# New Pattern Input/Output \& Coding-Decoding PDF - <br> www.exampundit.in 

## New Pattern Input Output - Set 1

An arrangement machine, when given a particular Input, rearranges it following a particular rule in each step. The following is the illustration of the input and the steps of arrangement.
STEP 5-


Step 5 is the last step for this input.
As per rules followed in the above step, give answer the following questions.
Input :-

| S | I |
| :--- | :--- |


| G | C |
| :--- | :--- |


| R | L |
| :--- | :--- |

$\square$

| O | M |
| :--- | :--- |


| $N$ | $K$ |
| :--- | :--- |

Q. 1 Which of the following is third to the right in step 1?
a) SA
b) $R U$
c) GL
d) GM
e) none of these
Q. 2 which of the following will be Step 1 for the above input?
a) MkJL AS GN RU FP
b) KN JL SA GM RV FP
c) JL KM GM SA RU EO
d) KN JL SA GL RV EO
e) none of these
Q. 3 Which of the following will be step 3 for the above input?
a) 361778
b) 991767
c) 538157
d) 518156
e) none of these.
Q. 4 what could be the value of final step for this input?
a) 4
b) 6
c) 8
d) 10
e) none of these.
Q. 5 Which of the following is third to right of 13 in step 2 ?
a) 74
b) 94
c) 67
d) 84
e) none of these.

Answers \& Solutions:

1. D
2. B
3. D
4. C
5. B


| Input :- | S | I |  | G | C | R | L |  | F | X |  | O | M |  | N | K |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Step 1- Exchange the places by taking their opposite alphabet and then subtract 2 places.
Step 2- Place value of alphabet. If exceeds 9 then add them to make single digit.
Step 3- Difference between the numbers.
Step 4- Add odd and even no. separately and then take their difference.
Step 5- Multiply the numbers.

An arrangement machine, when given a particular Input, rearranges it following a particular rule in each step. The following is the illustration of the input and the steps of arrangement.

| Input: 23 | 10 | 27 | 19 | 17 | 7 | 21 | 15 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| Step1: S | N | X | V | O | I | T | P |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Step2: 23 | 21 | 18 | 13 | 19 | 15 | 14 | 8 |
| Step3: 15 | 7 | 3 | 6 |  |  |  |  |

Step4: 8
Step5: 2

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Step 5 is the last step for this input.
As per rules followed in the above step, give answer the following questions.
Input: $20 \quad 13 \quad 14 \quad 21 \quad 19 \quad 16 \quad 9 \quad 22$

Note: No step had multiplications.
Q. 1 what is the third step of the above input?

| a) 6 | 7 | 7 | 8 |
| :--- | :--- | :--- | :--- |
| b) 7 | 7 | 6 | 9 |
| c) 7 | 7 | 7 | 9 |
| d) 9 | 7 | 7 | 6 |
| e) |  |  |  |
| None of these. |  |  |  |

Q. 2 what could be the fourth step of the above input?
a) $0 \quad 7$
b) $9 \quad 0$
c) 20
d) $0 \quad 2$
e) None of these.
Q. 3 which of the following is third to the right in step 2 ?
Q. 4 which of the following is fourth to the left in step 2 ?
a) 15
b) 16
c) 22
d) 23
e) none of these.
Q. 5 what is the last step of above input?
a) 0
b) 4
c) 1
d) 2
e) none of these.

## Answers

1. C
2. $D$
3. C
4. B
5. D


Step 3-1st place (Difference between 1st and last digit of step 2)
2nd place (difference between 2nd and 2nd last digit of step 2)
3rd place (difference between 3rd and 3rd last digit of step 2, and so on.)
Step 4 - Difference of 1st \& 2nd digit and 3rd \& 4th digit.
Step 5- Addition of both the digits. If the value exceeds 9, then add them to make a single digit.
Q. (1-5) The following is the illustration of the input and the steps of arrangement.


Step 2-

$\square$
$\square$

Step 3-


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Step 4 is the last step. No step had multiplication.

As per rules followed in the above step, give answer the following questions.

Q. 1 what is the third step of above input?
(a) 4, 4
(b) 3, 4
(c) 4,5
(d) 4, 3
(e) None of these.
Q. 2 what is the last step of above input?
(a) D
(b) F
(c) H
(e) None of these.
Q. 3 which of the following is fourth to the left in step 1?
(a) K
(b) N
(c) M
(d) C
(e) None of these.
Q. 4 what is the second step of above input?
(a) $8 \quad 4 \quad 5 \quad 6$
(b) $4 \quad 8 \quad 5 \quad 8$
(c) 4885
(d) $8 \quad 6 \quad 8 \quad 5$
(e) None of these.
Q. 5 which of the following is third to the right in step 1?
(a) Y
(b) M
(c) N
(d) V
(e) None of these.

Answers:

1. B
2. C
3. D
4. C
5. D

Explanations:


## New Pattern Coding \& Decoding - Set 1

Given below is a set of sentences along with their codes in a specific machine language.
Watched pot never boils - 4\&g 13\$u 11\#w 25\$v
Beggars cannot choose - 24\%w 24\%h 25\&v
Familiarity breeds contempt - 25\%v 24*w 21+b
Counsel is no command - 24\&o 18@v 24\&g 13@r

According to the above coding pattern, answer the following questions:

1. What will be the code for " bemuzzle fuzzed" ?
a) $21 \% \mathrm{~g} 25^{*} h$
b) $21 * g \quad 25 \% h$
c) $20 \% r 16 \& t$
d) Either a or b
e) None
2. "ace" will be coded as?
a) $20 \% \mathrm{t}$
b) $3 \& t$
c) $26 \# \mathrm{~h}$
d) $26 * \mathrm{t}$
e) None
3. "muzzling as crazy" will be coded as?
a) $14 *$ j $24 \$$ b $26 @ v$
b) $24 @ j$ 14\&b 20\&t
c) $3 \& t \quad 17+y 25 \& r$
d) Either b or c
e) None
4. What will be the code for " scuzzy quick" ?
a) $10 \& t 18 \& e$
b) $10 \& n 17 \% \mathrm{r}$
c) $8 \% \mathrm{~b} 10 \$ n$
d) Either b or c
e) None
5. "17\$b" will be the code for?
a) Jamie
b) Jammy
c) Yummy
d) Tommy
e) Fanny

## Answers:

1. Ans-a
2. Ans-C
3. Ans-a
4. Ans-c
5. Ans-b

## Solution-

Every code consists of three parts- a number (either 1 or 2 digit) , a symbol and a letter of English alphabet.
The number in the code is the reverse numeric value of the first letter of the word For example 4=w, 11=p, 13=n.

The symbol is coded with respect to the number of digits in the word.
By comparing the common terms of codes and eliminating we get the following :
2=@
3=\#
5=\$
6=\%
7=\&
8=*
11=+

The letter in the code is the alphabet two places to left of the last letter of the word.
For example in the word never, $r$ is the last letter hence the last part of the code will be $r+2=u$

Hence the words and their codes are:

| Watched | pot | never | boils |
| :---: | :---: | :---: | :---: |
| $4 \& g$ | $11 \# w$ | $13 \$ u$ | $25 \$ v$ |


| Beggars | cannot | choose |
| :--- | :--- | :--- |
| $25 \& v$ | $24 \% w$ | $24 \% h$ |

Familiarity breeds contempt
21+b $25 \%$ v $24 *$ w
Counsel is no command
24\&o 18@v 13@r 24\&g

Study the following information carefully and answer the questions that follow.
'she is studying' is coded as '39studyint 27shv 28ih'
'girls like drawing' is coded as '21likv 22drawint 16girlh'
'boys are playing' is coded as '28playint 19arv 17boyh'

1. Which of the following is the code for 'boys like studying'?
a) 39 studyint 21 likes 17 boyh
b) 17boyh 29likv 21studyint
c) 17 boyh 29 studyint 21 kikv
d) 21likv 17boyh 39studyint
e) cannot be determined
2. Which of the following is the code for 'girls like playing'?
a) 21 playint 16 likv 28 girlt
b) 28 likv 16 girlt 21playint
c) 21girlt 16playint 28likv
d) 28playint 21likv 16girlh
e) none of these
3. Which of the following is the code for 'reasoning is fun'?
a) 28 ih 27 reasonint 27 fum
b) 23 reasonint 27 fum 28 ih
c) 27 fun 23 reasonint 28 ih
d) cannot be determined
e) none of these
4. Which of the following is the code for 'like poles repel'?
a) 21 likv 31 repeo 23 polet
b) 31 repeo 21 polet 23 likv
c) 21likv 23 repeo 31 polet
d) cannot be determined
e) none of these
5. Which of the following is the code for 'shreya likes watching movies'?
a) 28 moviet 21 likeh21watchint 27 shreyz
b) 21 likes 28 movies 27 shreya 24 watching
c) 21 likeh 28 moviet 27 shreyz 24 wathint
d) 24 watchint 21 likeh 27 shreyz 28 moviet
e) none of these

## Solutions

1. D
2. $D$
3. $B$
4. $E$
5. E

## Logic for coding decoding:

Firstly, the numeric value before respective codes is the addition of numeric value of the first two alphabets in the respective word followed by the word itself where the last alphabet in the word is replaced by its reversal

For example - 'studying' is coded as '39studyint'
$39=19(\mathrm{~S})+20(\mathrm{~T})$
and ' $g$ ' is replaced by its reversal ' t '


