Chapter - 15

CODING-DECODING

Answer Key with **Step-by-Step Solutions**
Includes: All MCQs + **Extra PYQs** with Detailed Explanations

Previous Year Questions

1. 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
2. If in a certain language, MADRAS is coded as NBESBT, how BOMBAY coded in that language?
   (a) CPNCBX (b) CPNCBZ
   (c) CPOCBZ (d) CQOCBZ
3. If FISH is written as EHRG in a certain code, how would JUNGLE be written in that code?
   (a) ITMFKD (b) ITNFKD
   (c) KVOHMF (d) TIMFKD
4. In a certain code, TWINKLE is written as SVHOJKD then how would FILTERS be written in that code?
   (a) EHKSDQR (b) EHKUDQR
   (c) EGHUDQR (d) GJMSFST
5. In a certain code, ROAD is written as URDG. How is SWAN written in that code?
   (a) VXDQ (b) VZDQ
   (c) VZCP (d) UXDQ
6. If in a certain language, OPERATION is written as NODQBUJPO. How is INVISIBLE written in that language?
   (a) JOWJTJCMF (b) JOWJTHAKD
   (c) HMUHTJCMF (d) HMUHTHAKD
7. In a certain code, FAVOUR is written as EBUPTS. How is DANGER written in that code?
   (a) CBFFDS (b) CBMHDS
   (c) EBFHDS (d) EBHHFS
8. If SUMMER is coded as RUNNER , the code for WINTER will be
   (a) SUITER (b) VIOUER
   (c) WALKER (d) SUFFER
9. In a certain code, PRODUCTIONS is written as QQPCVEUHPMT. How is ORIENTATION written in that code?
   (a) PQJDOVBSJNO (b) PQJDOUBUJPO
   (c) PSJFOVBSJNO (d) NSHFMVBSJN
10. If in a code, MIND becomes KGLB and ARGUE becomes YPESC, then what will DIAGRAM be in that code?
    (a) BGYEPYK (b) BGYPYEK
    (c) GLPEYKB (d) LKBGYPK

11. If 'EARN' is written as 'RANE' in a certain code and 'BOND' is written as 'NODB' then how would 'TEAR' be written in the same code?
(a) EART (b) ATRE
(c) AERT (d) REAT

12. If 'PAGES' is written as 'RDIHU' in a certain code and 'WRITE' is written as 'YUKWG' then how would 'OTHER' be written in that same code?
(a) PWIHS (b) RVKGU
(c) RWJHU (d) QWJHT

13. If in a certain language 'SPORADIC' is coded as 'QNORDJEB' then how would 'TROUBLES' be coded in that same language?
(a) SQTNTFMC (b) TNQSRDKA
(c) TNQSTFMC (d) TFQSCMFT

14. If in a certain language 'LAWN' is coded as 'JCUP' then how would 'SLIT' be coded in that same language?
(a) QNGV (b) QJGV
(c) QNVG (d) NJGV

15. If cod for 'SATELLITE' is FUBTLDSHK', then what would be the code for 'LAUNCHING'?
(a) DOUBFGMHO (b) OVBMCFMHG
(c) OVMBCFMHG (d) DOUBCFMHG

16. In a coded language 'FORMATION' is written as 'ZSXTJOBSL' and 'RACIAL' is written as 'XJNBJQ'. How will 'RATIONAL' be written in that same code language?
(a) XJOBSLJQ (b) JXOBSLJQ
(c) XJOBSJLQ (d) JXOBSJLQ

17. In a coding system, 'KINETIC' is written as 'TICDKIN'. How is 'MACHINE' written in that same code?
(a) ENIGMAC (b) INEGMAC
(c) INEGCAM (d) ENIGCAM

18. In a certain language 'DESCRIBE' is coded as 'FCJSDTFE', then how 'CONSIDER' coded in that same language?
(a) SFEJJOPED (b) SEFJTOPED
(c) QFETJOPD (d) None of these

19. If A = 1, BAN = 17, then INDIA = ?
(a) 37 (b) 36
(c) 35 (d) 9

20. If 'Y'is coded as 2, PEN is coded as = 11-22-13 then what word can we get from 10-6-18-24-16=?
(a) QUICK (b) QUITE
(c) JFRXP (d) QUACK

21. If 'GEAR' is coded as '5914' and 'ROUTE' is coded as '47289' then 'GATE' may be coded as
(a) 5187 (b) 5189
(c) 5289 (d) 5429

22. In a certain code, 'EAT' is written as '318' and 'CHAIR' is written as '24156', then how 'TEACHER' be written in that code language?
(a) 8313426 (b) 8312436
(c) 8321436 (d) 8312346

23. In a certain language, 'spread red carpet' means '247', 'dust one carpet' means '236', 'one red carpet' means '234'. Which of the following means 'dust' in that language?
(a) 2 (b) 3
(c) 6 (d) None of these

Directions (24 - 27): Here English letters are given from A to Z. Every capital letter is coded by a small letter.

A	B	C	D	E	F	G	H	I	J	K	L
j	n	l	r	i	x	a	v	e	s	o	y

M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
d	q	m	t	g	u	c	z	w	h	p	k	b	f

Below there is a group of six letter as a question and given four column. a, b, c, d already coded. You should use these column as a answer. Read carefully the letters of group and give the answer.

(a)	(b)	(c)	(d)
uhmvrj	nywgea	kegsor	vezuiv
nyweqa	tzeigj	tiqawe	keguqr
upfrvg	wqsjbl	bilpyq	wsqjbl
veziyu	upfurg	nywgca	kesgor
biqppu	uhmvjr	upfvra	blipoq

24. BLUQSG
25. RWZHDG
26. HITREH
27. YCEWKN

28. In a certain code, 'DOWN' is written as '5 @ 9 #' and 'NAME' is written as '# 6 % 3'. How would 'MADE' be written in that code?
(a) %653 (b) % @ 6 3
(c) % 5 @ 3 (d) % @ 5 3

29. In a coding language, 'GUST' is coded as '@ 7 9 2', 'SNIP' is coded as '9 5 7 #', 'GAPE' is coded as '@ 5 3 5' then, What would be the code of 'SING'?
(a) 9 5 7 # (b) 5 9 # 5
(c) 9 B 7 5 (d) 9 7 5 @

Direction (30 to 35) : Read carefully the given information and choose the best option

In a certain code language 'her idea has merit' is written as 'for la bu na' and 'merit list has been displayed' is written as 'jo ke la si na' and 'her name displayed there' is written as 'ya si bu zo' and 'name in merit list' is written as 'na ya go ke'.

30. What is the code of 'ke'?
(a) been (b) has
(c) merit (d) list

31. What is the code of 'Idea'?
(a) for (b) la
(c) bu (d) na

32. What is the code of 'zo'?
(a) there (b) displayed
(c) name (d) her

33. What is the code of 'in'?
(a) na (b) ya
(c) go (d) ke

34. How can we coded 'her name is there'?
(a) zo ya go wo (b) bu ya zo go
(c) zo ya bu ke (d) ya zo wo bu

35. How can we code name has been displayed ?
(a) ya la ke si (b) jo si ya la
(c) si jo ke na (d) bu ya ke la

36. If the word 'CHRISMAS' written as 'HCIRMSSA' then how can we express the word 'CHRYSENT-HEMUMA' in the same language?
(a) HCRYESTNEHUMMA
(b) CHYRESTNEHUMAN
(c) CHYRESTNEHMUAM
(d) HCYRESTNEHUMAM

37. If in certain code, 'LANGUAGES' is coded as 'AGGNUAELS' then how is 'BUILDINGS' coded in the same language?
(a) ILNDIUGBS (b) ILNIDUGBS
(c) INLDIGUBS (d) ILNDIUGSB

38. What message we can get form given code?
TCHLI USEIC SLAUS EECCL RUEET
(a) CLUE is clear (b) This is a secret
(c) Lies are classic (d) Use lesser chilli

39. If 'VIJAY' is written as 'DIAAG' in a certain code, then how would 'SURAJ' be written in that same code?
(a) JCIAA (b) JCAIA
(c) AJCIJ (d) JCIAJ

40. If 'RAHUL' is written as 'IZSFO', 'SAURAV' is written as 'HZFIZE'. How will 'SACHIN' be written in that same coded language?
(a) HZXMRS (b) HZXSRM
(c) HZACDP (d) AZOPQM

Practice Set 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:
E S T A B L I S H E D → B A E T S L D E I H S
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.

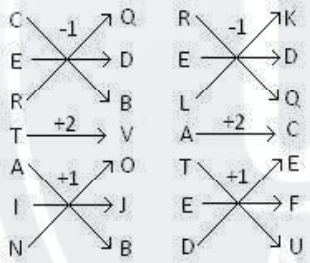
Thus, we have: TRIANGLE→TRIA / NGLE→ AIRT/ELGN →BHSSFKHM

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

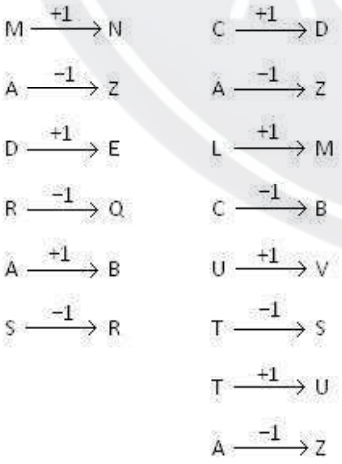
E – 3	A – 2	C – 8
L – 5	L – 5	A – 2
H – 4	C – 8	L – 5
I – 1	U – 9	I – 1
	T – 6	C – 8
	T – 6	U – 9
	A – 2	T – 6

11. (b);



So, KDQCEFU

12. (d);



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

31. (b); As R A M
18 1 13
1+8+1+1+3=14
S H Y A M
19 8 25 1 13
1+9+8+2+5+1+1+3=30
M O H A N
13 15 8 1 14
1+3+1+5+8+1+1+4=24

32. (b); There are 2 cases. Ist —the case of 'means' — in this we have to take answer as the backward part. IInd case — the case of known as, called as or written as — in this we have to take answer as the forward part. Therefore the answer this is green

33. (a); Green

34. (b); We know that fish swim in water but here water is called sky.

35. (d); We know that an uneducated man use thumb for signature but her thumb is called ankle.

36. (b); The formula '$\pi r^2 h$' is used by 'cylinder' but here cylinder is called cone.

37. (c); As :- $4 \times 6 = 24 + 4 + 6 = 34$
and $9 \times 6 = 54 + 9 + 6 = 69$
Hence : $7 \times 7 = 49 + 7 + 7 = 63$

38. (c); | A | Q | ? | B | B | = 36
4 + 9 + ? + 8 + 8 = 36
? + 29 = 36
? = 36 – 29
? = 7 is code for 'N'

39. (d); The colour of human blood is Red. But here 'Red' is called Rosy.

40. (b); We use soap for washing clothes but here soap is called 'ink'.

Directions (41 - 45) :
From column I & II codes are as follows.

I ® re
S ® ga
B ® sa
R ® ma
D ® pa
E ® ni
A ® da

41. (c); B I R D S
sa re ma pa ga

42. (c); B R E A D
sa ma ni da pa

43. (d); D R R A D E D
pa ma ni da pa ni pa

44. (a); S E R B I A
ga ni ma sa re da

45. (a); R A I S E D
ma da re ga ni pa

Directions (46 - 47)

46. (c); Codes are given on the basis of number of alphabets. Word 'SCIENCE' has seven alphabets.
so answer must be 'whistle'.
Whistle also have seven alphabets.

47. (d); Word 'RED' contains three alphabets so answer must be 'bud'.

48. (a); F I G H T
↓ ↓ ↓ ↓ ↓
⋕ ||| ⋕ >

49. (c); △ × □ + ▱ – ⏢
△=2, □=3, ▱=7 ⏢ =10
2 × 3 + 7 – 10
= 6 + 7 – 10
= 13 – 10
= 3
Hence :- 3 is coded by '□'

50. (c); C O M A
↓ ↓ ↓ ↓
| ⋕ ∧ #

Distinct Solutions

51. (b); All the letters of the word, except the last letter, are written in the reverse order and in the group of letters so obtained, each letter is moved two steps forward to get the code. Thus, we have:
AVOID→IOVAD→KQXCF

52. (d); We know in it, for are related preposition but here preposition is called conjunction.

53. (d); Stick.

54. (b); O_3 is situated in Stratosphere but here Stratosphere is called Biosphere.

55. (b); As :- M = 13 × 2 = 26

E = 5 × 2 = 10
R = 18 × 2 = 36
Then, 7 – G → 7 × 2 = 14
15 – O → 15 × 2 = 30
12 – L → 12 × 2 = 24
4 – D → 4 × 2 = 8
76

56. (b); 4 3 # © I 6
↓ ↓ ↓ ↓ ↓ ↓
A D F K M A
(Comdition (iv) is applicable)

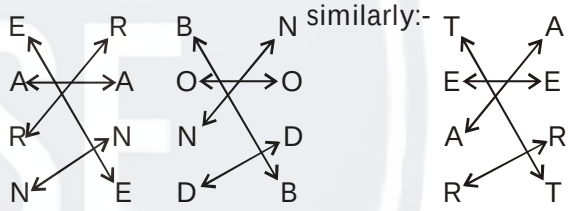
57. (b); @ 9 2 © $ 5
↓ ↓ ↓ ↓ ↓ ↓
Y I B K P Y
(Condition (ii) is applicable)

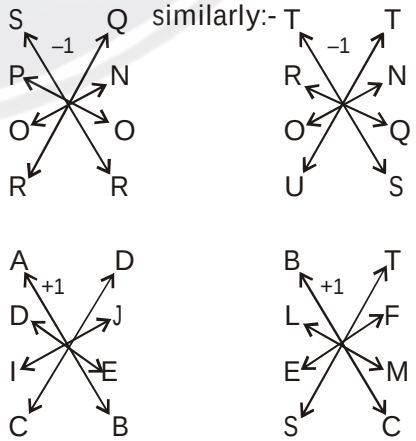
58. (d); 5 1 % 3 @ $
– – – – – –
Z M E D J Z
(Condition (iii) is applicable)

59. (a); 9 @ 2 4 6 3
– – – – – –
I J B A U D
(No condition is applicable)

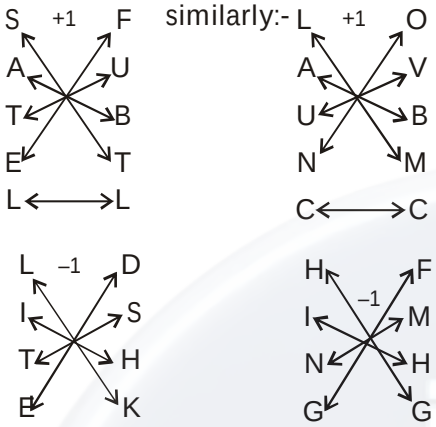
60. (a); 2 # 4 1 9 7
– – – – – –
B F A M I H
(No condition is applicable)

Previous Year Solutions

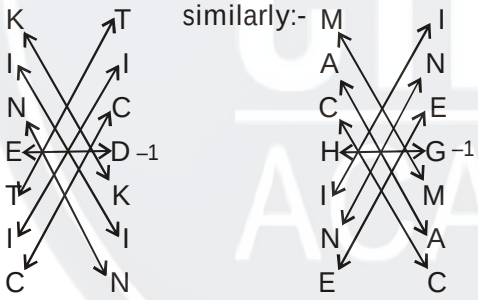
1. (a); The first letter of the word is moved one step forward to obtain the first letter of the code, while the other letters remain unaltered.
2. (b); Each letter in the word is moved one step forward to obtain the corresponding letter of the code.
3. (a); Each letter in the word is moved one step backward to obtain the corresponding letter of the code.
4. (b); Each letter in the word, except the middle letter, is moved one step backward while the middle letter is moved one step forward to obtain the corresponding letter of the code.
5. (b); Each letter in the word is moved three steps forward to obtain the corresponding letter of the code.
6. (c); Each of the first four letters in the word is moved one step backward, while each of the last five letters is moved one step forward to obtain the corresponding letter of the code.
7. (b); Each first, third and fifth letters are moved one step backward, while the second , fourth and sixth letters are moved one step forward to obtain the corresponding letter of the code.
8. (b); The first letter of the word is moved one step backward, while the two middle letters are each moved one step forward to obtain the corresponding letters of the code.
9. (a); The first, third, fifth, seventh, ninth and eleventh letters in the word are each moved one step forward; the second, fourth, eighth and tenth letters are each moved one step backward, while the middle (i.e. sixth) letter is moved two steps forward to obtain the corresponding letters of the code.
10. (a); Each letter in the word is moved two steps backward to obtain the corresponding letter of the code.
11. (c); 

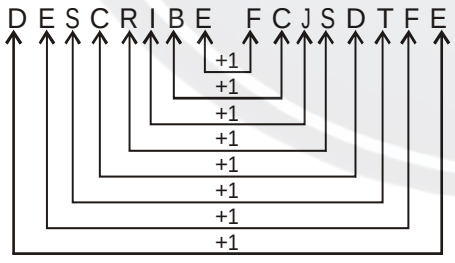
12. (d); P +2 R, A +3 D, G +2 I, E +3 H, S +2 U
W +2 Y, R +3 U, I +2 K, T +3 W, E +2 G
similarly:- O +2 Q, T +3 W, H +2 J, E +3 H, R +2 T
13. (c); 

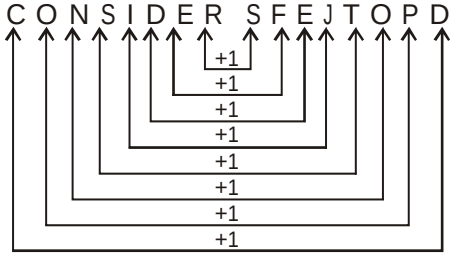
14. (a); L $\xrightarrow{-2}$ J similarly:- S $\xrightarrow{-2}$ O
A $\xrightarrow{+2}$ C L $\xrightarrow{+2}$ N
W $\xrightarrow{-2}$ U I $\xrightarrow{-2}$ G
N $\xrightarrow{+2}$ P T $\xrightarrow{+2}$ V

15. (b); 

16. (a); F → Z R → X similarly:- R → X
O → S A → J A → J
R → X C → N T → O
M → T I → B I → B
A → J A → J O → S
T → O L → Q N → L
I → B A → J
O → S L → Q
N → L

17. (b); 

18. (d); 

Similarly : 

19. (a); A = 1
B A N (2+1+14) = 17
I N D I A → (9+14+4+9+1) = 37

20. (a); If Y = 2
P E N = 11–22–13
Then :- 10-6-18-24-16- Q U I C K
Codes are given in reverse sense.

21. (b);

G – 5	R – 4	similarly
E – 9	O – 7	G – 5
A – 1	U – 2	A – 1
R – 4	T – 8	T – 8
	E – 9	E – 9

22. (b);

E – 3	C– 2	similarly
A – 1	H – 4	T – 8
T – 8	A – 1	E – 3
	I – 5	A – 1
	R – 6	C – 2
		H – 4
		E – 3
		R – 6

23. (c); Spread red carpet → 247 ...(i)
Dust one carpet → 236 ...(ii)
One red carpet → 234 ...(iii)
from Eqs (ii) and (iii), One → 3
from Eqs (i) and (ii) and (iii), carpet – 2
Hense dust → 6

24. (c); From the given table it is obvious that code of BLUQSG → nywgca which is present in option 3.

25. (c); Similarly the code of RWZHDG → upfvra

26. (d); Similarly the code of HITREH → vezuiv

27. (d); Similarly the code of YCEWKN → blipoq

28. (a); D → 5 and N → #
O → @ A → 6
E → 9 M → %
N → # E → 3

similarly M → %
A → 6
D → 5
E → 3

29. (d); G → @ and S → 9 and G → @
U → 7 N → 5 A → 5
S → 9 I → 7 P → 3
T → 2 P → # E → 5

similarly S → 9
I → 7
N → 5
G → @

(30 - 35):

Her idea has merit – for la bu na ...(i)
Merit list has been displayed – jo ke la si na ...(ii)
Her name displayed there – ya si bu zo ...(iii)
name in merit list – na ya go ke ...(iv)

30. (d); From Eqs (ii) and (iv) ke na → merit, list
From Eqs (iii) and (iv) and (i) na → merit
so ke → list

31. (a); From Eqs (i) and (iii) has → la
because (na for merit used above)
From Eqs (i) and (iii) Her → bu
so clearly Idea → for

32. (a); bu → her (from question 31)
from Eqs (iii) and (iv) → ya → name
from Eqs (ii) and (iv) → si → display
Hence : zo → there

33. (c); name → ya
merit → na
list → ke
so clearly → in → go

34. (d); Her name is there ?
Her → bu
name → ya
there → zo
is → the code of is totally different from the codes given above

35. (b); name has been displayed ?
name → ya
displayed → si
has → la
been → jo

36. (d); As; C↔H, H↔C, R↔I, I↔R, S↔M, M↔S, A↔S, S↔A
similarly:- C↔H, H↔C, R↔Y, Y↔R, S↔E, E↔S, N↔T, T↔N, H↔E, E↔H, M↔U, U↔M, M↔A, A↔M

37. (b); L A N G U A G E S A G G N U A E L S
1 2 3 4 5 6 7 8 9 6 4 7 3 5 2 8 1 9
Similarly,
B U I L D I N G S I L N I D U G B S
1 2 3 4 5 6 7 8 9 6 4 7 3 5 2 8 1 9

38. (b);
T C H L I U S E I C S L A U S E E C C L R U E E T
THIS IS A SECRET

39. (a); (22) V (2+2=4) D (4) similarly (19) S (1+9=10) J (10)
(9) I (9 = 9) I (9) (21) U (2+1=3) C (3)
(10) J (1+0=1) A (1) (18) R (1+8=9) I (9)
(1) A (1 = 1) A (1) (1) A (1= 1) A (1)
(25) Y (2+5=7) G (7) (10) J (1+0=1) A (1)

40. (b); As 18 1 8 21 12 9 26 19 6 15
R A H U L I Z S F O
18+9=27
1+26=27
8+19=27
21+6=27
12+15=27

Similarly,

19 1 21 18 1 22 8 26 6 9 26 5
S A U R A V H Z F I Z E
19+8=27
1+26=27
21+6=27
18+9=27
1+26=27
22+5=27

19 1 3 8 3 14 8 26 24 19 18 13
S A C H I N H Z X S R M
19+8=27
1+26=27
3+24=27
8+19=27
9+18=27
14+13=27