

## 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.



