	+1	−1
O	S	H	T	L

and

R	U	B	L	E
−1	+1	−1	+1	−1
Q	V	A	M	D

Then,

W	H	O	R	L
−1	+1	−1	+1	−1
V	I	N	S	K

53. (*b*) As, A = 1 (place value)
and ACE = 1 + 3 + 5 (place value of ACE) = 9
Similarly, ART = 1 + 18 + 20 (place value of ART)
= 39

54. (*d*) Given,

F	L	O	W	E	R	S
−1	−1	−1	−1	−1	−1	−1
E	K	N	V	D	Q	R

Then,

S	U	P	R	E	M	E
−1	−1	−1	−1	−1	−1	−1
R	T	O	Q	D	L	D

55. (*c*) As, A = 1
ACT = 1 + 3 + 20 = 24
Similarly, FAT = 6 + 1 + 20 = 27

56. (*c*) As, B = 2
and BAG = 2 + 1 + 7 = 10
Similarly, BOX = 2 + 15 + 24 = 41

57. (*c*) LADY = 2(12 + 1 + 4 + 25)
= 2 × 42 = 84

58. (*a*) As, D ⟶ 2 Similarly, S ⟶ 8
A ⟶ 1 H ⟶ 4
S ⟶ 8 A ⟶ 1
H ⟶ 4 D ⟶ 2
E ⟶ 5 E ⟶ 5

59. (*b*) As, A ⟶ 1 Similarly, B ⟶ 2
C ⟶ 3 O ⟶ 15
N ⟶ 14 I ⟶ 9
E ⟶ 5 L ⟶ 12

60. (*d*) As,

D	O	M	E
↓	↓	↓	↓
8	9	4	3

and

M	E	A	L
↓	↓	↓	↓
4	3	2	1

Similarly,

3	8	2	4	9
↓	↓	↓	↓	↓
E	D	A	M	O

61. (*d*) As, F ⟶ 21 Similarly, B ⟶ 25
L ⟶ 15 R ⟶ 9
A ⟶ 26 E ⟶ 22
R ⟶ 9 I ⟶ 18
E ⟶ 22 F ⟶ 21

Note Each letter is coded in opposite alphabet sequence.

62. (*c*) As,

12	5	1	4	5	18
L	E	A	D	E	R
+8	+8	+8	+8	+8	+8
20	13	9	12	13	26

Similarly,

12	9	7	8	20
L	I	G	H	T
+8	+8	+8	+8	+8
20	17	15	16	28

63. (*c*) As, S ⟶ 5 and R ⟶ 2
A ⟶ @ I ⟶ ©
F ⟶ 3 D ⟶ %
E ⟶ # E ⟶ #
R ⟶ 2

Similarly, F ⟶ 3
E ⟶ #
D ⟶ %
S ⟶ 5

64. (*b*) As, E ⟶ 3 and C ⟶ 2
A ⟶ 1 H ⟶ 4
T ⟶ 8 A ⟶ 1
I ⟶ 5 R ⟶ 6

Similarly, T ⟶ 8
E ⟶ 3
A ⟶ 1
C ⟶ 2
H ⟶ 4
E ⟶ 3
R ⟶ 6

65. (*a*) As, $\overset{3}{C}\ \overset{1}{A}\ \overset{20}{T}$ = (3 + 1 + 20) ÷ 2
= 24 ÷ 2 = 12

Similarly, $\overset{13}{M}\ \overset{1}{A}\ \overset{14}{N}$
= (13 + 1 + 14) ÷ 2
= 28 ÷ 2 = 14

B. Expert Level Exercise

1. (*a*) 5 6 2 1 8 3
↓ ↓ ↓ ↓ ↓ ↓
P A V M R P
[condition number (ii) follows]

2. (*d*) 6 2 7 8 5 1
↓ ↓ ↓ ↓ ↓ ↓
A V L R D M
[no condition follows]

3. (*c*) 8 1 2 3 5 4
↓ ↓ ↓ ↓ ↓ ↓
R M V P D R
[condition number (i) follows]

4. (*d*) 3 9 7 4 1 6
↓ ↓ ↓ ↓ ↓ ↓
P B L F M A
[no condition follows]

5. (*d*) 7 3 4 1 9 2
↓ ↓ ↓ ↓ ↓ ↓
L P F M B V
[no condition follows]

6. (*d*) 2 1 5 3 4 9
↓ ↓ ↓ ↓ ↓ ↓
© A P K % R
[none of the conditions is applicable]

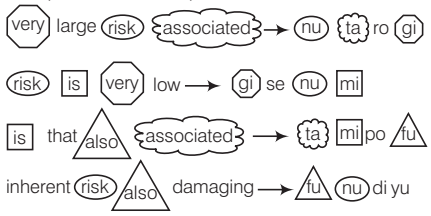
7. (*c*) 6 7 1 2 5 4
↓ ↓ ↓ ↓ ↓ ↓
☆ M A © P ☆
[condition (ii) is applicable]

8. (*b*) 8 1 3 4 6 9
↓ ↓ ↓ ↓ ↓ ↓
D A K % @ R
[none of the conditions is applicable]

9. (*d*) 7 9 4 8 2 1
↓ ↓ ↓ ↓ ↓ ↓
$ R % D © $
[condition (iii) is applicable]

10. (*a*) 5 9 1 4 2 6
↓ ↓ ↓ ↓ ↓ ↓
@ R A % © P
[condition (i) is applicable]

Solutions (Q. Nos. 11-15)



11. (*d*) risk also large → nu fu ro
12. (*e*) very → gi
13. (*b*) associated → ta
14. (*a*) 'di' stands for either 'damaging' or 'inherent'.
15. (*b*) that is low → po mi se
16. (*c*) sun shines brightly ⟶ ba lo sul …(i)
houses are brightly lit
⟶ kado ula ariba …(ii)
light comes from sun
⟶ dopi kup lo mo …(iii)
From Eqs. (i) and (ii), brightly ⟶ ba
From Eqs. (i) and (iii), sun ⟶ lo
Hence, sun ⟶ lo and brightly ⟶ ba

17. (*a*) po ki top ma ⟶ Usha is playing cards
Kop ja ki ma ⟶ Asha is playing tennis
ki topsopno ⟶ they are playing football
posur kop ⟶ Cards and tennis
So, Asha ⟶ ja

18. (*e*) me lo po ⟶ anu weds vinay …(i)
pe to lo ⟶ vinay comes here …(ii)
From Eqs. (i) and (ii), lo ⟶ vinay
Hence, come is either as pe or to.

19. (*d*)

@	9	1	$	2	6
↓	↓	↓	↓	↓	↓
P	E	F	H	R	J

[no such condition is follow]

20. (*d*)

3	8	7	#	©	9
↓	↓	↓	↓	↓	↓
K	D	M	T	A	E

[no such condition is follow]

21. (*a*)

4	@	3	1	2	d
↓	↓	↓	↓	↓	↓
V	P	K	F	R	V

[(i) condition follow]

22. (*c*)

%	4	1	8	7	☆
↓	↓	↓	↓	↓	↓
X	I	F	D	M	X

[(iii) condition follows]

23. (*b*)

9	1	2	4	d	6
↓	↓	↓	↓	↓	↓
J	F	R	I	V	E

[(ii) condition follows]

24. (*b*) 1 2 3 ⟶ bright little boy …(i)
1 4 5 ⟶ tall big boy …(ii)
6 3 7 ⟶ beautiful little flower …(iii)
From Eqs. (i) and (ii), 1 ⟶ boy
From Eqs. (i) and (iii), 3 ⟶ little
Hence, 2 ⟶ bright.

25. (*c*) 9 7 5 ⟶ throw away garbage …(i)
5 2 8 ⟶ give away smoking …(ii)
2 1 3 ⟶ smoking is harmful …(iii)
From Eqs. (ii) and (iii), smoking ⟶ 2

26. (*a*) As,

B	A	S	K	E	T
↓	↓	↓	↓	↓	↓
5	$	3	%	#	1

and

T	R	I	E	D
↓	↓	↓	↓	↓
1	4	*	#	2

Similarly,

S	K	I	R	T
↓	↓	↓	↓	↓
3	%	*	4	1

27. (*d*) 3a 2b 7c ⟶ truth is eternal …(i)
7c 9a 8b 3a ⟶ enmity is not eternal …(ii)
4d 2b 8b ⟶ truth does not …(iii)
From Eqs. (i) and (ii), 7c ⟶ is/eternal
From Eqs. (i) and (iii), 2b ⟶ truth
From Eqs. (ii) and (iii), 8b ⟶ hot
Hence, 9a ⟶ enmity

28. (*c*) We know that, national flower of India is Lotus and here Lotus is called Rose.

29. (*b*) According to given sign's table,

→	≠	>	=	<
↓	↓	↓	↓	↓
6	8	7	3	1

30. (*a*) Water quenches thirst and here water is called as light.

31. (*c*) Lizard ⟶ flying

32. (*b*) Glass is used for drinking water and here glass is called as saucer.

33. (*e*) Soap is used for washing clothes and here soap is called ink.

34. (*a*) According to given alphabets codes

1	6	3	5	1	4	9	7	8	4	2
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
A	N	I	M	A	L	W	O	R	L	D

Solutions (Q. Nos 35-39) *On the basis of given information*

economics is not money ⟶ ka la ho ga …(i)
demand and supply economics ⟶ mo ta pa ka …(ii)
money makes only part ⟶ zi la ne ki …(iii)
demand makes supply economics
⟶ zi mo ka ta …(iv)

35. (*c*) **36.** (*e*) **37.** (*a*) **38.** (*b*) **39.** (*d*)

40. (*b*) min fin bin gin ⟶ trains are always late …(i)
gin din cin hin ⟶ drivers were always punished …(ii)
bin cin vin rin ⟶ drivers stopped all trains …(iii)
din kin fin vin ⟶ all passengers were late …(iv)
From Eqs. (i) and (iv), fin ⟶ late
From Eqs. (ii) and (iii), cin ⟶ drivers
From Eqs. (ii) and (iv), din ⟶ were
Hence, drivers were late ⟶ cin din fin