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IEM KOLKATA

Machine Input Output

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Q1)
(Direction 1 – 5): Study the given information carefully and answer the following questions.

A word arrangement machine when given an input of words, rearranges them following a particular rule in each step. The following is an illustration of input and steps rearrangement.
INPUT: Mobile Bag Plate Charger Mouse Box
STEP 1: Bag Mobile Plate Charger Mouse Box
STEP 2: Bag Box Mobile Plate Charger Mouse
STEP 3: Bag Box Charger Mobile Plate Mouse
STEP 4: Bag Box Charger Mobile Mouse Plate
This is the final arrangement and step 4 is the last step.
As per the rules followed in the given steps, answer the questions given below for the following input.
Input: Rent Dear House Bear Colony

(i) What would be the last step of the given input?
1) Bear Colony Dear House Rent
2) Dear Bear House Colony Rent
3) Rent Dear House Bear Colony
4) Bear Colony House Rent Dear
5) Bear Colony Dear Rent House

(ii) How many steps are there?
a) 3 b) 4 c) 5 d) 6 e) Either 3 or 5

(iii) Which comes exactly between "Colony" and "House" in the final step?
a) Dear b) Bear c) Rent d) Either Bear or Rent e) None of these

(iv) Which element is 3rd from the left in the final step?
a) Bear b) Dear c) Rent d) House e) Colony

(v) What would be the penultimate step of the given input?
a) Bear Colony Rent Dear House
b) Bear Rent Dear House Colony
c) Bear Colony Dear Rent House
d) Bear Colony Dear House Rent
e) None of the above

Q2) 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: 18 Quickly Teacher Pacer 40 28 86 Heaven
Step 1: Heave Quickl Teache Pace 40 28 86 18
Step 2: Heave 18 Quickl Teache Pace 40 28 86
Step 3: Heav 18 Pac 28 Quick Teach 40 86
Step 4: Hea 18 Pa 28 Quic 40 Teac 86
Step 5: He 18 P 28 Qui 40 Tea 86
And Step 5 is the last step of the above input.
As per the pattern followed in the above steps, find out in each of the following questions the appropriate step for the given input.
Input: 20 Quicker towel Parker 41 29 87 Harness

Which of the following will be the last step of the rearrangement?
A) IV B) VI C) VII D) V

Q3) An alphabetical machine, when given an input of words rearranges them following a particular rule in each step. The following is an illustration of input and step of rearrangement.
INPUT: COVER LAYER MINIMUM CONTROL AMAZE UNIQUE INITIAL ENTER FINAL EXIT
Step I: COVER LAYER MINIMUM CONTROL AMAZE INITIAL ENTER FINAL
Step II: COVER LAYER MINIMUM CONTROL FINAL
Step III: CONTROL COVER FINAL LAYER MINIMUM
Step IV: COVER FINAL LAYER CONTROL MINIMUM
Step IV is the final step of the arrangement.

Which word is third from left in Step II?
A) GRADE B) PAIRS C) FOREIGN D) TOWARDS