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Revised Edition

A New Approach to REASONING

Verbal, Non-Verbal & Analytical

Useful for

Management (CAT, XAT, MAT, CMAT, IIFT, SNAP & other), Bank (PO & Clerk), SSC (CGL, 10+2, Steno, FCI, CPO, Multitasking), LIC (AAO & ADO), CLAT, RRB, UPSC and Other State PSC Exams

BS Sijwali • Indu Sijwali

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PREFACE

In any general, competitive or entrance examination, the section Reasoning and General Intelligence is equally weighted section in any question paper.

Reasoning basically tests candidates thinking power and mind applicability skills. Importance of reasoning is increasingly moving centre stage in today's competitive examinations. The questions that are asked in different examinations are not easy to solve and one cannot solve these problems without having prior knowledge and better practice. But if a candidate knows the basic concept behind the question, then he/she can solve it in no time.

This Book 'A New Approach to Reasoning is' the most appropriate and the best reference text book on reasoning as it caters to the needs of students who aspire to prepare and develop skills in Verbal, Non-Verbal and Analytical Reasoning for various competitive exams viz Management entrances (CAT, XAT, MAT, CMAT, IIFT & SNAP, etc.), SSC (10+2, CGL, CPO etc.), Bank (PO & Clerk), Railways, UPSC and other State PSCs entrance exams.

Above all, it can be said that the book at hand prove to be a real gem if studied with dedication and sincerity. We are sure that this book will add a new dimension to the preparation for every competitive examination and prove to be very helpful to all candidates.

However, we have put our best efforts in preparing this book, but if any error or whatsoever has been skipped out, we have welcomed your suggestions. A part from all those who helped in the compilation of this book a special note of thanks goes to Ms Garima Sharma without their support the book could not have come to its shape. Sandeep Saini has given their expertise in the layout of the book.

The contribution of Mr Amogh Goyal. Mr Rohit & Harvindar for this book is also very special and worthy of great applause.

Reader's recommendation will be highly treasured.

FEATURES OF REVISED & UPDATED EDITION

- The whole book is divided into three sections *viz.* **Verbal, Non-verbal and Analytical Reasoning.**
- Each chapter begins with a brief introduction about chapter and covers all possible **types** that are covered under it.
- Each type has its specific theory with supported **examples** and also has its separate exercise with detailed solutions.
- At the end of the chapter, there is a **Master Exercise** which covers questions based on all types and latest questions asked in **previous years' examinations**. Each question has its accurate and detailed answer.

Authors

BS Sijwali & Indu Sijwali

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A New Approach to

REASONING

VERBAL REASONING

CHAPTER / 01

Alphabet and Number Test

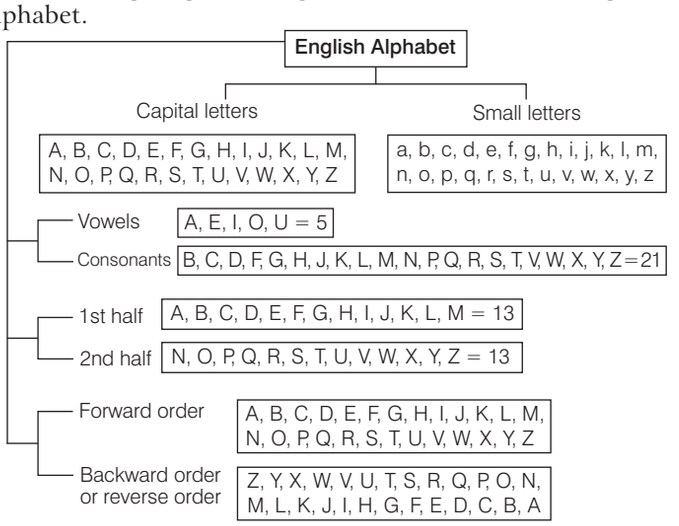
Alphabet and Number Tests are based on arrangement of English letters/numbers in a certain defined pattern. These tests are also based on formation of new numbers/words and finding letter pairs and numbers between two specific letters and numbers.

In this chapter, we deal with the questions in which, a group or series of letters is given. This group can be a meaningful or in scrambled form. Based on that group, a candidate is asked to find a letters' pair between the words or form a meaningful word with different letters or find letter or number to the left or right of a particular letter. Before moving to the type of questions, first we should learn the letters' position of English alphabet and various other facts related to it.

There are 26 letters in English alphabetical series

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.

The following diagram will give a better idea about English alphabet.



Positions

In English alphabet, each letter has its corresponding position and it is important to learn about the position or rank of the alphabets. Such positions of letters are of two types —

1. Forward Order Letter Position

In such order positions are counted from left to right. In other words, one starts counting from A and goes towards Z.

Left to Right

A	B	C	D	E	F	G	H	I	J	K	L	M
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

First half

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**

Second half

2. Backward Order Letter Position

In backward order position, counting is started from Z and is ended at A. In other words, counting is done from right to left.

Right to Left

Z	Y	X	W	V	U	T	S	R	Q	P	O	N
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

First half

M	L	K	J	I	H	G	F	E	D	C	B	A
14	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**

Second half

Trick to Learn Position/Rank of the Alphabets

We have already discussed that there are 26 letters in the alphabet series.

Now let us have a look at the tricks to learn the position of alphabets.

A to D First four letters A to D's, rank is 1 to 4 (easy to learn). No trick is required to learn them.

E For this you have to learn one word "EJOTY".

E	J	O	T	Y
5	10	15	20	25

Learning this word helps you to learn the position of 5 letters which are the multiple of 5.

F For this you have to learn another word "CFILORUX".

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

Learning this word helps you to learn the position of 8 letters which are the multiple of 3.

G Everybody know **G-7 Nations.**
The position of G is 7.

H If you join the 2 lines of H, it will become 8 or you can say H looks like 8. Thus, the position of H is "8".

I "I know (9) You". Learn this sentence and you will get position of "I".

J Remember the term "EJOTY".
The position of J is "10".

K K for **Kelvin** and which is similar to "**eleven**" in Pronunciation.
The position of K is "11".

L Remember the term "CFILORUX".
The position of L is "12".

M M looks like 3 (when we rotate M as 3)
The position of M is "13".

N N for November and November 14 is Children's day.
Thus, the position of N is "14".

O Again the term EJOTY. The position of O is "15".

P When we see water image of P, it look like Six (6). The position of P is "16".

Q Write Q like Q_7. Here, we can see "7" on right end of Q. The position of Q is "17".

R Remember the term CFILORUX or when we stretch R like R, it looks like 8. The position of R is "18".

S We write Nineteen, UNISSS in hindi. The position of S is "19". 19 (S)

T T-20 Match

Or

Remember the term EJOTY.
The position of T is "20".

U Again remember the term "CFILORUX". The position of U is 21.

V V for Victory.
You require two fingers to represent victory.
The position of "V" is "22".

W If you rotate anticlockwise the letter "W", it looks like 3, its position is 23.

X Remember the term CFILORUX.

Or

It is being divided into Four parts.

The position of X is 23.

Y Remember the term "EJOTY".
The position of Y is 25.

Z Last letter is Z. Its position is 26.

After the positional values of English letters are known, we should learn about the position of *Opposite* letters and *Left and Right* of a letter.

Opposite Letters

A letter is said to opposite of other when sum of their positional values is equal to 27.

e.g., Positional value of B = 2,
Positional value of Y = 25
Required sum = 2 + 25 = 27

Hence, they are opposite letter pair.

If we have to find the opposite letter of any letter, then corresponding position of that letter is subtracted from 27. *Let us see*

Opposite letter of A = 27 – Position of A
= 27 – 1 = 26th letter = Z

Opposite letter of B = 27 – Position of B
= 27 – 2 = 25th letter
= Y and so on.

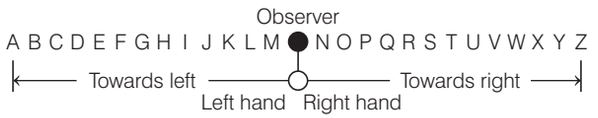
Trick to Remember Opposite Letters

AZ	Remember (ZA) of 'go' in Hindi / AZad
BY	Remember the word 'by' / BoY
CX	Remember CIX (like 'Six') / CraX
DW	Remember DW of the word / DEW.
EV	Remember EV (Evening) / IoVE
FU	Remember FU of 'Full' / ForU
GT	Remember GT Road (Built by Shershah)
HS	Higher Secondary / High School
IR	Indian Railway
JQ	Jack and Queen (in the game of cards)
KP	Kevin Peterson (England cricket player) / kal-Prso
LO	Remember LO of the word LOVE
MN	Remember MN of the word MAN

Left and Right of a Letter

Letters do not have their own left and right. We decide left and right of letters on the basis of ours left and right. In other words, the left of letters is towards our left and the right of letters is towards our right.

Let us see



If you have to find out 4th letter to the left of T, then stand in front of T like below.

So, 4th letter to the right of T is "X".

Clearly, 4th letter to the left of T is P.

And, if you have to find out 4th letter to the right of T, then stand in front of T and find required letter as below.

Some terms related to 'Left' and 'Right' are as follows

(i) **Just Left/Immediate left** It means just before.
e.g., G is the letter just left of H.

(ii) **Just right/immediate right** It means just after.
e.g., Q is the letter just right of P.

(iii) **From our Left** It means 'from our left to right' or we can say it as 'from letter A to Z'. *i.e.,*
A → B → C → ……→ Y → Z

(iv) **From our Right** It means 'from our right to left' or we can say it as 'from letter Z to A'. *i.e.,*
A ← B ← C ← …… ← Y ← Z

(v) **To the Left** It means 'from Z to A'. *i.e.,*
A ← B ← C ← …… ← Y ← Z

(vi) **To the Right** It means 'from A to Z'. *i.e.,*
A → B → C → …… → Y → Z

Important formulae to find the position of letter in english alphabet

1. In english alphabet n+n letter to the right of m+n letter from your left = (m+n)+n letter from left.
2. In english alphabets n+n letter to the left of m+n letter from your right = (m+n)+n letter from right.
3. In english alphabet n+n letter to the left of m+n letter from your left = (m–n)+n letter from left.
4. In english alphabet n+n letter to the right of m+m letters from your right = (m–n)+n letter from right.
5. In backward order of english alphabet n+n letter to the right of m+n letter from your left = (m+n)+n letter from left.
6. In backward order of english alphabet n+n to the left of m+n letter from your right = (m+n)+n letter from right.
7. In backward order of english alphabet n+n letter to the left of m+n letter from your left (m–n)+n letter from left.
8. In backward order of english alphabet n+n letter to the right of m+n letter from your right = (m+n)+n letter from right.

Various types of questions asked in the examination are as follows.

TYPE 01

Alphabet Test

In this type, the questions asked are based on–finding the place of an English letter to the left or right of another English letter in the alphabetical order.

Sometimes the questions are based on

- finding the number of English letter(s) between two different English letters.
- finding the middle letter between two specified letters and in some questions it is asked that which letters do not change their places after alphabetical arrangement.

The detailed discussion with examples of the above mentioned types of questions are as follow

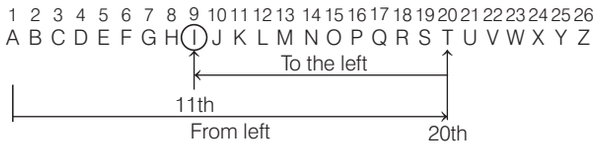
A. Place of a Letter in Forward Order

In this type of questions the exact letter has to be found out with the help of direction and place given in the question.

***Ex* 01** Find the 11th letter to the left of 20th letter from left in the English alphabet.

(a) D (b) J
(c) K (d) I

Solution ***(c)*** Let us see



Hence, 11th letter to the left of 20th letter from left is I.

Alternate Method (By formula 3)

In English alphabet 11th letter to the left of 20th letter from your left = (20 – 11)th letter from left = 9th letter from left = I

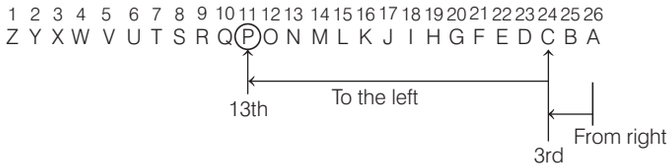
B. Place of Letter in Completely Backward Order

In such questions the order of letters is completely reversed or they are counted from Z to A and then the place of letter is asked with the help of direction.

***Ex* 02** If English alphabet is written in backward order, then what will be the 13th letter to the left of the 3rd letter from right?

(a) P (b) N
(c) R (d) Q

Solution ***(a)*** Backward order is written as



Now, the 13th letter to the left of the 3rd letter from right is P.

Alternate Method (By formula 6)

In backward order of alphabet, 13th letter to the left of 3rd letter from our right = (3 + 13)th letter from right
= 16th letter from right = P

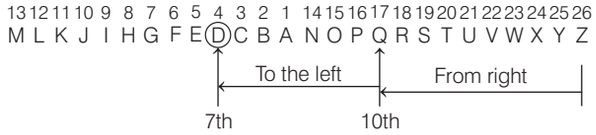
C. Place of a Letter When First Half is in Backward Order

In such type of questions, only the 1st half of the order of alphabetical series is reversed and remaining are left unaltered *i.e.,* order of A to M is reversed and then questions related to position of letters are asked.

***Ex* 03** If 1st half of the English alphabet is written in backward order, then what will be the 7th letter to the left of the 10th letter from your right?

(a) C (b) E
(c) D (d) J

Solution ***(c)*** Let us see



∴ The 7th letter to the left of 10th letter from our right is D.

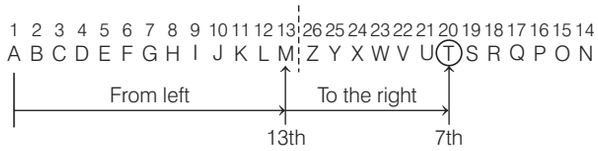
D. Place of a Letter When Second Half is in Backward Order

In such type of questions the 2nd half is reversed *i.e.,* from N to Z and remaining are kept as it is and then questions related to place of English alphabet are asked.

***Ex* 04** If 2nd half of the English alphabet is written in backward order, then what will be the 7th letter to the right of 13th letter from your left?

(a) T (b) U (c) V (d) S

Solution ***(a)*** Let us see



∴ The 7th letter to the right of 13th letter from our left is T.

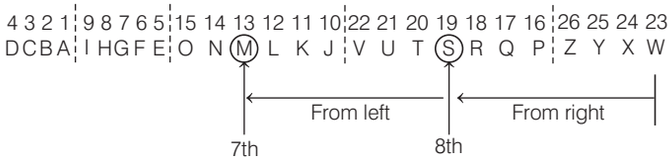
E. Multiple Letter Segment in Backward Order

In such type of questions, no specified order of change is followed in alphabetical order. They are changed according to the condition given in a particular question.

***Ex* 05** If first four letters of the English alphabet are written in reverse order; again next 5 letters are written in reverse order; again next 6 letters are written in reverse order; again next 7 letters are written in reverse order and finally, the remaining letters are also written in reverse order, then what will be the 7th letter to the left of the 8th letter from right?

(a) M (b) N (c) O (d) L

Solution ***(a)*** Let us see the arrangement

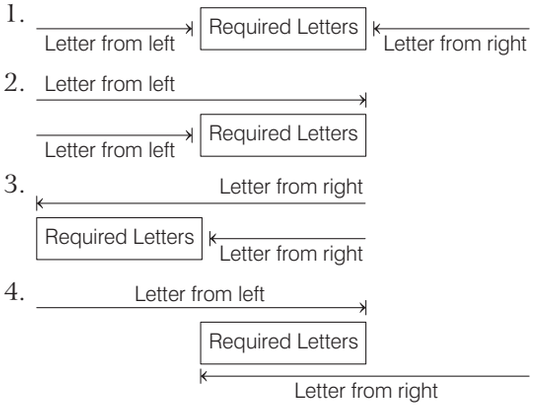


∴ The 7th letter to the left of the 8th letter from right is M.

F. Number of Letters Between Two Letters

In this particular type of questions the candidate is asked to calculate the total number of English letters between any two specified letters as directed in the question.

Four situations can be created under these types of problems



***Ex* 06** How many letters are there between 8th letter from left and 7th letter from right in the English alphabet?

(a) 7 (b) 11 (c) 8 (d) 9