In these type of questions an input is given which consists of either words or numbers. You will be told that a machine rearranges this input in a particular passion. Your aim is to find the rule followed by the machine in rearranging the input. Then you have to apply this rule to the questions given and find the answers. Finding the rule followed by the machine is the key task. Once you find the rule it's quite easy to solve the questions.

**SOURCE GENEAL RULES**

1. Arrange according to the dictionary
   -- the words are arranged according to the dictionary
   eg: Input: is of am do can
       Step I: am is of do can
       Step II: am can is of do
       Step III: am can do is of
       Here 'am', the Ist word that we will find in a dictionary from the given input, is placed in the Ist position in Step I. Then 'can', the second letter in the dictionary, is placed in the 2nd position and the process continues till the whole input of words are arranged. In the same manner as they will appear in the dictionary.

2. Arranging the words according to the increasing or decreasing order of the total number of letters of each word.
   eg: Input: He never lie always
       Step I: Always He never lie
       Step II: Always never He lie
       Step III: Always never lie He
       Here the word with the larger number of letters is placed first, ie 'always', then the word 'never' and so on till the word with least number of letters is placed last.

3. If we don't find any arrangement, then number the words of the input.
   eg:- Input: is to before go back on
       Step I: go is to before back on
       Step II: is go to before back on
       Step III: is before go to back on
       and so on ...............
       Were the 4th word is patern to the 1st place and the nearest word to it is interchanged. This process is continued.

4) Arrangement of Numbers
   Input: 15 28 27 39 12 6
   Step I: 6 12 15 28 27 39
   Step II: 6 12 28 15 27 39
   Step III: 6 12 28 15 27 39
   Step IV: 6 12 28 39 15 27
   Step V: 6 12 28 39 27 15
   Here, Ist the even numbers are arranged in the ascending order while the odd numbers are arranged in the descending order after the even numbers are arranged.

**PRACTICE TESTS**

Directions (Q. 1-7): Study the following information to answer the questions given below:

A number arrangement machine when given an input of numbers, rearranges them following a particular rule in each step. The following is an illustration of input and of steps rearrangement.
Input:  48  245  182  26  99  542  378  297
Step I:  542  48  245  182  26  99  378  297
Step II:  542  26  48  245  182  99  378  297
Step III:  542  26  378  48  245  182  99  297
Step IV:  542  26  378  48  297  245  182  99
Step V:  542  26  378  48  297  99  245  182
This is the final arrangement and step V is the last step for this input.

1. What will the fourth step for an input whose second step is given below?
   **Step: 765  42  183  289  542  65  110  350**
   1) 765  42  542  350  183  289  65  110
   2) 765  42  542  65  110  183  289  350
   3) 765  42  542  183  289  110  350  65
   4) Cannot be determined
   5) None of these

2. What should be the third step of the following input?
   **Input: 239  123  58  361  495  37**
   1) 239  123  58  361  495  37
   2) 239  123  58  361  495  37
   3) 239  123  58  361  495  37
   4) 239  123  58  361  495  37
   5) None of these

3. How many steps will be required to get the final output from the following input?
   **Input: 39  88  162  450  386  72  29**
   1) Two
   2) Three
   3) Four
   4) Six
   5) None of these

4. What should be the last step of the following input?
   **Input: 158  279  348  28  326  236**
   1) 158  279  348  28  326  236
   2) 158  279  348  28  326  236
   3) 158  279  348  28  326  236
   4) 158  279  348  28  326  236
   5) None of these

5. If the first step of an input is “785 198 32 426 373 96 49”, then which of the following steps will be “785 32 426 49 198 373 96”?
   1) Third
   2) Fourth
   3) Fifth
   4) Second
   5) None of these

6. Below is given the second step of an input. What will be its fourth step?
   **Step II: 298  12  36  212  185**
   1) 298  12  36  212  185
   2) 298  12  36  212  185
   3) 298  12  36  212  185
   4) Cannot be determined
   5) None of these

7. Below is given the third step of an input. What will be its second step?
   **Step III: 387  42  236  185  92  64**
   1) 387  42  236  185  92  64
   2) 387  42  236  185  92  64
   3) 387  42  236  185  92  64
   4) Cannot be determined
   5) None of these

8. Directions (Q.8-12): Study the following information carefully and answer the questions given below it:

   An export processing unit has a computerised machine which generates six codes to distinguish products of each of the seven batches produced in a day. The machine is fed code for the first batch of each day. Based on that, the machine generates 6 codes by rearrangement of words for subsequent batches. Following is an illustration of generation of codes for some batches of a day.

   Day’s first batch — who nut cream page for table.
   Day’s second batch — who for cream page nut table.
   Day’s third batch — who for page cream nut table.
   Day’s fourth batch — table for page cream nut who.
   Day’s fifth batch — page table for nut who cream.
   Day’s sixth batch — page who for nut table cream.
   and so on till seventh batch. Next day based on the same rule, new set of words will be introduced as given above:

   Day’s first batch — who nut cream page for table.
   Day’s second batch — who for cream page nut table.
   Day’s third batch — who for page cream nut table.
   Day’s fourth batch — table for page cream nut who.
   Day’s fifth batch — page table for nut who cream.
   Day’s sixth batch — page who for nut table cream.

   and so on till seventh batch. Next day based on the same rule, new set of words will be introduced as given above:

   8. If the seventh batch of the day is ‘from door no leaf glass but’, which of the following would be the first three words of the code of the third batch of that day?
      1) door leaf from.....
      2) door leaf but .......
      3) glass leaf but.....
      4) but door no........
      5) None of these
9. If the code of sixth batch of the day is 'very say could man on fire', which of the following batch codes would read as 'say could very fire man on'?
   1) Second  2) Third  3) Fourth  4) Fifth  5) None of these

10. If the code of fourth batch is 'so when clean get lemon dust', which of the following would be the code for seventh batch?
   1) get dust lemon when so clean  
   2) clean so when lemon dust get  
   3) when get dust so clean lemon  
   4) clean dust lemon when so get  
   5) None of these

11. If the first batch code of a day is 'five gave it close to mine', which of the following will be the code for fourth batch?
   1) five to it close gave mine  
   2) mine to close it gave five  
   3) five to close it gave mine  
   4) close five to gave mine it  
   5) None of these

12. If the code of fifth batch of a day is same is tea at now then', which of the following would definitely be the first code of that day?
   1) tea same is now then at  
   2) same now tea at is then  
   3) now at then same tea is  
   4) now tea is same then at  
   5) None of these

13. If following is the fifth step of an input, what will be the third step?
   Step V: 17 32 43 82 69 93 49 56 99 106
   1) 17 32 43 82 69 93 49 56 99 106  
   2) 17 32 82 69 43 93 49 56 99 106  
   3) 17 32 82 69 93 43 49 56 99 106  
   4) 17 32 82 69 43 93 56 49 99 106  
   5) Can't be determined

14. How many steps will be required for getting the final output for the following input?
   Input: 101 85 66 49 73 39 142 25 115 74
   1) 5  2) 6  3) 7  4) 8  5) None of these

15. Which of the following will be the third step for the following input?
   Input: 45 78 97 132 28 16 146 54 99 112
   1) 16 28 45 78 97 146 54 99 112 132  
   2) 16 28 45 97 78 54 99 112 132 146  
   3) 16 28 45 78 97 132 54 99 112 146  
   4) 16 28 45 97 78 132 99 54 112 146  
   5) None of these

16. If the second step for an input is as given below, what will be the fifth step for the same input?
   Step II: 22 49 32 88 69 132 101 185
   1) 22 32 49 88 69 101 132 185  
   2) 22 32 69 49 88 101 132 185  
   3) 22 32 49 69 132 88 132 185  
   4) 22 32 49 88 69 132 101 185  
   5) None of these

17. What will be the Step II for the following input?
   Input: 47 62 17 92 86 42 24 79
   1) 17 24 62 86 42 79 92  
   2) 17 47 62 86 42 24 79 92  
   3) 17 24 62 92 86 42 79  
   4) 17 47 62 86 24 42 79 92  
   5) None of these

18. What will be the last step for the following input?
   Input: 138 63 49 93 89 122 32 71
   1) 32 49 71 63 89 93 122 138  
   2) 32 49 63 71 93 89 122 138  
   3) 32 49 63 71 89 93 122 138  
   4) Can't be determined  
   5) None of these

Directions (Q. 13-19): Study the following information carefully to answer the questions given below.

A number sorting machine when given an input of numbers, rearranges the numbers in a particular manner step by step as indicated below till all the numbers are arranged in a particular order.

Given below is an illustration of this arrangement:

<table>
<thead>
<tr>
<th>Input</th>
<th>Step I</th>
<th>Step II</th>
<th>Step III</th>
<th>Step IV</th>
<th>Step V</th>
<th>Step VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>39 121 48 18 76 112 14 45 63 96</td>
<td>14 39 121 48 18 76 112 14 45 63 96</td>
<td>14 39 48 14 76 112 45 63 96 121</td>
<td>14 18 39 48 76 112 45 63 96 121</td>
<td>14 18 39 45 48 76 63 96 112 121</td>
<td>14 18 39 45 48 63 76 96 112 121</td>
<td></td>
</tr>
</tbody>
</table>

(This is the final arrangement and Step VI is the last step for this input)
19. What will be the step III for the following input?
   **Input**: 68 182 39 93 129 46 21 58
   1) 21 39 68 93 129 46 58 182
   2) 21 39 68 129 93 46 58 182
   3) 32 68 39 93 129 46 58 182
   4) Can’t be determined
   5) None of these

**Directions (Q. 20-26): Study the following information to answer the given questions.**

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

**Input**: 25 280 345 36 93 147 550

**Step I**: 550 280 345 36 93 147 25

**Step II**: 550 345 280 36 93 147 25

**Step III**: 550 345 280 147 93 36 25

This is the final arrangement and Step III is the last step for this input.

20. If ‘842 485 68 358 236 123 93’ is the second step of an input, which of the following steps will be ‘842 485 358 236 123 68 93’?
   1) Fourth
   2) Fifth
   3) Sixth
   4) Can’t be determined
   5) None of these

21. How many steps will be required to get the final output from the following input?
   **Input**: 78 293 585 740 64 132 26
   1) 4
   2) 5
   3) 3
   4) 2
   5) None of these

22. What will be the third step for the following input?
   **Input**: 113 18 48 225 462 175 288
   1) 462 288 48 225 113 175 18
   2) 462 288 225 175 113 48 18
   3) 462 225 288 48 113 175 18
   4) 462 288 225 48 113 175 18
   5) None of these

23. If following is the first step for an input, what will be the fourth step?
   **Step I**: 498 175 292 96 79 387 158
   1) 498 387 292 175 96 158 79
   2) 498 387 292 175 158 96 79
   3) 498 387 292 175 79 158 96
   4) None of these

24. Following is the step II for an input. What will be the first step for the input?
   **Step II**: 595 438 28 142 38 65 289
   1) 595 28 438 142 38 65 289
   2) 595 438 142 28 38 65 289
   3) 595 28 142 438 38 65 289
   4) Can’t be determined
   5) None of these

25. What will be the second step for the following input?
   **Input**: 158 294 22 89 142 385 463
   1) 463 385 294 22 89 142 158
   2) 463 385 89 22 142 294 158
   3) 463 385 22 89 142 158 294
   4) 463 385 22 142 89 158 294
   5) None of these

26. Which of the following is the last step for the following input?
   **Input**: 145 227 900 49 116 243 356
   1) 900 356 243 227 90 49 145
   2) 900 356 243 227 145 116 49
   3) 900 356 227 243 145 116 49
   4) 900 356 243 227 116 145 49
   5) None of these

**Directions (Q. 27-31): Study the following information to answer the given questions.**

A word arrangement machine when given an input line of words, rearranges them following a particular rule in each step. The following is an illustration of the input and the steps of rearrangement.

**Input**: going but for crept te light sir

**Step I**: crept going but for te light sir

**Step II**: crept going light but for te sir

**Step III**: crept going light but for sir te

(Step III is the last step for this input)
As per the rules followed in the above steps, find out in the given questions the appropriate step for the given input,

27. **Input**: the in car as he may me
Which of the following will be the third step for this input?
   1) car the in as he may me
   2) car may the as in he me
   3) car as may he the in me
   4) car may the in as he me
   5) None of these

28. If the second step of an input is ‘clever remand window sales batch tiger never’ which of the following will be its sixth step?
   1) clever remand window batch sales tiger never
   2) window remand clever sales batch tiger never
   3) batch never sales tiger clever remand window
   4) clever remand window tiger batch sales never
   5) It cannot have sixth step.

29. If the input is ‘true se veto be nuke my like’, which of the following will be the IV step?
   1) like nuke true veto be se my
   2) be my like se true veto nuke
   3) be my se like true veto nuke
   4) veto true nuke like so be my
   5) Cannot be determined

30. **Input**: ‘more fight cats cough sough acts idea’. Which of the following steps would be the last step for this input?
   1) III  2) IV  3)V  4) VI  5) VII

31. If the V step of an input is ‘more pure soft cat not so sir at’, what will be the II step?
   1) at so more pure cat not soft sir
   2) more pure soft so sir cat at not
   3) more pure soft cat so sir at not
   4) more so sir soft pure cat at not
   5) Cannot be determined

Directions (Q. 32-36): Study the following information carefully to answer the questions given below. In a toy exhibition, a machine processes a given input by the following rule. Participants are shown one by one till it reaches its last step. Following is an illustration of the working of this machine.

<table>
<thead>
<tr>
<th>Input</th>
<th>Step I</th>
<th>Step II</th>
<th>Step III</th>
<th>Step IV</th>
<th>Step V</th>
</tr>
</thead>
<tbody>
<tr>
<td>su  me  ato  fe  zen  u  no</td>
<td>fe  sui  me  no  ato  zen  u</td>
<td>no  fe  sui  u  me  ato  zen</td>
<td>u  no  fe  zen  sui  me  ato</td>
<td>ato  zen  u  me  no  fe  sui</td>
<td></td>
</tr>
</tbody>
</table>

and so on.

Now attempt the questions given below.

32. Which of the following steps would read as ‘not you only say wise yet are’ for the input ‘say not you are only wise yet’?
   1) III  2) V  3) VI  4) VII  5) None of these

33. If the Step V of an input is ‘so cd rom lay is nor it’, which of the following would be its Step II?
   1) is nor it rom lay so cd
   2) nor it lay is so cd rom
   3) lay so cd it rom is nor
   4) Data inadequate
   5) None of these

34. If the Step III of an input is ‘lo men chi from yet as know’, which of the following would be its input?
   1) Data inadequate
   2) from lo men know chi yet as
   3) men chi yet lo as know from
   4) chi as know men know from lo
   5) None of these

35. Which of the following correctly describes the ‘machine logic’ in generating various steps based on the given input?
   1) Each step is generated on random basis.
   2) Words/letters are finally arranged in dictionary order,
   3) The seventh letter interchanges with the fourth every time.
   4) Data inadequate
   5) None of these
36. What will be the step IV for the following input?
   **Input**: may sen to cry if not hell
   1) cry may sen to if not hell
   2) if not hell to cry may sen
   3) sen to if may not hell cry
   4) not hell cry if may sen to
   5) None of these

   **Directions (Q. 37-41)**: A word 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**: 95 is 11 my are
   - **Step I**: is 95 11 my are
   - **Step II**: is 11 95 my are
   - **Step III**: is 11 my 95 are
   - **Step III** is the last step for this input.

   Now, study the logic given above and answer the questions that follow:

37. **Input**: go 123 save be 39 67 let
   - Which among the given steps will be the last step for the given input?
     1) III
     2) IV
     3) V
     4) VI
     5) None of these

38. **Input**: we 143 lay as 12 may 36
   - What is step IV for the given input?
     1) as 12 we lay 36 143 may
     2) as 12 we 36 143 lay may
     3) as we 143 lay 12 may 36
     4) may 36 12 lay 143 we as
     5) None of these

39. If step III of an input is 'mare 1665 meat 1885 saves 20171 19199', then which of the following will definitely be the input?
   1) meat saves 20171 1885 mare 1665 19199
   2) mare 1885 saves meat 1665 19199 20171
   3) 19199 saves mare meat 1885 1665 20171
   4) Data inadequate
   5) None of these

40. **Input**: like tea 115 1264 eat 151 gate
   - For the above input, which step will be the following arrangement?
     **Arrangement**: eat 115 tea 151 like 1264 gate
     1) VI
     2) V
     3) III
     4) II
     5) None of these

41. If step II of a given input is 'get 116 1250 say 1124 four 148 hire', then which of the following is step VI of the given input?
   1) get 116 say 148 four 1124 hire 1250
   2) get 116 say 148 1250 1124 four hire
   3) get 116 say 148 four 1124 1250 hire
   4) Data inadequate
   5) None of these

   **Directions (Q. 42-46)**: Study the following information carefully and answer the questions given below:

   A word 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**: top the name good for is there
   - **Step I**: is top the name good for there
   - **Step II**: is for top the name good there
   - **Step III**: is for the top name good there
   - **Step IV**: is for the top good name there
   - (This is the last arrangement and step IV is the last step of this input.)

42. If following is the second step of an input, what will be the fourth step?
   **Step II**: is to for while they were going day
   1) is to day for they while were going
   2) is to day for while they were going
   3) is to for day while they were going
   4) Can't be determined
   5) None of these

43. If following is the third step of an input, what will be its first step?
   **Step III**: no dog was first five forest dense
   1) no was dog first five forest dense
   2) no first was dog five forest dense
   3) no dog first was forest five dense
   4) Can't be determined
   5) None of these

44. Which of the following is the third step for the following input?
   **Input**: lack of a common safe in the
   1) a of in the lack common safe
   2) a of in lack common safe
   3) a in of lack common safe the
   4) a in of the lack common safe
   5) None of these
45. How many steps will be required to get the final output from the following input?

**Input:** where do you go out of way

1) One 2) Three 3) Four 4) Eight 5) None of these

46. If step I of an input is ‘If there was no good man’, what step would be ‘if no man there was good’?

1) Second 2) Third 3) Fourth 4) Can’t be determined 5) None of these

**Directions (47-51): Study the following information carefully and answer the questions given below:**

When an input line of words is given to a word arrangement machine, it rearranges them following a particular rule in each step.

**Input:** car some pour tie more tin bee goat.

**Step I:** goat car some pour tie more tin bee.

**Step II:** goat more car some pour tie tin bee.

**Step III:** goat more pour car some tie tin bee.

**Step IV:** goat more pour some car tie tin bee.

**Step V:** goat more pour some bee car tie tin

and step V is the last output.

47. If the 3rd step of an input is: bend take vide nut zeal pot car tin. which of the following will be the last step?

1) VIth 2) Vth 3) VIIth 4) IVth 5) None of these

48. If the 2nd step of an input is: coat some for die song kill bit son, which is certainly the input?

1) for come die song kill coat bit son
2) for die come song kill coat bit son
3) for die song come kill coat bit son
4) Can’t be determined 5) None of these

49. **Input:** door site may for you mean now goal.

Which of the following is the 3rd step of the above input?

1) door goal mean site for may now you
2) door goal mean site for you now
3) door site goal mean for you now
4) Can’t be determined 5) None of these

50. **Input:** mute deal sit cut coat day long for.

Which of the following will be the 4th step?

1) coat deal mute sit cut day long for
2) coat deal long mute sit cut day for
3) coat deal long mute cut sit day for
4) coat deal long mute cut day for sit
5) None of these

51. **Input:** ask not feel task opt sale dark den.

Which of the following will be the last step?

1)Vth 2)Vlth 3)Vlh 4)VIIth 5) None of these

**Directions (52-56): Read the following information carefully and answer the questions given below:**

A word-number arrangement machine, when given an input as a set of words and numbers, rearranges them following a particular rule and generates step wise outputs till the rearrangement is complete following that rule.

Followings is an illustration of input and steps of rearrangement till the last step.

**Input:** pour ask 57 dear 39 fight 17 28

**Step I:** ask pour 57 dear 39 fight 17 28

**Step II:** ask 57 pour dear 39 fight 17 28

**Step III:** ask 57 dear pour 39 fight 17 28

**Step IV:** ask 57 dear 39 pour fight 17 28

**Step V:** ask 57 dear 39 pour fight 17 28

**Step VI:** ask 57 dear 39 fight 28 pour 17 and

**Step VI:** is the last output.

As per the rule followed in the above steps find out the answer to each of the following questions:

52. If step II of an input is “cut 97 38 end for 29 46 down”, which of the following will be the last step?

1) V 2) IV 3) VI 4) VII 5) None of these

53. If the I Vth step of an input is “ago 85 elite 79 exile fat 26 41”, which of the following will definitely be the II step of the input?

1) ago 85 79 elite fat 26 41 exile
2) ago 85 exile elite 41 26 fat 79
3) ago 85 26 exile 41 elite 79 fat
4) Cannot be determined 5) None of these

54. If the I Vth step of an input is “ago 85 elite 79 exile fat 26 41”, which of the following will definitely be the II step of the input?

1) ago 85 79 elite fat 41 26 exile
2) ago 85 exile elite 41 26 fat 79
3) ago 85 26 exile 41 elite 79 fat
4) Cannot be determined 5) None of these
54. If the 1st step of an input is “car 17 vas tiger 92 87 like 52”, which of the following will be the IVth step?
   1) car 92 like 87 tiger 52 17 vas
   2) car 92 like 87 17 vas tiger 52
   3) car 92 like 87 tiger 17 vas 52
   4) car 92 like 17 vas tiger 87 52
   5) None of these
55. Input: zeal for 49 31 high 22 track 12
   Which of the following will be the IIIrd step?
   1) for 49 high 31 track 22 zeal 12
   2) for 49 high 31 zeal 22 track 12
   3) for 49 high zeal 31 22 track 12
   4) for 49 high 31 track zeal 22 12
   5) None of these
56. Input: 19 feat 34 28 dog bag take 43
   Which of the following steps would be “bag 43 dog 19 feat 34 28 take”?
   1) IInd
   2) IVth
   3) 1st
   4) Cannot be determined
   5) None of these

Directions (Q. 57-61): Study the following information carefully and answer the given questions:

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

Input: sky forward 17 over 95 23 come 40
Step I: come sky forward 17 over 95 23 40
Step II: come 95 sky forward 17 over 23 40
Step III: come 95 forward sky 17 over 23 40
Step IV: come 95 forward 40 sky 17 over 23
Step V: come 95 forward 40 over sky 17 23
Step VI: come 95 forward 40 over 23 sky 17

Step VI is the last step of the rearrangement of the above input.

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

57. Input: machine hire for 19 against 85 21 46
   Which of the following will be step II?
   1) against 85 hire machine for 19 21 46
   2) against 85 machine 19 hire for 21 46
   3) against 85 machine hire for 19 21 46
   4) Cannot be determined
   5) None of these
58. Input: box at 20 53 62 gift now 32
   Which of the following is step IV?
   1) at 62 box 53 gift 32 20 now
   2) at 62 box 53 gift 32 now 20
   3) at 62 box 53 gift 20 now 32
   4) Cannot be determined
   5) None of these
59. Input: on at 33 27 42 sky mat 51
   Which of the following steps will be the last?
   1) VI
   2) VII
   3) VIII
   4) V
   5) None of these
60. Step III of an input is:
    bring 63 desk 11 29 together fight 30
    Which of the following steps will be the last but one?
    1) VI
    2) VII
    3) VIII
    4) V
    5) None of these
61. Step II of an input is:
    earn 72 31 46 higher goal 20 more
    Which of the following is definitely the input?
    1) 46 72 31 earn higher goal 20 more
    2) 2031 72 46 higher goal earn more
    3) higher 20 31 72 46 goal earn more
    4) Cannot be determined
    5) None of these
From the last step it is clear that there are two alternating series of numbers: One in descending order and the other in ascending order.

When we go through input to step 1, we find that the largest no. becomes the first and remaining numbers shift rightward. In the next step the smallest no. becomes the second and the rest shift rightward. These two steps continue alternately until the two alternate series are formed.

1, 3; 2, 4; 3, 5; 4, 1; 5, 2; 6, 2; 7, 4; Previous steps can't be determined

The machine operates as follows:

1st batch to 2nd batch: Second and fifth words interchange places.
2nd to 3rd: The middle two words interchange places.
3rd to 4th: First and last words interchange places.
4th to 5th: The middle words move to the extreme positions on their respective sides while the outer words move inwards.

Hereafter, the process is repeated, i.e.
5th to 6th: Same as 1st to 2nd
6th to 7th: Same as 2nd to 3rd

Let us now make our job easy by going in for digital representation. We assign numbers 1 to 6 to the words in the first batch: who - 1, nut - 2, cream - 3, page - 4, for - 5, table - 6. Thus, our table becomes:

<table>
<thead>
<tr>
<th>1st batch</th>
<th>2nd batch</th>
<th>3rd batch</th>
<th>4th batch</th>
<th>5th batch</th>
<th>6th batch</th>
<th>7th batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6</td>
<td>1 5 3 4 2 6</td>
<td>1 5 4 3 2 6</td>
<td>6 5 4 3 2 1</td>
<td>4 6 5 2 1 3</td>
<td>4 1 5 2 6 3</td>
<td>4 1 2 5 6 3</td>
</tr>
</tbody>
</table>

We can now answer the questions easily by applying the above table.

8. 1; 9. 2; 10. 4; 11. 2; 12. 3;

(13-19): Here the rule followed is:

**Step I:** The smallest number becomes first and the remaining numbers shift one position rightward. [In case the first number is small then the next number just larger than it will become second and the rest will shift one position rightward and so on.]

**Step II:** The largest number among given numbers becomes last and the remaining numbers shift one position leftward. [In case the largest number is first from the right end, the second largest number replaces the second number from the right end, and so on.]

These steps are repeated alternately till all the numbers get arranged in ascending order and that will be the last step for that particular input.

13. 5 14. 4 15. 3 16. 5 17. 2 18. 3 19. 1

(20-26): Here the rule followed is: numbers are getting arranged in descending order.

The largest of the given numbers interchanges its place with the first number. [In case the largest number is already arranged, the second largest is interchanged with the number next to the largest no., and so on until the numbers are arranged in descending order.

20. 2; 21. 1 22. 4; 23. 3; 24. 4; Previous step can't be determined.

25. 5; 26. 2;

(27-31): The words are arranged according to the number of letters they have, one at a time. The word with the maximum number of letters is put first. If two words have the same...
number of letter, we go for alphabetical arrangement.

27.2; 28.5; 29.1; 30.4; 31.5; We can't move backward.

(32-36): Here the rule followed is:

In each step the fourth word becomes first word and the last word becomes fourth word and all other words shift one place rightwards except the third, which shifts two place rightwards.

In order to make things easier, let us represent the words digitally from 1 to 7. Then we have:

<table>
<thead>
<tr>
<th>Input</th>
<th>1 2 3 4 5 6 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step I</td>
<td>4 1 2 7 3 5 6</td>
</tr>
<tr>
<td>Step II</td>
<td>7 4 1 6 2 3 5</td>
</tr>
<tr>
<td>Step III</td>
<td>6 7 4 5 1 2 3</td>
</tr>
<tr>
<td>Step IV</td>
<td>5 6 7 3 4 1 2</td>
</tr>
<tr>
<td>Step V</td>
<td>3 5 6 2 7 4 1</td>
</tr>
<tr>
<td>Step VI</td>
<td>2 3 5 1 6 7 4</td>
</tr>
</tbody>
</table>

[Note: We have gone up to step VI because one of the questions (Q. 171) demands that.]

32. 3; 33.1; 34.5; 35.5; 36.2

(37-41): From the last step it can be concluded that words and numbers are arranged alternately, word with least number of letters shifts to the left most position followed by the least number among the given numbers. In case of two words with same number of letters, words are arranged as per their dictionary order. For getting arranged they are interchanged with the word/number whose place it occupies.

37.4; 38.5; 39.4; 40.3; 41.1;

(42-46): The words get arranged one by one on the basis of the no. of letters, the word with least no. of words gets arranged first. If the no. of letters is the same, the word that comes first in the dictionary gets arranged first. While one word gets arranged, the others shift rightwards.

42.1; 43.4; 44.3; 45.5; 46.2;

(47-51): Here the rule followed is:

Words are arranged according to their no. of letters. Words with largest no. of letters are arranged first. For two words with equal no. of letters they follow the order of English dictionary, i.e., the word which comes first in English dictionary is arranged first. In each step only one word is arranged and the rest shift one position rightwards. The process goes on until all the words are arranged.

47.2; 48.4; 49.5; 50.3; 51.1;

(52-56): From the last step it is clear that words are arranged in alphabetical order and nos. are arranged in decreasing order alternately. To obtain this output first the word, which comes first in dictionary, comes to the first place and the rest shift one place rightwards. In the next step the largest no. comes to the second place and the rest shift one place rightwards. These two steps occur alternately until the last step is obtained.

52.1; 53.4; 54.2; 55.3; 56.5;

(57-61): From the last step it can be concluded that words and numbers are arranged alternately. Words are arranged alphabetically whereas numbers are arranged in descending order. When the arrangement of all elements gets completed in a particular step that step is called last step.

57.3; 58.3; 59.3; 60.1; 61.4;