

The background features a collage of various icons related to business and analytics. On the left, there is a large black circle pattern. In the center, a glowing lightbulb is surrounded by smaller black circles. To the right, there is a 3D pie chart with orange, blue, and red segments, a line graph with a yellow trend line, a bar chart with blue bars, a flowchart with yellow boxes and arrows, and two cylinders labeled '50%' and '100%'. A blue pen is visible at the bottom right.

EPEA516

ANALYTICAL SKILLS II

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Learning Outcomes



After this lecture, you will be able to

- develop understanding about the basics of substitution and matrix coding,
- analyze different types of substitution and matrix coding,
- solve various problems relating to substitution and matrix coding.

Substitution

- Some Particular Words
- Certain Substituted Names

Substitution

- 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?



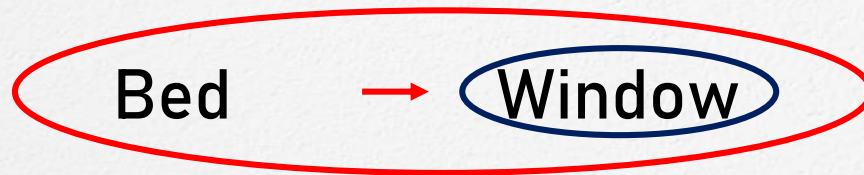
- Colour of human blood – Red

Substitution

- 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?
- Parrot → Peacock → Swallow → Pigeon → Sparrow
- Indian National Bird - Peacock

Substitution

- If room is called bed, bed is called window, window is called flower and flower is called cooler, then on what would a man sleep?
- Room → Bed → Window → Flower → Cooler



Substitution

- If book is called watch, watch is called bag, bag is called dictionary and dictionary is called window, then which is used to carry the books?
- Book → Watch → Bag → Dictionary → Window



Substitution

- 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?
- Animals which can walk are called swimmers.
- Animals who crawl are called flying.
- Animals living in water are called snakes.
- Animals fly in the sky are called hunters.

Matrix Coding

- A word is represented by only one set of numbers.
- Sets of numbers are represented by two classes of alphabets in the two given matrices.
- The columns and rows of both the matrices are numbered.
- A letter from these matrices can be represented first by its row and next by column number.
- To identify the correct set of numbers for the given word.

Matrix Coding

Matrix – I

	0	1	2	3	4
0	D	K	A	E	C
1	C	D	K	A	E
2	K	C	E	A	D
3	K	C	D	E	A
4	E	D	A	K	C

Matrix – II

	5	6	7	8	9
5	P	L	O	T	N
6	T	P	N	L	O
7	P	N	T	O	L
8	O	N	T	P	L
9	L	O	P	N	T

- Identify the correct code for COLD from the following given options: (First read row and then column)
- A. 44, 96, 95, 22
- B. 31, 99, 77, 22
- C. 30, 66, 86, 43
- D. 10, 85, 79, 24

Matrix Coding

Matrix – I

	0	1	2	3	4
0	D	K	A	E	C
1	C	D	K	A	E
2	K	C	E	A	D
3	K	C	D	E	A
4	E	D	A	K	C

C	O	L	D
10	85	95	00
21	96	56	11
31	57	68	41
04	78	79	32
44	69	89	24

Matrix – II

	5	6	7	8	9
5	P	L	O	T	N
6	T	P	N	L	O
7	P	N	T	O	L
8	O	N	T	P	L
9	L	O	P	N	T

• A. 44, 96, 95, 22

B. 31, 99, 77, 22

• C. 30, 66, 86, 43

D. 10, 85, 79, 24

• COLD – 10, 85, 79, 24

Matrix Coding

Matrix

	0	1	2	3	4	5	6	7	8	9
0	I	L	B	P	K	N	H	S	A	E
1	M	A	Q	G	T	V	I	O	N	U
2	H	R	W	J	A	X	B	E	C	I
3	T	Y	A	I	U	U	O	N	J	F
4	F	O	B	M	E	G	U	K	W	R
5	A	C	L	J	X	R	A	A	X	T
6	P	S	U	E	Z	K	V	W	D	L
7	Z	D	Y	V	F	O	H	Y	I	O
8	M	I	Z	Q	E	A	U	E	I	S
9	P	E	O	D	E	U	Q	O	C	G

Identify the correct code for JOKE from the following given options:
(First read column and then row)

- A. 32, 14, 56, 44
- B. 35, 14, 37, 78
- C. 83, 63, 40, 59
- D. 83, 71, 25, 36

Matrix Coding

Matrix

	0	1	2	3	4	5	6	7	8	9
0	I	L	B	P	K	N	H	S	A	E
1	M	A	Q	G	T	V	I	O	N	U
2	H	R	W	J	A	X	B	E	C	I
3	T	Y	A	I	U	U	O	N	J	F
4	F	O	B	M	E	G	U	K	W	R
5	A	C	L	J	X	R	A	A	X	T
6	P	S	U	E	Z	K	V	W	D	L
7	Z	D	Y	V	F	O	H	Y	I	O
8	M	I	Z	Q	E	A	U	E	I	S
9	P	E	O	D	E	U	Q	O	C	G

J	O	K	E
32	14	40	19
35	29	56	36
83	57	74	44
	63		48
	71		49
	79		72
	97		78
			90

- A. 32, 14, 56, 44
- B. 35, 14, 37, 78
- C. 83, 63, 40, 59
- D. 83, 71, 25, 36

Conclusion

- Substitution
 - Particular Words - Substituted Names
- Matrix Coding
 - Table - Code

Summary

- Coding – Decoding
 - Substitution
 - Matrix Coding

That's all for now...