Expected Input Output Part 2 for Upcoming Mains Exam

Input-Output Part 2

Directions (1-5): **Study the following information carefully and answer the questions given below.**

A number arrangement machine, when given an input, rearranges it following a particular rule. The following is the illustration of the input and steps of the arrangement.

Condition:

i) If an odd number comes at the even-numbered position, then the first digit of the number is changed to &.

ii) If an Even number comes at the odd-numbered position, then the Second digits of the number changed to *.

Input: 34 25 56 98 11 77 68 83

Step 1: 11 34 25 56 77 68 83 98

Step 2: 25 &1 3* 56 77 68 9* &3

Step 3: 3* &5 &1 56 6* 9* &3 &7

Step 4: 5* 3* &5 &1 9* &3 &7 6*

Expected Input Output Part 2 for Upcoming Mains Exam

Step 4 is the last step of the rearrangement. As per the rules followed in the above steps, find out the answers to each of the following questions.

Input: 13 99 42 19 66 87 32 70

1) Which of the following element is between 3* and &3 in the last step?

a. None

b. 6*

c. 7*

d. &3

e. &9

2) Which of the following steps are not used in the rearrangement?

a. 4* 3* &9 &3 &9 &7 7* 6*

b. 19 &3 4* 66 3* 7* &9 &7

c. 13 42 19 66 87 32 7* &9

d. 19 4* &3 3* 66 7* &9 &7

e. None of these

3) Which of the following element is immediately preceded by 4* in step 2?

a. 19

b. 66

c. &3

d. 6*

e. None

4) In step 3, which element is second to the right of the number which is third from the left end?

a. 6*

b. &5

c. 77

Expected Input Output Part 2 for Upcoming Mains Exam

d. 9*

e. 56

5) Which among the following is the last step of the rearrangement?

a. 4* 3* &6 &3 &7 &9 7* 6*

b. 4* 3* &9 &3 &9 &6 7* 7*

c. 4* 3* &3 &9 &3 &7 7* 6*

d. 4* 3* &9 &3 &9 &7 7* 6*

e. None of these

Directions (6-10): Study the following information carefully and answer the given questions:

A word and number arrangement device when given an input line of words and numbers rearranges them following a particular pattern in each step. The following is an illustration of input and rearrangement.

Input: glitter situation younger contain visiting hostel ginger

Step I: younger contain visiting ginger situation glitter hostel

Step II: 41 25 27 14 55 14 20

Step III: 66 52 41 69 69 34

Step IV: 19 12 20 30 22

Step V: 7 -8 -10 8

Step VI: -56 80 -80

Step VII: 24 0

Step VIII: 24

Input: biscuit decide hideout silent essential author gesture

6) Which element is third to the left in step IV?

a. 21

Expected Input Output Part 2 for Upcoming Mains Exam

b. 32

c. 24

d. 120

e. None of these

7) What is the sum of the all the digits of the number in final step?

a) 04

b) 08

c) 13

d) 12

e) None of these

8) Which element is fifth from the right in step 1?

a) Author

b) 89

c) Silent

d) Hideout

e) None of these

9) Which step number is the following output?

'21 32 24 12 17'

a) Step I

b) Step II

c) Step IV

d) Step III

e) Step V

Expected Input Output Part 2 for Upcoming Mains Exam

10) What is sum of all the numbers of penultimate step?

a) 49

b) 46

c) 43

d) 44

e) None of these

Directions (11-15): Study the following information carefully and answer the given questions:

A word and number arrangement device when given an input line of words and numbers rearranges them following a particular pattern in each step. The following is an illustration of input and rearrangement.

Input: Three person bought prime laptops

Step I: 25 75 315 45 15

Step II: 34 64 204 54 04

Step III: 04 34 54 64 204

Step IV: 30 20 10 140

Step V: 3 2 1 5

Step VI: X Y Z V

Step VI is the last step of the given input

Input: seven persons attend eight meeting

11) What is the position of '54' in the step-3?

a) fourth from the left

b) second from the left

c) fourth from the right

d) third from the left

e) second from the right

Expected Input Output Part 2 for Upcoming Mains Exam

12) What is the sum of all the numbers in step 5?

a) 16

b) 15

c) 10

d) 11

e) 12

13) How many elements are there between '334' and '270' in step 3?

a) Two

b) One

c) Three

d) None

e) There is no such step

14) Which step number is the following output?

30 20 10 270

a) Step I

b) Step II

c) Step IV

d) Step III

e) Step V

15) How many vowels are presents in the last step of the given input?

a) 2

b) None

c) 1

d) 3

e) 4

Directions (16-20): Study the following information carefully and answer the given questions:

A word and number arrangement device when given an input line of words and numbers rearranges them following a particular pattern in each step. The following is an illustration of input and rearrangement.

Input: articulate reticent incorrigible adroit martinet

Step I: adroit articulate incorrigible martinet reticent

Step II: 6 10 12 8 8

Step III: 60 120 96 64

Step IV: -60 24 32

Step V: -36 56

Step VI: 20

Step VII: T

Input: drag gorgeous energetic wonder harper

16) Which of the following represents position of "24" in Step IV of the new input?

a) Second from the left

b) Third from the right

c) Third from the left

d) First from the left

e) First from the right

17) Which number would be at third position from left in Step IV?

a) 24

b) -36

c) -24

Expected Input Output Part 2 for Upcoming Mains Exam

d) 12

e) 36

18) Which alphabet appears in the last step of the output?

a) L

b) M

c) X

d) Q

e) J

19) Which step number is the following output?

"36 72 48 36"

a) Step I

b) Step II

c) Step IV

d) Step III

e) Step V

20) What is difference between fifth number from left and fifth number from right in Step II?

a) 5

b) 6

c) 3

d) 4

e) 2

Directions (21-25): Directions: A word and number arrangement machine when given an input line of words and numbers rearranges then following a particular rule in each step. The following is an illustration of an input rearrangement.

Expected Input Output Part 2 for Upcoming Mains Exam

Input: Current True 28 30 Given 24 Situation 48 Triangles 52

Step I: Triangles Current True 28 30 Given Situation 48 52 24

Step II: Triangles Situation Current True 30 Given 48 52 24 28

Step III: Triangles Situation True Current Given 48 52 24 28 30

Step IV: Triangles Situation True Current Given 52 24 28 30 48

Step V: Triangles Situation True Current Given 24 28 30 48 52

Step VI: 18 09 18 21 09 24 28 30 48 52

Step VII: 09 09 09 03 09 06 10 03 12 07

Step VIII: 03 03 06 07 09 09 09 09 10 12

Step VIII is the output of the above input

Input: Nest Dinner 26 Figure 78 34 38 Medicine Summer 56

21) In the Step V, which element will be sixth to the right of seventh element from the right end for the input given below?

a. 78

b. Nest

c. 56

d. 38

e. None of these

22) What would be the sum of all the numbers in the penultimate step?

a. 95

b. 83

c. 75

d. 88

Expected Input Output Part 2 for Upcoming Mains Exam

e. None of these

23) Which number is second to the right of third element from left end in step IV?

a. 78

b. Nest

c. Figure

d. Medicine

e. None of these

24) What is the sum of first four numbers from left end in last step?

a. 12

b. 18

c. 14

d. 10

e. 20

25) Which element is third to the left of third element from the right end in step III?

a. 26

b. 78

c. Medicine

d. Dinner

e. None of these

Directions (26-30): Read the given information carefully and answer the questions.

A three digit number arrangement machine when given an input line of numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: 347 736 479 238 547 632

Step I: 256 627 568 329 456 723

Step II: 723 627 568 456 329 256

Expected Input Output Part 2 for Upcoming Mains Exam

Step III: 237 267 568 456 239 256

Step IV: 23 44 53 34 29 32

Step V: 23 29 32 34 44 53

Step V is the last step of the above input. As per rules followed in the above steps, find out in each of the given questions the appropriate steps for the given input.

Input for the question:

"825 392 647 528 724 438"

26) What is the absolute difference between first two numbers (from the left end) in Step IV of the given input?

a. 4

b. 14

c. 11

d. 8

e. None of these

27) What is the sum of all the prime numbers in the last step of the given input?

a. 70

b. 94

c. 87

d. 99

e. None of these

28) What is the sum of all the digits of the 3rd number from the left end in step II of the given input?

a. 15

b. 14

c. 16

d. 18

e. None of these

29) What is the addition of first two numbers (from the left end) in Step V of the given input?

a. 48

b. 54

c. 51

d. 59

e. None of these

30) What is the sum of all the odd numbers in the last step of the given input?

a. 170

b. 205

c. 187

d. 199

e. None of these

Direction (31-35): Study the following information carefully and answer the questions given below.

A word and number arrangement machine, when given a particular input, rearranges it following a particular rule.

The following is the illustration of the input and the steps of arrangement.

Input: glitter situation younger contain visiting hostel ginger

Step I: ginger glitter situation younger contain visiting hostel

Step II: ginger hostel glitter situation younger contain visiting

Step III: ginger hostel contain glitter situation younger visiting

Expected Input Output Part 2 for Upcoming Mains Exam

Step IV: ginger hostel contain glitter younger situation visiting

Step V: ginger hostel contain glitter younger visiting situation

Step VI: 07 08 20 20 14 22 01

Step VII: 08 10 22 22 16 24 02

Step VIII: 02 08 10 16 22 22 24

And Step VIII is the last step of the rearrangement as the desired arrangement is obtained. As per the rules followed in the above steps, answer the following questions for the given input.

Input: biscuit decide hideout silent essential author gesture

31) What is the sum of all numbers in the penultimate step of given input?

a. 82

b. 85

c. 76

d. 75

e. 80

32) Which word is the fifth from the left in step III of given input?

a. Author

b. Gesture

c. Essential

d. Decide

e. Hideout

33) Which number is the third to the right of sixth number from right end in step VI of given input?

a. 03

b. 20

c. 21

d. 19

e. None of the above

34) Which of the following is the middle word in step III of given input?

a. Silent

b. Biscuit

c. Hideout

d. Gesture

e. Author

35) Which word is the third to the left of third word from right end in step IV of given input?

a. Biscuit

b. Gesture

c. Author

d. Hideout

e. Decide

Direction(36-40): Study the following information carefully and answer the questions given below.

Eight batsmen with different runs in a match are arranged in two teams P and Q. Runs of each batsman are coded as per the following examples:

Runs	Step 1	Step 2	Player codes
342	57	171	19
123	41	164	82
279	93	372	186
324	54	162	18
126	21	63	7

Expected Input Output Part 2 for Upcoming Mains Exam

189	63	252	126
216	36	108	12
339	113	452	226

After player codes are generated, players are arranged in ascending order as per player code and the first four players are kept in team P and last four players are kept in team Q:

Work out the same for the following runs of the players:

315, 234, 195, 423, 414, 87, 162, 378

36) What is the player code of the player, who has 87 runs?

a. 65

b. 130

c. 58

d. 105

e. None of these

37) What is the difference of the highest and the lowest player codes in team P?

a. 14

b. 23

c. 19

d. 17

e. None of these

38) If a player scores 75 runs, what will be his code?

a. 150

b. 70

c. 25

Expected Input Output Part 2 for Upcoming Mains Exam

d. 50

e. None of these

39) What is the sum of the 2nd highest and the lowest player codes in Team Q?

a. 188

b. 340

c. 268

d. 329

e. None of these

40) The player with 3rd highest code (including both the teams) has how many runs?

a. 414

b. 378

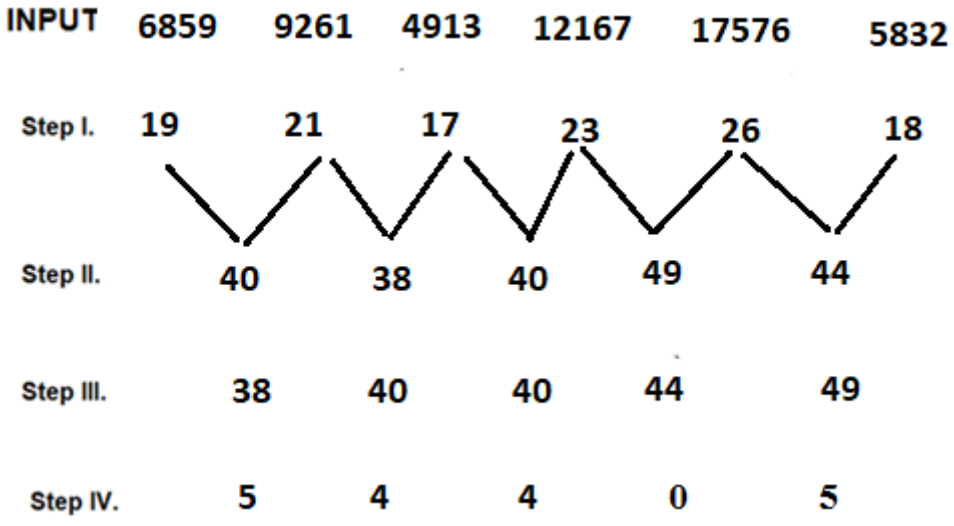
c. 195

d. 87

e. None of these

Directions(41-45): Study the given information to answer the questions based on it.

A number arrangement machine when given an input line of numbers rearranges them following a particular rule. The following is an illustration of input and re-arrangement.



Expected Input Output Part 2 for Upcoming Mains Exam

As per the rules followed in the above steps, find out in each of the following questions the appropriate steps for the given input.

Input – 24389 21952 19863 15625 13824 10648

41) Which of the following is the 3rd number from left in the penultimate step?

a. 56

b. 58

c. 50

d. 52

e. None of these

42) What will be final step of the given input?

a. 2 0 3 5 2

b. 2 3 5 0 2

c. 2 5 3 2 0

d. 2 5 3 0 2

e. None of these

43) What is the multiplication of the number which is third from left and which fifth from right in the last step?

a. One

b Two

c. Four

d. Three

e. More than Three

44) Which of the following element is 3rd to the right of the element which is 2nd from the left end in the step II?

a. 57

b. 46

Expected Input Output Part 2 for Upcoming Mains Exam

c. 55

d. 52

e. 49

45) What is the sum of the elements which are 2nd from the right end of step II and 3rd from the right in step III?

a. 103

b. 104

c. 101

d. 109

e. None of these

Directions (46-50): Read the given information carefully and answer the questions.

A five digit number arrangement machine when given an input line of numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input: 56148 34195 41683 63215 52197

Step I: 14568 13459 13468 12356 12579

Step II: 1158 1129 1138 1106 1149

Step III: 0048 0028 0028 0006 0048

Step IV: 12 10 10 06 12

Step V: 06 10 10 12 12

Step VI: 036 10 10 14 14

Step VI is the last step of the above input. As per rules followed in the above steps, find out in each of the given questions the appropriate steps for the given input.

Input for the question:

"43156 92146 81247 53179 69432 47269"

46) In the last step, which number is 3rd from the right end of the given input?

a. 41

Expected Input Output Part 2 for Upcoming Mains Exam

b. 16

c. 14

d. 18

e. None of these

47) What is the sum of last three numbers in step IV of the given input?

a. 30

b. 58

c. 46

d. 40

e. None of these

48) Which number is 4th from the left end in step II of the given input?

a. 1129

b. 1159

c. 1126

d. 2936

e. None of these

49) What is the absolute difference of the 3rd number from right end in step III and 2nd number from the left end in step III?

a. 37

b. 26

c. 25

d. 20

e. None of these

50) Which among the following is the first number from left end in step IV of the given input?

a. 08

b. 10

c. 16

d. 18

e. None of these

Solution and Detailed Explanation

Solution (1-5):

Given condition:

i) If an odd number comes at the even-numbered position, then the first digit of the number is changed to &.

ii) If an Even number comes at the odd-numbered position, then the Second digits of the number changed to *.

Operation applied:

Numbers are arranged in increasing order from left end and in decreasing order from right end simultaneously.

For the input,

Input: 13 99 42 19 66 87 32 70

Step 1: 13 42 19 66 87 32 7* &9

Step 2: 19 &3 4* 66 3* 7* &9 &7

Step 3: 3* &9 &3 4* 6* &9 &7 7*

Step 4: 4* 3* &9 &3 &9 &7 7* 6*

1. e

2. d

3. c

4. a

5. d

Solution(6-10):

In the given illustration:

Expected Input Output Part 2 for Upcoming Mains Exam

Step I: arrange the words from the left side which comes last in the dictionary and then the word which comes first in the English dictionary. Now, the second last word and second word will be arranged and so on.

Step 2: each word is replaced by sum of the numerical position of vowels in the English alphabetical order.

Step 3: sum of the two adjacent numbers given in step 2.

Step 4: sum of all the digits of the two adjacent numbers given in step 3.

Step 5: Subtraction of 2nd number from the left from 1st and 3rd number from 2nd and so on.

Step 6: Product of the two adjacent numbers given in step 5.

Step 7: sum of the two adjacent numbers given in step 6.

Step 8: Addition of two numbers

Step-8 is the final step

Now given

Input: biscuit decide hideout silent essential author gesture

Step I: silent author hideout biscuit gesture decide essential

Step II: 14 37 50 39 31 19 20

Step III: 51 87 89 70 50 39

Step IV: 21 32 24 12 17

Step V: -11 8 -12 05

Step VI: -88 96 -60

Step VII: 08 36

Step VIII: 44

6. c

7. b

8. d

9. c

Expected Input Output Part 2 for Upcoming Mains Exam

10. d

Solution(11-15):

In the given illustration:

Step I: Each word is replaced by the multiplication of numerical positions of vowels in the English alphabetical series.

Step 2: Each odd digit of the number should be replaced by -1 and each even digit of the number should be replaced by +1.

Step 3: Arrange all the numbers in the ascending order.

Step 4: Difference of the two adjacent numbers given in step 3(Subtraction of lower number from higher number).

Step 5: Sum of the digits of the numbers given in step 4.

Step 6: The alphabet which have the positional value same as the number given in step 5.

Step 6 is the last step

Input: Seven persons attend eight meeting

Step I: 25 75 15 45 225

Step II: 34 64 04 54 334

Step III: 04 34 54 64 334

Step IV: 30 20 10 270

Step V: 3 2 1 9

Step VI: X Y Z R

Step VI is the last step of the given input

11. d

12. b

13. e

14. c

Expected Input Output Part 2 for Upcoming Mains Exam

15. b

Solution(16-20:

In the given illustration:

Step I: arrange the words in an alphabetical order.

Step 2: each word is replaced by number of letters in that word.

Step 3: Product of two adjacent numbers given in step 2.

Step 4: difference between the two adjacent numbers given in step 3.

Step 5: sum of the two adjacent numbers given in step 4.

Step 6: sum of the two adjacent numbers given in step 5.

Step 7: the alphabet which have the positional value same as the number given in step 6.

Step 7 is the last step

Now given

Input: drag gorgeous energetic wonder harper

Step I: drag energetic gorgeous harper wonder

Step II: 4 9 8 6 6

Step III: 36 72 48 36

Step IV: -36 24 12

Step V: -12 36

Step VI: **24**

Step VII: **X**

16. a

17. d

18. c

Expected Input Output Part 2 for Upcoming Mains Exam

19. d

20. e

Solution (21-25):

In the illustration from Step I-V, the words are being arranged according to highest number, which is obtained by the sum of numbers representing the first and last alphabet of the word, from left to right and simultaneously the numbers are being arranged one by one in ascending order. In Step VI, after rearrangement of words and numbers, we write the number as the number representing second letter of the word. In step VII, we add the digits of the numbers. In step VIII, we arranged the numbers in increasing order from left to right.

Input: Nest Dinner 26 Figure 78 34 38 Medicine Summer 56

Step I: Summer Nest Dinner Figure 78 34 38 Medicine 56 26

Step II: Summer Nest Dinner Figure 78 38 Medicine 56 26 34

Step III: Summer Nest Dinner Figure 78 Medicine 56 26 34 38

Step IV: Summer Nest Dinner Medicine Figure 78 26 34 38 56

Step V: Summer Nest Dinner Medicine Figure 26 34 38 56 78

Step VI: 21 05 09 05 09 26 34 38 56 78

Step VII: 03 05 09 05 09 08 07 11 11 15

Step VIII: 03 05 05 07 08 09 09 11 11 15

21. a

22. b

23. c

24. e

25. b

Solutions (26-30):

The rearrangement takes place in the following ways:

Expected Input Output Part 2 for Upcoming Mains Exam

In Step I, all the odd digits of each numbers are subtracted by 1 and all the even digits of each numbers are added by 1.

In Step II, all the numbers in step I are arranged in decreasing order from left to right.

In Step III, all the digits of all the numbers are arranged in increased order (within each number)

In Step IV, the hundredth digit is added to the product of unit digit and tenth digit of each numbers.

In Step V, numbers in step IV are arranged in increasing order from left to right.

Input: 825 392 647 528 724 438

Step I: 934 283 756 439 635 529

Step II: 934 756 635 529 439 283

Step III: 349 567 356 259 349 238

Step IV: 39 47 33 47 39 26

Step V: 26 33 39 39 47 47

26. d

27. b

28. b

29. d

30. b

Solution (31-35):

The logic followed here is:

Step I - Step V: Words are arranged in increasing order of number of letters. If two or more words have same number of letters then those words are arranged in alphabetical order of first letters.

Step VI: If a word has even number of letters then it will be replaced by the number representing first letter and if a word has odd number of letters then it will be replaced by number representing middle letter.

Step VII: One is added to odd numbers and two is added to even numbers.

Step VIII: Numbers are arranged in ascending order from left end.

Input: biscuit decide hideout silent essential author gesture

Expected Input Output Part 2 for Upcoming Mains Exam

Step I: author biscuit decide hideout silent essential gesture

Step II: author decide biscuit hideout silent essential gesture

Step III: author decide silent biscuit hideout essential gesture

Step IV: author decide silent biscuit gesture hideout essential

Step V: 01 04 19 03 20 05 14

Step VI: 02 06 20 04 22 06 16

Step VII: 02 04 06 06 16 20 22

31. c

32. e

33. e

34. b

35. e

Solution (36-40):

As per the pattern if the runs of the players are an even number then in step 1, run scored is divided by 6 then in step 2, the value obtained in step 1 is multiplied by 3 and finally in step 3, the value obtained in step 2 is divided by 9, to obtain the player code.

If the runs of the players is an odd number then in step 1, run scored is divided by 3 then in step 2, the value obtained in step 1 is multiplied by 4 and finally in step 3, the value obtained in step 2 is divided by 2, to obtain the player code

Runs	Step 1	Step 2	Player codes
315	105	420	210
234	39	117	13
195	65	260	130
423	141	564	282
414	69	207	23
87	29	116	58

Expected Input Output Part 2 for Upcoming Mains Exam

162	27	81	9
378	63	189	21

Distribution of players according to the player codes in team P and team Q,

Team P			
Runs	Step 1	Step 2	Player codes
162	27	81	9
234	39	117	13
378	63	189	21
414	69	207	23

Team Q			
Runs	Step 1	Step 2	Player codes
87	29	116	58
195	65	260	130
315	105	420	210
423	141	564	282

36. c

37. a

38. d

39. c

40. c

Solution(41-45):

Input: 24389 21952 19863 15625 13824 10648

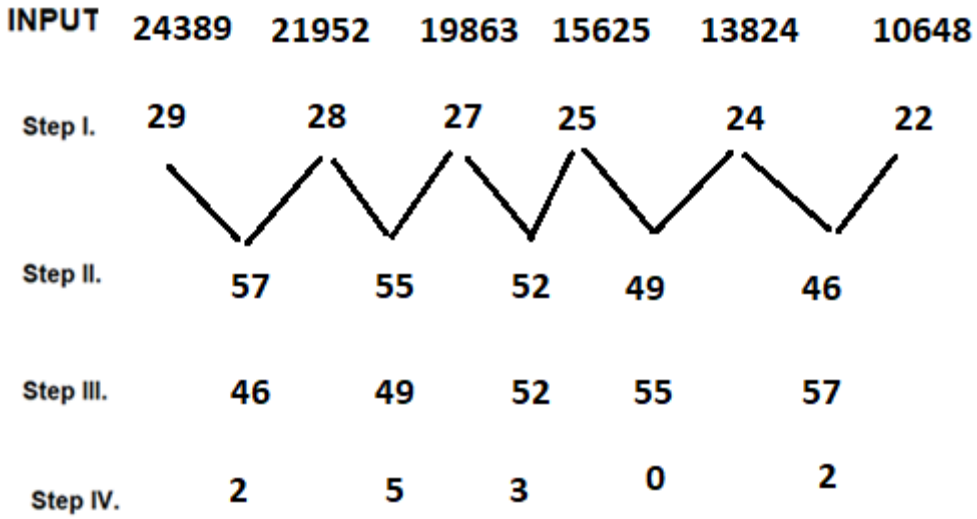
Expected Input Output Part 2 for Upcoming Mains Exam

Step I: All the numbers in the given input are cubes of two digit numbers so, take the cube root of all the numbers in step-1

Step II: Sum of first and 2nd number, 2nd and 3rd number and 3rd and 4th number and so on from the left side of step I

Step III: Arrange all the numbers in the ascending order.

Step IV: Difference of digit of all numbers. Lower number is subtracted from higher number.



41. d

42. d

43. e

44. b

45. c

Solutions(46-50):

In Step I, all the digits of each numbers are arranged in decreasing order from the right side. In step II, middle three digits are added.

In step III, the odd digits are decreased by 1. In step IV, all the digits of the number are added, all the numbers are arranged in increasing order. In step V, the individual digits are squared.

Input: 43156 92146 81247 53179 69432 47269

Step I: 13456 12469 12478 13579 23469 24679

Step II: 1126 1129 1138 1159 2139 2179

Step III: 0026 0028 0028 0048 2028 2068

Expected Input Output Part 2 for Upcoming Mains Exam

Step IV: 08 10 10 12 12 16

Step V: 064 10 10 14 14 136

46. c

47. d

48. b

49. d

50. a