Coding Decoding for SBI PO Mains, IBPS PO Mains Exams.

Coding Decoding Quiz 52

Directions: Read the following information carefully and answer the questions given beside.

A software engineer prepared a 4×4 matrix to get output.
The rows of the matrix are denoted by %,$,@ and & from top to bottom.
The columns of the matrix are denoted by P,Q,R and S from left to right.

Rules :
The matrix contains numerical values that are obtained as per the following rules.

I. Row % contains consecutive multiples of 9 starting from 27 from left to right.
II. Row $ contains consecutive prime numbers starting from 19 from right to left.
III. Row @ contains consecutive multiples of 11 starting from 55 from left to right.
IV. Row & contains consecutive odd numbers starting from 33 from left to right.

Process of receiving output :

To gain output a string is input which is denoted by string X or string Y or a combination of both.
The string contains numerical values of the matrix, which is denoted by placing row name first and then column name. For example: %R means that value of row% which is written at column R.

Forms of Output :

The output can be received in following four forms.
A : If the value of output is less than 120
B : If the value of output is between 120 and 200
C : If the value of output is between 201 and 260
D : If the value of output is more than 260

Value of output :

There are certain conditions to find the value of output, which is given below.

I. If all the values of a string are odd numbers then subtract the second lowest number from the highest number and take the square of the difference.
II. If sum of even numbers is more than that of odd numbers then add the highest and the third highest numbers of the string.
III. If the string does not contain prime number then first half all the numbers and then add them.

Note : If a string follows more than one conditions, only preceding condition has to be followed.

All the questions are asked on the basis of below mentioned strings.

X = @Q &S @S %P
Y = %R $S &Q @P

Questions :

1.   If only string Y is to be considered as input then which of the following outputs will be received?

A. B   B. A   C. C   D. D   E. Either C or D.

2.   If only string X is to be taken as input and the engineer wants to receive output C, then which of the following values can be added to string X?

A. &Q + %P   B. %R + $R   C. &S + @P   D. $S + &P   E. Both B and C

3.   If X + Y is to be taken as input then which of the following will be the output received?

A. B   B. D   C. C   D. A   E. Either C or D

4.   If Y – X is to be considered as input then which of the following is to be deducted from the output to make it 'B'?

A. %S   B. @Q   C. @R   D. &S   E. %Q

5.   If only string X is to be considered as input then which of the following will be the output?

A. A   B. B   C. C   D. D   E. Either A or B

Correct Answers:

1	2	3	4	5
D	C	B	C	B

Common explanation :

Reference:
I. Row % contains consecutive multiples of 9 starting from 27 from left to right.
II. Row $ contains consecutive prime numbers starting from 19 from right to left.
III. Row @ contains consecutive multiples of 11 starting from 55 from left to right.
IV. Row & contains consecutive odd numbers starting from 33 from left to right.

Inference:

	P	Q	R	S
%	27	36	45	54
$	31	29	23	19
@	55	66	77	88
&	33	35	37	39

Reference:
I. If all the values of a string are odd numbers then subtract the second lowest number from the highest number and take the square of the difference.

II. If sum of even numbers is more than that of odd numbers then add the highest and the third highest numbers of the string.

Inference:
X = @Q &S @S %P

Y = %R $S &Q @P

X = @Q &S @S %P

X = 66 39 88 27

For string X, condition II is applicable.

Thus, 88 + 39 =127.

For string Y, condition I is applicable.

Y = %R $S &Q @P

Y = 45 19 35 55

Thus 55 – 35 = 20

Square of 20 = 400.

Explanations:

1. If only string Y is to be considered as input then the output will be 400.

Thus output D will be received.

Hence option D is correct.

2. If only string X is to be considered as input then the output will be 127.

So, to obtain output C we need at least 201 – 127 = 74.

Among the given options, only option C produces the value more than 74.

&S + @P
39+55 = 94

Hence option C is correct.

3. If X+Y is to be considered as input then the output will be 127 + 400 = 527

So the output obtained is D.

Hence option B is correct.

4. If Y – X is to be considered as input then the output will be 400 – 127 = 273

To make it between 120 and 200, at least 73 has to be deducted from the given output.

Only @R which is 77 is the value that is when deducted from the output will make it 196.

Hence option C is correct.

5. If only string X is to be considered as input then output will be 127, thus output will be B.

Hence option B is correct.