# **INPUT OUTPUT**

#### I. Study the following information carefully and answer the given questions.

A number arrangement machine arranges two digit numbers into a typical manner. Each step takes gives output taking input from the previous step. The following is an illustration of Input and rearrangement. Using the illustration answer the question given below. **Example:** 



Step I: Multiply the first digit of first number with second digit of fourth Number. Multiply the second digit of first number with first digit fourth number.

Step II: Add the first digit of all numbers in Step I for the first number and second digit of all numbers in Step I for the second number

Step III: Divide second digit by first digit

Step IV: First number is subtracted from the second number.

# 1. If the value "5" is subtracted from the final output then what will be the resultant value?

A. -7
B. 3
C. -3
D. 4
E. None of these Answer - A. -7
2. If in the first step the first digit of every number is added and multiplied by 5 then which will be the resultant value?
A. 50

B. 60 C. 55 D. 65 E. None of these Answer – **B. 60**  3. Which of the following combinations represent the first digit of the second value and the second digit of the first value in Step I of the given input?

A. 6, 4 B. 4, 6 C. 6, 2 D. 2, 8 E. 2, 4 Answer – **C. 6, 2** 

4. Which of the following represents the sum of the first digit of the second value and the second digit of the first value in Step II of the given input?

A. 5 B. 2 C. 6

D. 4 E. 3

Answer – **B.** 2

5. Which of the following represents the difference between the first value and the second value of Step II of the given input?

A. 8 B. 7 C. 9 D. 4 E. 6 Answer – **D. 4** 

#### I. Study the following information carefully and answer the given questions.

A number arrangement machine arranges two digit numbers into a typical manner. Each step takes gives output taking input from the previous step. The following is an illustration of Input and rearrangement. Using the illustration answer the question given below.

Example: 1 3 2 1 1 2 3 1 14 4 1 4 3 6 1 2 4 2 4 1 6 6 2 8 Input. 1 2 2 1 3 3 1 2 2 2 4 1 1 2 1 1 3 3 1 2 2 2 4 4 2 4 6 16 2 8 1 8 4 8 12

Step I: Multiply the first digit of first number with second digit of fourth Number. Multiply the second digit of first number with first digit fourth number.

Step II: Add the first digit of all numbers in Step I for the first number and second digit of all numbers in Step I for the second number and then multiply by 2.

Step III: Divide second digit by first digit

Step IV: Add two numbers.

#### 6. If the value "6" is added to the final output then what will be the resultant value?

A. 12 B. 18 C. 10 D. 11 E. None of these

Answer – **B. 18** 

7. If in the first step the second digit of every number is added and divided by 2 then which will be the resultant value?

A. 5 B. 6

C. 7

D. 4

E. None of these

Answer – C. 7

8. Which of the following combinations represent the first digit of the third value and the second digit of the first value in Step I of the given input?

A. 4, 1

B. 1, 4 C. 2, 6

D. 4, 6

E. 4, 4

Answer – **D. 4, 6** 

9. Which of the following represents the sum of the second digit of the second value and the first digit of the first value in Step II of the given input?

A. 8 B. 7

в. / С. б

D. 4

E. 9

Answer – E. 9

10. Which of the following represents the difference between the first value and the second value of Step III of the given input?

A. 1

B. 2

C. 0

D. 4 E. 5

Answer – **D. 4** 

# I. Study the following information carefully and answer the given questions.

The following is an illustration of Input and rearrangement. Using the illustration answer the question given below.

Step-I: Interchange the Alphabets/Numbers(follow the same pattern as shown in Figure.)

# Step-II:

(a) If both letters are Vowel and number is less than 6, then vowels change to next letter in English alphabetical series and add 2 to the number

(b) If both letters are consonant and number is greater than 6 or equal to, then consonants change to the previous letter in English alphabetical series and subtract 3 from the number

(c) If both letters are Vowel and number is greater than 6 or equal to, then vowels change to the previous letter in English alphabetical series and subtract 3 from the number

(d) If both letters are consonant and number is less than 6, then consonants change to next letter in English alphabetical series and add 3 to the number

(e) If there are one vowel and one consonant, then vowel change to next letter and consonant change to the previous letter and add 2 to the number.

(f) If there is single consonant, then consonant change to the previous letter and Subtract 3 from the number.

(g) If there is a single vowel, then vowel change to next letter and add 3 to the number.

Step-III: Follow Both Steps I and II

Example:



Stop I

F4	CBS	A.134
Q:R.B		0
012	R2	in s

81	DC6	B-63
-		
842	23.4	817b4

Step II.

665	25	089
A.		ona
16.002	Eller	1.4

Step III

Input:







D8	<b>IO4</b>	CU5
MN8		EU7
CD4	E4	<b>C</b> 7

Step II

C5	JP6	BV7
LM5		DT4
DE7	<b>F</b> 7	B4

Step III

Al	E3	CF9
EU8		MN7
AU4	IO4	B2

1. In Step III, what is the sum of numbers in the first row?

A. 15 B. 11 C. 12 D. 13 E. None of these Answer – **D. 13** 

2. In Step III, what is the difference between the sum of numbers in the first row and the sum of numbers in the third row?

A. 5 B. 6 C. 3 D. 4 E. None of these Answer – **C. 3** 

3. In Step II, what is the product of the sum of numbers in the first column and the sum of numbers in the third column?

A. 245 B. 285 C. 275 D. 255 E. 235 Answer – **D. 255** 

4. In Step II, If the sum of the numbers in the third row is divided by the sum of numbers in the second row then what will be the resultant?

- A. 8 B. 7 C. 6
- D. 4
- E. 2

Answer – E. 2

5. In Step I, which of the following letter/number occur more than twice?

A. E

B. U

C. 7

D. 4

E. 8

Answer – D. 4

#### **II.** Study the following information carefully and answer the given questions.

The following is an illustration of Input and rearrangement. Using the illustration answer the question given below.

Step-I: Interchange the Alphabets/Numbers(follow the same pattern as shown in Figure.)

Step-II:

(a) If both letters are Vowel and number is less than 5, then vowels change to next letter in English alphabetical series and add 2 to the number

(b) If both letters are consonant and number is greater than 5 or equal to, then consonants change to the previous letter in English alphabetical series and subtract 3 from the number

(c) If both letters are Vowel and number is greater than 5 or equal to, then vowels change to the previous letter in English alphabetical series and subtract 3 from the number

(d) If both letters are consonant and number is less than 5, then consonants change to next letter in English alphabetical series and add 3 to the number

(e) If there are one vowel and one consonant, then vowel change to next letter and consonant change to the previous letter and add 2 to the number.

(f) If there is single consonant, then consonant change to the previous letter and Subtract 3 from the number.

(g) If there is a single vowel, then vowel change to next letter and add 3 to the number.

Step-III: Follow Both Steps I and II





Step I

Step II

Step III

IE3	E4	<b>D</b> 7
KE3		NP4
AM5	C5	UO5

JF5	<b>F</b> 7	C4
JF5		OQ7
BL8	<b>B</b> 7	TN2

KG5	A4	<b>B</b> 5
PP9		IE2
CM7	E4	SM2

Input:







Step II

K4 E5 EU4 EG8 CF7 HL8 M7 KO6

л	F8	FV6
FF10		BE4
GK5	L4	JP8

Step III

15	Л	EU2
AF6		EE7
FJ3	E5	KQ4

6. In Step III, what is the sum of numbers in the first row?

A. 5 B. 1 C. 2 D. 8 E. None of these Answer – **D. 8** 

7. In Step III, what is the difference between the sum of numbers in the second row and the sum of numbers in the third row?

A. 5 B. 6 C. 1 D. 4 E. None of these Answer – **C. 1** 

8. In Step II, what is the product of the sum of numbers in the first column and the sum of numbers in the third column?

A. 218 B. 288 C. 278 D. 256 E. 236 Answer – **B. 288** 

9. If the sum of the numbers in the second column of Step I is divided by sum of the numbers in the second column of Step II then what will be the resultant?

- A. 8 B. 7 C. 6 D. 3
- E. 1

Answer – E. 1

10. In Step I, which of the following letter/number occur more than twice?

A. E

B. K

C. 7

D. 4 E. 8

Answer – A. E

**Directions (1-5):** A string of numbers is given as input. The further steps given are obtained by applying certain logic. Numbers of step II have been obtained by using at least 1 digit of each number in step I. Each step is a resultant of previous step only.



- 1. Which number is greatest in step 1?
  - A) 53
  - B) 25
  - C) 63
  - D) 60

E) Other than options given Answer Option C

Solution: For given input:::Step I: 63.....25....21 — SubtractionStep II: 10....14 (6\*2 - 2 = 10)Step III: 1....5 – AdditionStep IV: 3 — Average

2. What is the second smallest number obtained in any step of given input?

A) 8.5
B) 7.5
C) 3
D) 10.5
E) 7
Answer Option C
3. Find the difference between sum of numbers obtained in 1st step and sum of numbers obtained in all

other steps. A) 61 B) 67

B) 67 C) 89 D) 72 E) 76 **Answer Option E Solution:** Required difference = (63+25+21) - (10+14+1+5+3) 4. What is the difference between the second largest number and the smallest number obtained in any steps?

- A) 24
- B) 18
- C) 15
- D) 29
- E) 21

#### **Answer Option A Solution:** Required difference = 25 - 1 = 24

5. What is the average of numbers obtained in last 2 steps?

- A) 4
- B) 5
- C) 9
- D) 7

E) None of these

# **Answer Option E**

# Solution:

Required average =(1+3+5)/3 = 3

**Directions (6-10):** A string of numbers is given as input. The further steps given are obtained by applying certain logic. Numbers of step II have been obtained by using at least 1 digit of each number in step I. Each step is a resultant of previous step only.



6. What is the average of numbers obtained in last 2 steps?

- B) 5
- C) 3
- D) 6 E) 4

A) 8

#### **Answer Option E**

Solution:

7. What is the smallest number obtained in any step of given input?

- A) 6
- B) 4
- C) 3
- D) 2
- E) 7

#### **Answer Option D**

8. Find the difference between sum of numbers obtained in 1st step and sum of numbers obtained in all other steps.

- A) 204
- B) 217
- C) 189
- D) 222
- E) 176

#### Answer Option A

#### Solution:

Required difference = (85+76+96) - (24+17+2+6+4)

9. What is the difference between the largest and the second smallest numbers obtained in any steps? A) 92

- B) 108
- C) 115
- D) 69
- E) 81

# Answer Option A

Solution:

Required difference = 96 - 4 = 92

10. Digit 7 repeats how much times in any numbers obtained in all steps?

- A) Three
- B) Five
- C) One
- D) Two
- E) None

#### **Answer Option D**

**Directions (1-5):** A string of numbers is given as input. The further steps given are obtained by applying certain logic. Numbers of step II have been obtained by using at least 1 digit of each number in step I. Each step is a resultant of previous step only.



1. What is the average of numbers obtained in step 2?

- A) 53
- B) 66
- C) 75
- D) 60

E) Other than options given

#### **Answer Option D**

2. What is the second smallest number obtained in any step of given input?

- A) 8.5
- B) 7.5
- C) 3

D) 10.5

E) 7

#### Answer Option B

3. Find the difference between sum of numbers obtained in 1st step and sum of numbers obtained in all other steps.

- A) 28
- B) 25
- C) 29
- D) 26
- E) 27

#### Answer Option C

4. What is the difference between the second largest and the third smallest numbers obtained in any steps? A) 75.5

- B) 74.5 C) 76.5
- D) 71.5
- E) 73.5
- Answer Option A

5. What is the average of numbers obtained in last 2 steps?

- A) 4
- B) 5
- C) 9
- D) 7
- E) 6

# Answer Option D

**Directions (6-10):** A string of numbers is given as input. The further steps given are obtained by applying certain logic. Numbers of step II have been obtained by using at least 1 digit of each number in step I. Each step is a resultant of previous step only.



6. What is the average of numbers obtained in step II and III?

- A) 28.5
- B) 26
- C) 25.5
- D) 29

E) Other than options given

# Answer Option A

7. What is the second largest number obtained in any step of given input?

- A) 86
- B) 59

C) 66

D) 60

E) 67

Answer Option C

8. Find the difference between sum of numbers obtained in step I and sum of numbers obtained in all other steps.

A) 98 B) 85

C) 109 D) 86

E) 95

#### **Answer Option E**

9. What is the difference between the third largest and the second smallest numbers obtained in any steps? A) 45.5

B) 64

C) 49

D) 57

E) 53.5

#### **Answer Option D**

10. How many numbers obtained in any steps are greater than 50?

A) Six

B) Four

C) Three

D) None

E) Five

Answer Option B

Directions (1-5): A string of numbers is given as input. The further steps given are obtained by applying certain logic. Numbers of step II have been obtained by using at least 1 digit of each number in step I. Each step is a resultant of previous step only. None of the exact logic is repeated in any step.



1. What is the average of numbers obtained in step II and step IV?

A) 33.4

B) 16.3

C) 22.3

D) 23.6

E) Other than options given

#### Answer Option C

2. What is the second smallest number obtained in any step of given input?

- A) 2
- B) 4
- C) 6

D) 5

E) 7

# Answer Option B

3. Find the difference between sum of numbers obtained in 1st step and sum of numbers obtained in all other steps.

A) 118B) 102C) 112D) 173

E) 1

# Answer Option E

4. What is the difference between the second largest and the third smallest numbers obtained in any steps? A) 63

B) 40

C) 74

D) 61

E) 55

# Answer Option A

5. What is the average of numbers obtained in last 2 steps?

A) 6

B) 2

C) 5

D) 4

E) None of these

Answer Option D

Directions (1-5): A string of alphabets is given as input. The further steps given are obtained by applying certain logic. Alphabets of step II have been obtained by using at least 1 digit of each number in step I. Each step is a resultant of previous step only. None of the exact logic is repeated in any step.



Input:



1. Which alphabet occurs exactly 3 times in any steps?

A) L

B) F

C) R

D) U

E) Other than options given

#### Answer Option B

2. What is the sum of numbers corresponding to each alphabet in step II? (Taking A = 1, B = 2,  $\dots Z = 26$ )

A) 18

B) 19

C) 15

D) 13

E) 11

# Answer Option C

3. Let @ is the sum of numbers corresponding to each alphabet in step III. What is the alphabet corresponding to @? (Taking  $A = 1, B = 2, \dots, Z = 26$ )

A) L

B) M

C) P

D) O

E)Q

**Answer Option D**