

## CH 3 INPUT AND OUTPUT

### ANSWERS AND EXPLANATIONS

**1-5:** Here it is case of arrangement. The logic is: the words get arranged in alphabetical order. Whereas the numbers get arranged in descending order. Numbers occupy odd places in the final steps while words occupy even positions. When any element gets arranged the previous elements occupying that position shifts one place towards right.

1. (b) **Input:** 9 13 about tariff 24 call 29 even  
**Step I:** 29 9 13 about tariff 24 call even  
**Step II:** 29 about 9 13 tariff 24 call even  
**Step III:** 29 about 24 9 13 tariff call even  
**Step IV:** 29 about 24 call 9 13 tariff even
2. (c) **Step II:** 37 desk 34 garden 5 father victory 17  
**Step III:** 37 desk 34 father garden 5 victory 17  
**Step IV:** 37 desk 34 father 17 garden 5 victory  
 Since all the elements of the input are fully arranged in Step IV, this is the last step of the given input.
3. (d) **Step I:** 59 bead tenure father 38 11 ultimate 24  
**Step II:** 59 bead 38 tenure father 11 ultimate 24  
**Step III:** 59 bead 38 father tenure I I ultimate 24
4. (d) Since it is a case of arrangement, we can't obtain previous steps with certainty.
5. (a) **Input:** 24 12 entry sand butter 51 32 carry  
**Step I:** 51 24 12 entry sand butter 32 carry  
**Step II:** 51 butter 24 12 entry sand 32 carry  
**Step III:** 51 butter 32 24 12 entry sand carry

**6-10:** An intuitive look at the input and the steps makes it clear that it is a case of arrangement. The input is a combination of words and numbers. Words get arranged according to reverse order of alphabetical arrangement whereas numbers get arranged in ascending order.

In step I, 'over' occupies the first place from the left end and the other elements are pushed one place rightward.

Similarly, in step II, '26' occupies the second place from the left end and the other elements are pushed one place rightward.

Thus, alternate arranging of words and numbers finally gives the last step in which the odd places from the left are occupied by words and the even places are occupied by numbers.

6. (d) Since it is a case of arrangement, therefore previous steps or input can't be determined with certainty.
7. (b) **Step III:** take 17 mind game 29 73 18 loud  
**Step IV:** take 17 mind 18 game 29 73 loud  
**Step V:** take 17 mind 18 loud game 29 73  
**Step VI:** take 17 mind 18 loud 29 game 73  
 Hence, step VI is the last step. Therefore, three more steps are required to complete the sequence.
8. (d) **Input:** by now 51 32 for 91 20 me  
**Step I:** now by 51 32 for 91 20 me  
**Step II:** now 20 by 51 32 for 91 me  
**Step III:** now 20 me by 51 32 for 91  
**Step IV:** now 20 me 32 by 51 for 91  
**Step V:** now 20 me 32 for by 51 91  
**Step VI:** now 20 me 32 for 51 by 91  
 Hence, step VI is the last step for the given input.
9. (b) **Input:** fight for all 39 62 25 today 19  
**Step I:** today fight for all 39 62 25 19  
**Step II:** today 19 fight for all 39 62 25  
**Step III:** today 19 for fight all 39 62 25  
**Step IV:** today 19 for 25 fight all 39 62
10. (e) **Input:** queen mary 79 62 17 20 green west  
**Step I:** west queen mary 79 62 17 20 green



**Step II:** west 17 queen mary 79 62 20 green

**Step III:** west 17 queen 20 mary 79 62 green

**Step IV:** west 17 queen 20 mary 62 79 green

**Step V:** west 17 queen 20 mary 62 green 79

Hence, step V is the last step. Therefore, the penultimate step (last but one) is step IV.

**11-14 :** 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.

11. (c) **Input:** machine hire for 19 against 85 21 46

**Step I:** against machine hire for 19 85 21 46

**Step II:** against 85 machine hire for 19 21 46

12. (c) **Input:** box at 20 53 62 gift now 32

**Step I:** at box 20 53 62 gift now 32

**Step II:** at 62 box 20 53 gift now 32

**Step III:** at 62 box 53 20 gift now 32

**Step IV:** at 62 box 53 gift 20 now 32

13. (c) **Input:** on at 33 27 42 sky mat 51

**Step I:** at on 33 27 42 sky mat 51

**Step II:** at 51 on 33 27 42 sky mat

**Step III:** at 51 mat on 33 27 42 sky

**Step IV:** at 51 mat 42 on 33 27 sky

**Step V:** at 51 mat 42 on 33 sky 27

14. (a) **Step III:** bring 63 desk 11 29 together fight 30

**Step IV:** bring 63 desk 30 11 29 together fight

**Step V:** bring 63 desk 30 fight 11 29 together

**Step VI:** bring 63 desk 30 fight 29 11 together

**Step VII:** bring 63 desk 30 fight 29 together II

Step VII is the last step. Hence, step VI is the secondlast step (penultimate step).

15. (d) Previous steps can't be determined.

**16-20:** In the given arrangement the first and the second places are occupied by words; the third and the fourth by numbers; the fifth and the sixth by words; and the seventh and the eighth by numbers.

Words occupy place in alphabetical order while

numbers occupy place in descending order.

Whenever a word or a number gets arranged other elements shift one place rightward.

16. (d) Since it is a case of 'Arrangement', previous steps can't be obtained with certainty.

17. (a) **I: Input:** bring home 42 73 15 goal 32 type

**Step I:** bring goal home 42 73 15 32 type

**Step II:** bring goal 73 home 42 15 32 type

**Step III:** bring goal 73 42 home 15 32 type

**Step IV:** bring goal 73 42 home type 15 32

**Step V:** bring goal 73 42 home type 32 15

Since all the elements of Input get arranged in Step V, it is the last step.

18. (e) **Input:** bench 47 63 advance 13 29 again between

**Step I:** advance bench 47 63 13 29 again between

**Step II:** advance again bench 47 63 13 29 between

**Step III:** advance again 63 bench 47 13 29 between

19. (c) **Step II:** desk eagle 12 28 41 69 foreign land

**Step III:** desk eagle 69 12 28 41 foreign land

**Step IV:** desk eagle 69 41 12 28 foreign land

**Step V:** desk eagle 69 41 foreign 12 28 land

**Step VI:** desk eagle 69 41 foreign land 12 28

**Step VII:** desk eagle 69 41 foreign land 28 12

20. (a) **Step III:** again dark 83 sour 19 21 prey 39

**Step IV:** again dark 83 39 sour 19 21 prey

**Step V:** again dark 83 39 prey sour 19 21

**Step VI:** again dark 83 39 prey sour 21 19

Since step VI is the last step (because all elements of step III get arranged in step VI), step V is the required step (penultimate step or last but one.)

**(21-25) :** From the last step it can be concluded that words and numbers are arranged alternately. Word with least number of letters shifts to the leftmost 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.



21. (d) **Input** : go 123 save be 39 67 let  
**Step I** : be 123 save go 39 67 let  
**Step II** : be 39 save go 123 67 let  
**Step III** : be 39 go save 123 67 let  
**Step IV** : be 39 go 67 123 save let  
**Step V** : be 39 go 67 let save 123  
**Step VI** : be 39 go 67 let 123 save
22. (e) **Input** : we 143 lay as 12 may 36  
**Step I** : as 143 lay we 12 may 36  
**Step II** : as 12 lay we 143 may 36  
**Step III** : as 12 we lay 143 may 36  
**Step IV** : as 12 we 36 143 may lay
23. (d) Previous step can't be determined.
24. (c) **Input** : like tea 115 1264 eat 151 gate  
**Step I** : eat tea 115 1264 like 151 gate  
**Step II** : eat 115 tea 1264 like 151 gate  
**Step III** : eat 115 tea 151 like 1264 gate
25. (a) **Step II** : get 116 1250 say 1124 four 148 hire  
**Step III** : get 116 say 1250 1124 four 148 hire  
**Step IV** : get 116 say 148 1124 four 1250 hire  
**Step V** : get 116 say 148 four 1124 1250 hire  
**Step VI** : get 116 say 148 four 1124 hire 1250
- [Note: In the sample given for the arrangement, the mode of arrangement is ambiguous. We have taken interchange as our basis but arrangement by shifting is also a possibility. Such ambiguous questions should not be asked.]
- 26–30: 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.
26. (b) **Input** : the in car as he may me  
**Step I** : car the in as he may me  
**Step II** : car may the in as he me  
**Step III** : car may the as in he me
27. (e) **Step II** : clever remand window sales batch tiger never  
**Step III** : clever remand window batch sales tiger never  
**Step IV** : clever remand window batch never sales tiger  
 Now, step IV would be the last step.
28. (a) **Input** : true se veto be nuke my like  
**Step I** : like true se veto be nuke my  
**Step II** : like nuke true se veto be my  
**Step III** : like nuke true veto se be my  
**Step IV** : like nuke true veto be se my
29. (d) **Input** : more fight cats cough sough acts idea  
**Step I** : cough more fight cats sough acts idea  
**Step II** : cough fight more cats sough acts idea  
**Step III** : cough fight sough more cats acts idea  
**Step IV** : cough fight sought acts more cats idea  
**Step V** : cough fight sough acts cats more idea  
**Step VI** : cough fight sough acts cats idea more
30. (e) We can't move backward.
- (43-49): 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 I, 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.
31. (c) **Step II**: 765 42 183 289 542 65 110 350  
**Step III**: 765 42 542 183 289 65 110 350  
**Step IV**: 765 42 542 65 183 289 110 350
32. (d) **Input**: 239 123 58 361 495 37  
**Step I**: 495 239 123 58 361 37  
**Step II**: 495 37 239 123 58 361  
**Step III**: 495 37 361 239 123 58
33. (e) **Input**: 39 88 162 450 386 72 29  
**Step I**: 450 39 88 162 386 72 29  
**Step II**: 450 29 39 88 162 386 72  
**Step III**: 450 29 386 39 88 162 72  
**Step IV**: 450 29 386 39 162 88 72  
**Step V**: 450 29 386 39 162 72 88
34. (a) Last step can be known directly.
35. (b) **Step I**: 785 198 32 426 373 96 49  
**Step II**: 785 32 198 426 373 96 49  
**Step III**: 785 32 426 198 373 96 49  
**Step IV**: 785 32 426 49 198 373 96
36. (b) **Step II**: 298 12 128 36 212 185  
**Step III**: 298 12 212 128 36 185  
**Step IV**: 298 12 212 36 128 185
37. (d) Previous steps can't be determined

