DILR

Questions with Answers for Practice

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Go through the set of 35 DILR questions from official CAT question papers of previous years. This paper is divided into two sets of DI and LR questions. There are a total of 32 questions that you should aim to solve in 60 minutes to maintain speed of the actual CAT exam. Also find, correct answers at the end of the questions set.

Data Interpretation (DI)questions

DI set

In an election, several candidates contested for a constituency. In any constituency, the winning candidate was the one who polled the highest number of votes, the first runner up was the one who polled the second highest number of votes, the second runner up was the one who polled the third highest number of votes, and so on. There were no ties (in terms of number of votes polled by the candidates) in any of the constituencies in this election.

In an electoral system, a security deposit is the sum of money that a candidate is required to pay to the election commission before he or she is permitted to contest. Only the defeated candidates (i.e., one who is not the winning candidate) who fail to secure more than one sixth of the valid votes polled in the constituency, lose their security deposits. The following table provides some incomplete information about votes polled in four constituencies: A, B, C and D, in this election.

	Constituency			
	A	B	C	D
No. of candidates contesting	10	12	5	8
Total No. of valid votes polled	5,00,000	3,25,000	6,00,030	
No. of votes polled by the winning candidate	2,75,000	48,750		
No. of votes polled by the first runner up	95,000			37,500
No. of votes polled by the second runner up				30,000
% of valid votes polled by the third runner up				10%

The following additional facts are known:

1.The first runner up polled 10,000 more votes than the second runner up in constituency A.

2.None of the candidates who contested in constituency C lost their security deposit. The difference in votes polled by any pair of candidates in this constituency was at least 10,000.

3.The winning candidate in constituency D polled 5% of valid votes more than that of the first runner up. All the candidates who lost their security deposits while contesting for this constituency, put together, polled 35% of the valid votes.

Q 1: What is the percentage of votes polled in total by all the candidates who lost their security deposits while contesting for constituency A?

Q 2: How many candidates who contested in constituency B lost their security deposit?

Q 3: What BEST can be concluded about the number of votes polled by the winning candidate in constituency C?

Options:

A: 1,40,006

B: less than 2,00,010

C: between 1,40,005 and 1,40,010

D: 1,40,010

Q 4: What was the number of valid votes polled in constituency D?

Options:

A: 1,25,000

B: 1,75,000

C: 1,50,000

D: 62,500

Q 5: The winning margin of a constituency is defined as the difference of votes polled by the winner and that of the first runner up. Which of the following CANNOT be the list of constituencies, in increasing order of winning margin?

Options:

1. B, D, C, A

2. B, C, D, A

3. D, B, C, A

4. D, C, B, A

Q 6: For all the four constituencies taken together, what was the approximate number of votes polled by all the candidates who lost their security deposit expressed as a percentage of the total valid votes from these four constituencies?

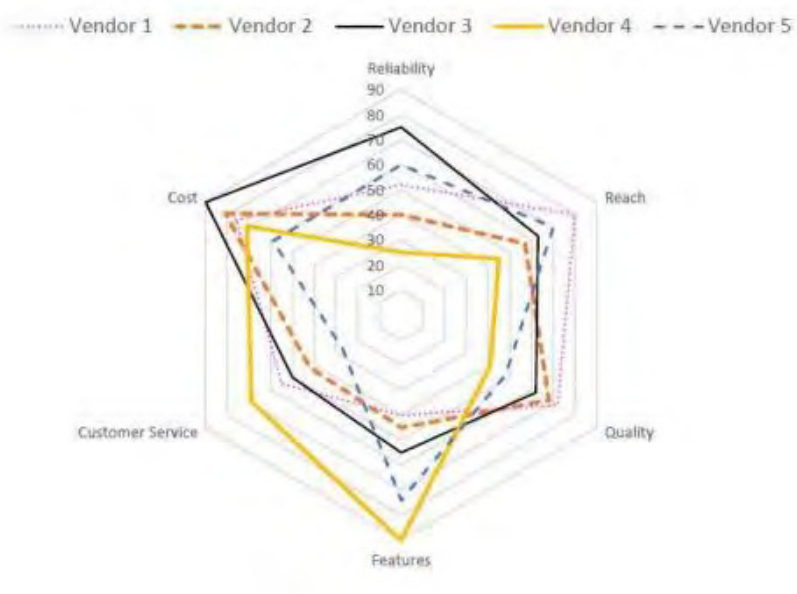
Options:

A. 23.91%

B. 32.00%

C. 38.25%

D. 23.54% **DI Set** Five vendors are being considered for a service. The evaluation committee evaluated each vendor on six
aspects – Cost, Customer Service, Features, Quality, Reach, and Reliability. Each of these evaluations are on a scale of 0 (worst) to 100 (perfect). The evaluation scores on these aspects are shown in the radar chart. For example, Vendor 1 obtains a score of 52 on Reliability, Vendor 2 obtains a score of 45 on Features and Vendor 3 obtains a score of 90 on Cost.



Q 7: On which aspect is the median score of the five vendors the least? **Options:** 1. Reliability 2. Cost 3. Quality 4. Customer Service **Q 8: A vendor's final score is the average of their scores on all six aspects. Which vendor has the highest final score?**

Options:

1. Vendor 4
2. Vendor 3
3. Vendor 1

4. Vendor 2 **Q 9: List of all the vendors who are among the top two scorers on the maximum number of aspects is: Options:** 1. Vendor 1 and Vendor 5 2. Vendor 2 and Vendor 5 3. Vendor 2, Vendor 3 and Vendor 4 4. Vendor 1 and Vendor 2 **Q 10: List of all the vendors who are among the top three vendors on all six aspects is: Options:** 1. Vendor 3 2. Vendor 1 3. None of the Vendors 4. Vendor 1 and Vendor 3

DI Set

Simple Happiness Index (SHI) of a country is computed on the basis of three parameters: social support (S), freedom to life choices (F) and corruption perception (C). Each of these parameters is measured on a scale of 0 to 8 (integers only). A country is then categorised based on the total score obtained by summing the scores of all the three parameters, as shown in the following table:

Total score	0-4	5-8	9-13	14-19	20-24
Category	Very Unhappy	Unhappy	Neutral	Happy	Very Happy

Following diagram depicts the frequency distribution of the scores in S, F and C of 10 countries - Amda, Benga, Calla, Delma, Eppa, Varsa, Wanna, Xanda, Yanga and Zooma:

Further, the following are known:

1. Amda and Calla jointly have the lowest total score, 7, with identical scores in all the three parameters.

2. Zooma has a total score of 17.

3. All the 3 countries, which are categorised as happy, have the highest score in exactly one parameter.

Q 11: What is Amanda's score in F?

Q 12: What is Zooma's score in S?

Q 13: Benga and Delma, two countries categorized as happy, are tied with the same total score . What is the maximum total score they can have?

Options:

1. 14
2. 15
3. 16
4. 17

Q 14:IfBenga scores 16 and Delma scores 15, what is the maximum number of countries with a score of 13?

Options:

1. 0
2. 1
3. 2
4. 3

DI Set

A study to look at the early learning of rural kids was carried out in a number of villages spanning three states, chosen from the North East (NE), the West (W) and the South (S). 50 four-year old kids each were sampled from each of the 150 villages from NE, 250 villages from W and 200 villages from S. It was found that of the 30000 surveyed kids 55% studied in primary schools run by government (G), 37% in private schools (P) while the remaining 8% did not go to school (O).

The kids surveyed were further divided into two groups based on whether their mothers dropped out of school before completing primary education or not. The table below gives the number of kids in different types of schools for mothers who dropped out of school before completing primary education:

	G	P	O	Total
NE	4200	500	300	5000
W	4200	1900	1200	7300
S	5100	300	300	5700
Total	13500	2700	1800	18000

It is also known that:

1. In S, 60% of the surveyed kids were in G. Moreover, in S, all surveyed kids whose mothers had completed primary education were in school.
2. In NE, among the O kids, 50% had mothers who had dropped out before completing primary education.
3. The number of kids in G in NE was the same as the number of kids in G in W.

Q 15: What percentage of kids from S were studying in P?

Options:

1. 37%
2. 6%
3. 79%
4. 56%

Q 16: Among the kids in W whose mother has completed primary education, how many were not in school?

Options:

1. 300
2. 1200
3. 1050
4. 1500

Logical Reasoning (LR) Questions

Comprehension: The Humanities department of a college is planning to organize eight seminars, one for each of the eight doctoral students - A, B, C, D, E, F, G and H. Four of them are from Economics, three from Sociology and one from Anthropology department. Each student is guided by one among P, Q, R, S and T. Two students are guided by each of P, R and T, while one student is guided by each of Q and S. Each student is guided by a guide belonging to their department. Each seminar is to be scheduled in one of four consecutive 30-minute slots starting at 9:00 am, 9:30 am, 10:00 am and 10:30 am on the same day. More than one seminars can be scheduled in a slot, provided the guide is free. Only three rooms are available and hence at the most three seminars can be scheduled in a slot. Students who are guided by the same guide must be scheduled in consecutive slots.

The following additional facts are also known.

1. Seminars by students from Economics are scheduled in each of the four slots.
2. A's is the only seminar that is scheduled at 10:00 am. A is guided by R.
3. F is an Anthropology student whose seminar is scheduled at 10:30 am.
4. The seminar of a Sociology student is scheduled at 9:00 am.
5. B and G are both Sociology students, whose seminars are scheduled in the same slot. The seminar of an Economics student, who is guided by T, is also scheduled in the same slot.
6. P, who is guiding both B and C, has students scheduled in the first two slots.
7. A and G are scheduled in two consecutive slots.

Q 1: Which one of the following statements is true?

Options:

1. Three seminars are scheduled in the first slot.
2. Only one seminar is scheduled in the second slot.
3. Two seminars are scheduled in the first slot.
4. Three seminars are scheduled in the last slot.

Q 2: Who all are NOT guiding any Economics students?

Options:

1. Q, R and S
2. P, R and S
3. P, Q and R
4. P, Q and S

Q 3: Which of the following statements is necessarily true?

Options:

1. S is guiding F.
2. Q is guiding G.
3. H is an Economics student.
4. B is scheduled in the first slot.

Q 4: If D is scheduled in a slot later than Q's, then which of the following two statement(s) is (are) true?

(i) E and H are guided by T.

(ii) G is guided by Q.

Options:

1. Only (i)
2. Both (i) and (ii)
3. Neither (i) nor (ii)
4. Only (ii)

Q 5: If E and Q are both scheduled in the same slot, then which of the following statements BEST describes the relationship between D, H, and T?

Options:

1. Exactly one of D and H is guided by T.
2. At least one of D and H is guided by T.
3. Both D and H are guided by T.
4. Neither D nor H is guided by T

Q 6: If D is scheduled in the slot immediately before Q's, then which of the following is NOT necessarily true?

Options:

1. G is guided by Q.
2. D is guided by T.
3. E is guided by R.
4. F is guided by S

Comprehension:

A supermarket has to place 12 items (coded A to L) in shelves numbered 1 to 16. Five of these items are types of biscuits, three are types of candies and the rest are types of savouries. Only one item can be kept in a shelf. Items are to be placed such that all items of same type are clustered together with no empty shelf between items of the same type and at least one empty shelf between two different types of items. At most two empty shelves can have consecutive numbers. The following additional facts are known. 1. A and B are to be placed in consecutively numbered shelves in increasing order.

2. I and J are to be placed in consecutively numbered shelves both higher numbered than the shelves in which A and B are kept.

3. D, E and F are savouries and are to be placed in consecutively numbered shelves in increasing order after all the biscuits and candies.

4. K is to be placed in shelf number 16.

5. L and J are items of the same type, while H is an item of a different type.

6. C is a candy and is to be placed in a shelf preceded by two empty shelves.

7. L is to be placed in a shelf preceded by exactly one empty shelf.

Q 7: In how many different ways can the items be arranged on the shelves?

Options:

A. 1

B. 2

C. 8

D. 4

Q 8: Which of the following items is not a type of biscuit?

Options:

1. A
2. G
3. L
4. B

Q 9: Which of the following can represent the numbers of the empty shelves in a possible arrangement?

Options:

1. 1,5,6,12
2. 1,2,6,12
3. 1,2,8,12
4. 1,7,11,12

Q 10: Which of the following statements is necessarily true?

Options:

1. All candies are kept before biscuits.
2. There are at least four shelves between items B and C.
3. There are two empty shelves between the biscuits and the candies
4. All biscuits are kept before candies

Comprehension:

A new game show on TV has 100 boxes numbered 1, 2, . . . , 100 in a row, each containing a mystery prize. The prizes are items of different types, a, b, c, . . . , in decreasing order of value. The most expensive item is of type a, a diamond ring, and there is exactly one of these. You are told that the number of items at least doubles as you move to the next type. For example, there would be at least twice as many items of type b as of type a, at least twice as many items of type c as of type b and so on. There is no particular order in which the prizes are placed in the boxes.

Q 11: What is the minimum possible number of different types of prizes?

Q 12: What is the maximum possible number of different types of prizes?

Q 13: Which of the following is not possible?

Options:

1. There are exactly 45 items of type c.
2. There are exactly 60 items of type d.
3. There are exactly 75 items of type e.
4. There are exactly 30 items of type b.

Q 14: You ask for the type of item in box 45. Instead of being given a direct answer, you are told that there are 31 items of the same type as box 45 in boxes 1 to 44 and 43 items of the same type as box 45 in boxes 46 to 100. What is the maximum possible number of different types of items?

Options:

A. 3
B. 6
C. 4
D. 5

Comprehension:

Applicants for the doctoral programmes of Ambi Institute of Engineering (AIE) and Bambi Institute of Engineering (BIE) have to appear for a Common Entrance Test (CET). The test has three sections: Physics (P), Chemistry (C), and Maths (M). Among those appearing for CET, those at or above the 80th percentile in at least two sections, and at or above the 90th percentile overall, are selected for Advanced Entrance Test (AET) conducted by AIE. AET is used by AIE for final selection.

For the 200 candidates who are at or above the 90th percentile overall based on CET, the following are known about their performance in CET:

1. No one is below the 80th percentile in all 3 sections.
2. 150 are at or above the 80th percentile in exactly two sections.
3. The number of candidates at or above the 80th percentile only in P is the same as the number of candidates at or above the 80th percentile only in C. The same is the number of candidates at or above the 80th percentile only in M.
4. Number of candidates below 80th percentile in P: Number of candidates below 80th percentile in C: Number of candidates below 80th percentile in M = 4:2:1.

BIE uses a different process for selection. If any candidate is appearing in the AET by AIE, BIE considers their AET score for final selection provided the candidate is at or above the 80th percentile in P. Any other candidate at or above the 80th percentile in P in CET, but who is not eligible for the AET, is required to appear in a separate test to be conducted by BIE for being considered for final selection. Altogether, there are 400 candidates this year who are at or above the 80th percentile in P.

Q 15: What best can be concluded about the number of candidates sitting for the separate test for BIE who were above the 90th percentile overall in CET?

Options:

1. 3 or 10
2. 10
3. 5
4. 7 or 10

Q 16: If the number of candidates who are at or above the 90th percentile overall and also are at or above the 80th percentile in P in CET, is more than 100, how many candidates had to sit for the separate test for BIE?

Options:

1. 299
2. 310
3. 321
4. 330

DILR Questions with Answers for Practice

DISection:

Q1 answer: 9

Q2 answer: 11

Q3 answer: A: 1,40,006

Q4 answer: B: 1,75,000

Q5 answer: 2. B, C, D, A

Q6 answer: A. 23.91%

Q7 answer: Customer Service

Q8 answer: Vendor 3

Q9 answer: 1. Vendor 1 and Vendor 5

Q10 answer: Vendor 3

Q 11 answer: 1

Q 12 answer: 6

Q 13 answer: Option 2. 15

Q 14 answer: Option 2. 1

Q 15 answer: 37%

Q 16 answer: 300

LR Section:

Q 1 answer: Option 3

Q 2 answer: Option 4

Q 3 answer: Option 3

Q 4 answer: Option 2

Q 5 answer: Option 2

Q 6 answer: Option 3

Q 7 answer: Option C

Q 8 answer: Option 2

Q 9 answer: Option 2

Q 10 answer: Option 2

Q11 answer: 2

Q12 answer: 6

Q13 answer: Option 1

Q14 answer: Option D

Q15 answer: Option 1

Q16 answer: Option 1