



Coding Decoding Questions for CAT

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Instructions

For the following questions answer them individually

Question 1

If the word 'EXAMINATION' is coded as 56149512965, then the word 'GOVERNMENT' is coded as:

- A 7645954552
- B 7654694562
- C 7645965426
- D 7654964526

Answer: A

Explanation:

We are given that, 'EXAMINATION' = 56149512965

We can see that number places according to alphabetical order of E = 5, X = 24, A = 1, M = 13, I = 9, N = 14, T = 20, O = 15.

We can see the pattern as if the number > 9, then sum of the digit is assigned to that letter.

If the number place < 9, the number place is assigned to that letter.

In GOVERNMENT, G = 7, O = 1+5 = 6, V = 2+2 = 4, E = 5, R = 1+8 = 9, N = 1+4 = 5, M = 1+3 = 4, E = 5, N = 1+4 = 5, T = 2+0 = 2

Therefore, the code for 'GOVERNMENT' = 7645954552. Hence, option A is the correct answer.

Question 2

In a certain code language 'TERMINAL' is written as 'NSFUMBOJ' and 'TOWERS' is written as 'XPUTSF'. How is 'MATE' written in that code?

- A FUBN
- B UFNB
- C BNFU
- D BNDS
- E None of these

Answer: C

Explanation:

while coding 'TERMINAL', for first four letters, every letter will change to its next letter in alphabetical series and 1st and the fourth letter will exchange their positions and 2nd, 3rd will exchange their positions. Similarly, next four letters will also follow the same pattern. Hence, code will be 'NSFUMBOJ'

Now for "MATE", we will change the letters according to above-stated pattern only. M will be N, A will be B and they will exchange their positions. T will be U and E will be F and they will also exchange their positions.

Hence, answer will be C

Instructions

In each of the following problems, there is one question and three statements I, II and III given below the question. You have to decide whether the data given in the statements is sufficient to answer the question. Read all the statements carefully and find which of the statement(s) is/are sufficient to answer the given question.

Question 3

What does 'orange' represent in a code language?

I. 'rim pa xab' means 'orange and apple' in that code language

II. 'na pie tac' means 'I dislike sweet' in that code language

III. 'natsi pa' means 'orange is sweet' in that code language

- A All I, II and III
- B Only II and III
- C Only I and III
- D Only I and either II or III

Answer: C

Explanation:

I and II have no words in common. Therefore, we cannot determine the code for any of the 6 words involved.

II and III have 'sweet' in common. We can determine the code for sweet but we cannot determine the code for 'orange'.

I and III have 'orange' in common. We can determine the word represented by 'orange' using I and III together and hence, option C is the right answer.

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Instructions

According to a coding scheme the sentence:

"Peacock is designated as the national bird of India" is coded as **5688999 35 1135556678 56 458 13666689 1334 79 13366**

This coding scheme has the following rules:

- a: The scheme is case-insensitive (does not distinguish between upper case and lower case letters).
- b: Each letter has a unique code which is a single digit from among 1, 2, 3, ..., 9.
- c: The digit 9 codes two letters, and every other digit codes three letters.
- d: The code for a word is constructed by arranging the digits corresponding to its letters in a non-decreasing sequence.

Answer these questions on the basis of this information.

Question 4

What best can be concluded about the code for the letter L?

- A 1
- B 8
- C 1 or 8
- D 6

Answer: A

Explanation:

Peacock	is	designated	as	the	national	bird	of	India
5688999	35	1135556678	56	458	13666689	1334	79	13366

We can see that India's code is 13366 therefore we can say that I's code is either 3 or 6.

Also, we can see that code for word "is" is 35 therefore we can say that I's code is 3. Consequently, we can say that S's code is 5.

Also, we can see that code of word 'as' is 56 therefore we can say that A's code is 6. Consequently, we can say that S's code is 5.

There is only one letter 'O' common in words 'of' and 'national'. In code word as well only digit '9' is common in both. Hence, we can say that letter 'O' is assigned numerical '9'. Consequently, we can say that F is assigned number 7.

	1	2	3	4	5	6	7	8	9
Letters			I		S	A	F		O

It is given that '9' is assigned to only two alphabets one of them is 'O'. We can see that there are three 9's in Peacock's code. One of the digit '9' is used for 'O'. Remaining two 9's must represent same letter. We can see that only letter 'C' has appeared twice in Peacock. Therefore, we can say that 'C' is assigned number '9'.

In word national 'N' has appeared twice. In code only digit '6' has appeared more than once. Hence, we can say that code of letter N is '6'. Consequently, we can say that code for letter 'D' is '1' because in India rest of the numerals are already taken.

	1	2	3	4	5	6	7	8	9
Letters	D		I		S	N, A	F		C, O

In words, 'the' and 'national' only letter 't' is common. In code as well only digit '8' is common in two codes. Hence, we can say that letter code for letter 't' is 8.

In words, 'the' and 'peacock' only letter 'e' is common. In code as well only digit '5' is common in two codes. Hence, we can say that letter code for letter 'e' is 5. Consequently, we can say that leftover letter, in word "the", 'H's code is 4.

	1	2	3	4	5	6	7	8	9
Letters	D		I	H	S, E	N, A	F	T	C, O

We can see that code for word "NATIONAL" is 13666689. Hence, we can say that code for the letter L is '1'. Hence, option A is the correct answer.

Question 5

What best can be concluded about the code for the letter B?

- A 3 or 4
- B 1 or 3 or 4
- C 1
- D 3

Answer: A

Explanation:

Peacock	is	designated	as	the	national	bird	of	India
5688999	35	1135556678	56	458	13666689	1334	79	13366

We can see that India's code is 13366 therefore we can say that I's code is either 3 or 6.

Also, we can see that code for word "is" is 35 therefore we can say that I's code is 3. Consequently, we can say that S's code is 5.

Also, we can see that code of word 'as' is 56 therefore we can say that A's code is 6. Consequently, we can say that S's code is 5.

There is only one letter 'O' common in words 'of' and 'national'. In code word as well only digit '9' is common in both. Hence, we can say that letter 'O' is assigned numerical '9'. Consequently, we can say that F is assigned number 7.

	1	2	3	4	5	6	7	8	9
Letters			I		S	A	F		O

It is given that '9' is assigned to only two alphabets one of them is 'O'. We can see that there are three 9's in Peacock's code. One of the digit '9' is used for 'O'. Remaining two 9's must represent same letter. We can see that only letter 'C' has appeared twice in Peacock. Therefore, we can say that 'C' is assigned number '9'.

In word national 'N' has appeared twice. In code only digit '6' has appeared more than once. Hence, we can say that code of letter N is '6'. Consequently, we can say that code for letter 'D' is '1' because in India rest of the numerals are already taken.

	1	2	3	4	5	6	7	8	9
Letters	D		I		S	N, A	F		C, O

In words, 'the' and 'national' only letter 't' is common. In code as well only digit '8' is common in two codes. Hence, we can say that letter code for letter 't' is 8.

In words, 'the' and 'peacock' only letter 'e' is common. In code as well only digit '5' is common in two codes. Hence, we can say that letter code for letter 'e' is 5. Consequently, we can say that leftover letter, in word "the", 'H's code is 4.

	1	2	3	4	5	6	7	8	9
Letters	D		I	H	S, E	N, A	F	T	C, O

We can see that code for word "NATIONAL" is 13666689. Hence, we can say that code for the letter L is '1'.

	1	2	3	4	5	6	7	8	9
Letters	L, D		I	H	S, E	N, A	F	T	C, O

We can see that code for word "BIRD" is 1334. 1 corresponds to D and one 3 corresponds to I. Hence, we can say that code for letters 'R' and 'B' are '3' and '4' in any order.

Therefore, we can say that for letter 'B' there are two possible numbers: 3 or 4

Hence, option A is the correct answer.

Question 6

For how many digits can the complete list of letters associated with that digit be identified?

- A 1
- B 2
- C 0
- D 3

Answer: B

Explanation:

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	1	2	3	4	5	6	7	8	9
Letters			I		S	A	F		O

It is given that '9' is assigned to only two alphabets one of them is 'O'. We can see that there are three 9's in Peacock's code. One of the digit '9' is used for 'O'. Remaining two 9's must represent same letter. We can see that only letter 'C' has appeared twice in Peacock. Therefore, we can say that 'C' is assigned number '9'.

In word national 'N' has appeared twice. In code only digit '6' has appeared more than once. Hence, we can say that code of letter N is '6'. Consequently, we can say that code for letter 'D' is '1' because in India rest of the numerals are already taken.

	1	2	3	4	5	6	7	8	9
Letters	D		I		S	N, A	F		C, O

In words, 'the' and 'national' only letter 't' is common. In code as well only digit '8' is common in two codes. Hence, we can say that letter code for letter 't' is 8.

In words, 'the' and 'peacock' only letter 'e' is common. In code as well only digit '5' is common in two codes. Hence, we can say that letter code for letter 'e' is 5. Consequently, we can say that leftover letter, in word "the", 'H's code is 4.

	1	2	3	4	5	6	7	8	9
Letters	D		I	H	S, E	N, A	F	T	C, O

We can see that code for word "NATIONAL" is 13666689. Hence, we can say that code for the letter L is '1'.

	1	2	3	4	5	6	7	8	9
Letters	L, D		I	H	S, E	N, A	F	T	C, O

We can see that code for word "DESIGNATED" is 1135556678. Hence, we can say that code for the letter 'G' is '7'.

	1	2	3	4	5	6	7	8	9
Letters	L, D		I	H	S, E	N, A	G, F	T	C, O

We can see that code for word "PEACOCK" is 5688999. Hence, we can say that code for the letters 'P' and 'K' is '8'.

	1	2	3	4	5	6	7	8	9
Letters	L, D		I	H	S, E	N, A	G, F	T, P, K	C, O

Digit '1' is used for L and D only. We can not figure out the third letter for which digit 1 is used.

Digit '2' is not used for any letter. Hence, we can not figure out all the letters for which digit 2 is correct code.

Digit '3' is used for letter 'I' only. Hence, we can not figure out all the letters for which digit 3 is correct code.

Digit '4' is used for letters 'H' and one of 'B' and 'R'. Hence, we can not figure out all the letters for which digit 4 is correct code.

Digit '5' is used for letters 'S' and 'E'. We can not figure out the third letter for which digit 5 is used.

Digit '6' is used for letters 'A' and 'N'. We can not figure out the third letter for which digit 6 is used.

Digit '7' is used for letters 'G' and 'F'. We can not figure out the third letter for which digit 7 is used.

Digit '8' is used for letters 'T', 'P' and 'K'. Hence, we can say that this is one of the digit for which the complete list of letters associated is known.

Digit '9' is used for letters 'C' and 'O'. Hence, we can say that this is one of the digit for which the complete list of letters associated is known.

Therefore, we can say that for only two digits (8 and 9), the complete list of letters associated is known. Hence, option B is the correct answer.

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Question 7

Which set of letters **CANNOT** be coded with the same digit?

- A S, E, Z
- B I, B, M
- C S, U, V
- D X, Y, Z

Answer: C

Explanation:

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There is only one letter 'O' common in words 'of' and 'national'. In code word as well only digit '9' is common in both. Hence, we can say that letter 'O' is assigned numerical '9'. Consequently, we can say that F is assigned number 7.

	1	2	3	4	5	6	7	8	9
Letters			I		S	A	F		O

It is given that '9' is assigned to only two alphabets one of them is 'O'. We can see that there are three 9's in Peacock's code. One of the digit '9' is used for 'O'. Remaining two 9's must represent same letter. We can see that only letter 'C' has appeared twice in Peacock. Therefore, we can say that 'C' is assigned number '9'.

In word national 'N' has appeared twice. In code only digit '6' has appeared more than once. Hence, we can say that code of letter N is '6'. Consequently, we can say that code for letter 'D' is '1' because in India rest of the numerals are already taken.

	1	2	3	4	5	6	7	8	9
Letters	D		I		S	N, A	F		C, O

In words, 'the' and 'national' only letter 't' is common. In code as well only digit '8' is common in two codes. Hence, we can say that letter code for letter 't' is 8.

In words, 'the' and 'peacock' only letter 'e' is common. In code as well only digit '5' is common in two codes. Hence, we can say that letter code for letter 'e' is 5. Consequently, we can say that leftover letter, in word "the", 'H's code is 4.

	1	2	3	4	5	6	7	8	9
Letters	D		I	H	S, E	N, A	F	T	C, O

We can see that code for word "NATIONAL" is 13666689. Hence, we can say that code for the letter L is '1'.

	1	2	3	4	5	6	7	8	9
Letters	L, D		I	H	S, E	N, A	F	T	C, O

We can see that code for word "DESIGNATED" is 1135556678. Hence, we can say that code for the letter 'G' is '7'.

	1	2	3	4	5	6	7	8	9
Letters	L, D		I	H	S, E	N, A	G, F	T	C, O

We can see that code for word "PEACOCK" is 5688999. Hence, we can say that code for the letters 'P' and 'K' is '8'.

	1	2	3	4	5	6	7	8	9
Letters	L, D		I	H	S, E	N, A	G, F	T, P, K	C, O

Let us check this by options:

(A) S,E,Z: If letter 'Z' is assigned code '5' then this case is possible.

(B) I,B,M: If letters 'B' and 'M' are assigned code '3' then this case is possible.

(C) S,U,V: If letters 'U' and 'V' are assigned code '5' then this case is possible. But in that case digit 5 will have 4 letters associated with it which is not possible. Hence, this is the answer.

(D) X,Y,Z: If letters 'X', 'Y' and 'Z' are assigned code '2' then this case is possible.

Instructions

For the following questions answer them individually

Question 8

In a certain code language 'HORSE' is written as 71417184, then the word 'MONKEY' is coded as:

- A 11141216425
- B 12141310424
- C 12151411325
- D 12151210424

Answer: B

Explanation:

'HORSE' is written as 71417184

In alphabetical order H comes 8th, O comes 15th, R comes 18th, S comes 19th and E comes 5th.

We are given 71417185 i.e. 1 is reduced from the alphabetical order of the letter.

Thus, 'MONKEY' will be coded as '12141310424'.

Hence, option B is the correct answer.

Question 9

In a certain code TEMPORAL is written as OLDSMBSP. How is CONSIDER written in that code?

- A RMNBSFEJ
- B BNMRSFEJ
- C RMNBJEFS
- D TOPDQDCH
- E None of these

Answer: A

Explanation:

Split TEMPORAL into two halves TEMP and ORAL

Reversing the order of letters we get PMET and LARO

Subtracting 1 from PMET we get $P - 1 = O$, $M - 1 = L$, $E - 1 = D$, $T - 1 = S$

Adding 1 to LARO we get $L + 1 = M$, $A + 1 = B$, $R + 1 = S$, $O + 1 = P$

Applying the same concept to CONSIDER

CONS \Rightarrow SNOC IDER \Rightarrow REDI

$S - 1 = R$, $N - 1 = M$, $O - 1 = N$, $C - 1 = B$

$I + 1 = J$, $D + 1 = E$, $E + 1 = F$, $R + 1 = S$

RMNBJEFS

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Question 10

In a certain code GIVEN is written MDVJH. How is SHARK written in that code ?

- A JSAIT
- B JQAIT
- C TIAQJ
- D JQBTI
- E JQIAT

Answer: B

Explanation:

Here MDVJH is obtained from GIVEN first by writing it backwards and then writing preceeding letter in alphabetical series for first two, successive letter for last two letters and leaving middle letter unchanged.

Hence, SHARK would read as JQAIT which is option B.

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