

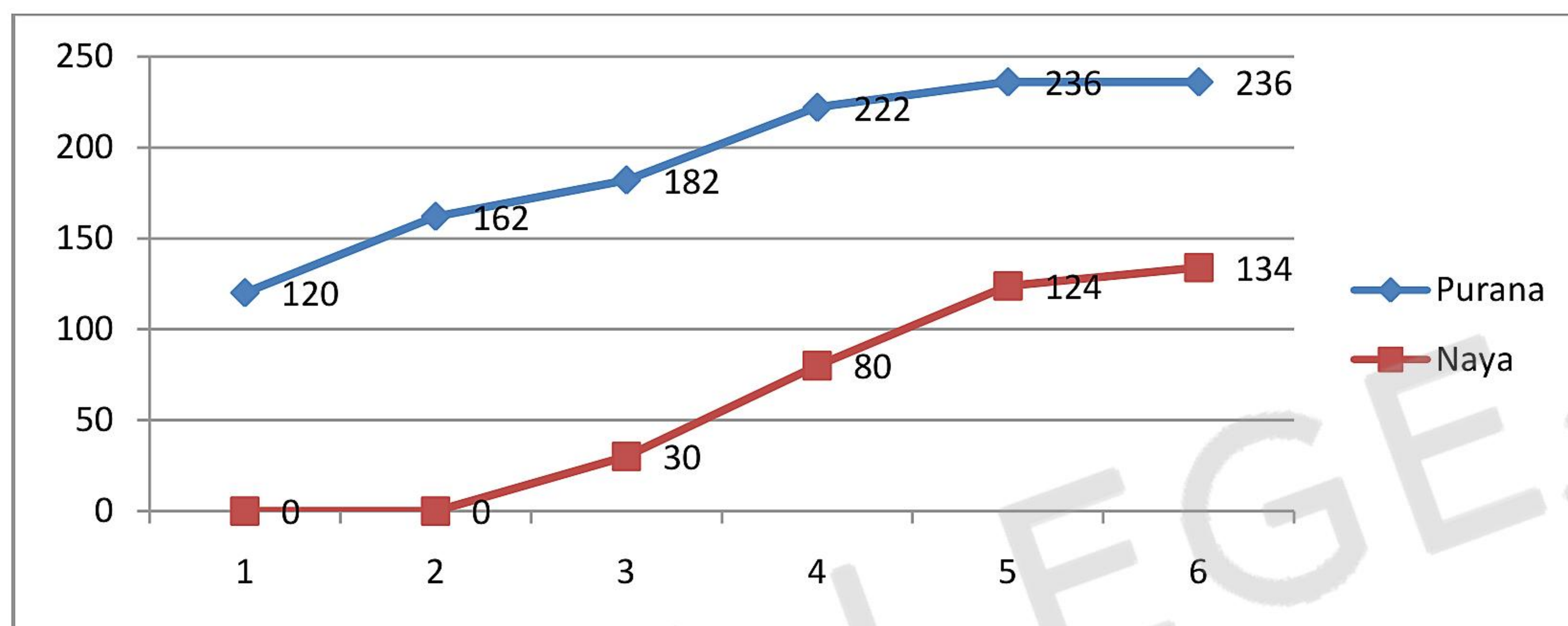
# CAT 2015 based paper

## Section 2 DI LR

### Data Interpretation

Answer the questions on the basis of the information given below.

Purana and Naya are two brands of kitchen mixer-grinders available in the local market. Purana is an old brand that was introduced in 1990, while Naya was introduced in 1997. For both these brands, 20% of the mixer-grinders bought in a particular year are disposed off as junk exactly two years later. It is known that 10 Purana mixer-grinders were disposed off in 1997. The following figures show the number of Purana and Naya mixer-grinders in operation from 1995 to 2000, as at the end of the year.



1. How many Naya mixer-grinders were purchased in 1999?

- (1) 44
- (2) 50
- (3) 55
- (4) 64

2. How many Naya mixer-grinders were disposed off by the end of 2000?

- (1) 10
- (2) 16
- (3) 22
- (4) Cannot be determined from the data

3. How many Purana mixer-grinders were disposed off in 2000?

- (1) 0
- (2) 5
- (3) 6
- (4) Cannot be determined from the data

4. How many Purana mixer-grinders were purchased in 1999?

- (1) 20
- (2) 23
- (3) 50
- (4) Cannot be determined from the data

# CAT 2015 based paper

Answer the questions on the basis of the information given below. A study was conducted to ascertain the relative importance that employees in five different countries assigned to five different traits in their Chief Executive Officers. The traits were compassion (C), decisiveness (D), negotiation skills (N), public visibility (P), and vision (V). The level of dissimilarity between two countries is the maximum difference in the ranks allotted by the two countries to any of the five traits. The following table indicates the rank order of the five traits for each country.

| Rank | India | China | Japan | Malaysia | Thailand |
|------|-------|-------|-------|----------|----------|
| 1    | C     | N     | D     | V        | V        |
| 2    | P     | C     | N     | D        | C        |
| 3    | N     | P     | C     | P        | N        |
| 4    | V     | D     | V     | C        | P        |
| 5    | D     | V     | P     | N        | D        |

5. Which of the following pairs of countries are most dissimilar?

- (1) China and Japan
- (2) India and China
- (3) Malaysia and Japan
- (4) Thailand and Japan

6. Which of the following countries is least dissimilar to India?

- (1) China
- (2) Japan
- (3) Malaysia
- (4) Thailand

7. Which amongst the following countries is most dissimilar to India?

- (1) China
- (2) Japan
- (3) Malaysia
- (4) Thailand

8. Three of the following four pairs of countries have identical levels of dissimilarity. Which pair is the odd one out?

- (1) Malaysia and China
- (2) China and Thailand
- (3) Thailand and Japan
- (4) Japan and Malaysia

# CAT 2015 based paper

Answer the questions based on the table given below. The table below gives information about four different crops, their different quality, categories and the regions where they are cultivated. Based on the information given in the table answer the questions below.

| Quality |        | Region |      |     |     |    |
|---------|--------|--------|------|-----|-----|----|
| Crop 1  | High   | R1,    | R2,  | R3, | R4, | R5 |
|         | Medium | R6,    | R7,  | R8  |     |    |
|         | Low    | R9,    | R10, | R11 |     |    |
| Crop 2  | High   | R5,    | R8,  | R12 |     |    |
|         | Medium | R9,    | R13  |     |     |    |
|         | Low    | R6,    | R7,  | R8  |     |    |
| Crop 3  | High   | R2,    | R6,  | R7. | R13 |    |
|         | Medium | R3,    | R9,  | R11 |     |    |
|         | Low    | R1,    | R4   |     |     |    |
| Crop 4  | High   | R3,    | R10, | R11 |     |    |
|         | Medium | R1,    | R2,  | R4  |     |    |
|         | Low    | R5,    | R9   |     |     |    |

9. How many regions produce medium qualities of Crop-1 or Crop-2 and also produce low quality of Crop-3 or Crop-4?

1. Zero
2. One
3. Two
4. Three

10. Which of the following statements is true?

1. All medium quality Crop-2 producing regions are also high quality Crop-3 producing regions.
2. All high quality Crop-1 producing regions are also medium and low Crop-4 producing regions.
3. There are exactly four Crop-3 producing regions, which also produce Crop-4 but not Crop-2.
4. Some Crop-3 producing regions produce Crop-1, but not high quality Crop-2.

11. How many low quality Crop-1 producing regions are either high quality Crop-4 producing regions or medium quality Crop-3 producing regions?

1. One
2. Two
3. Three
4. Zero

12. How many high quality Crop-1 producing regions are low quality Crop-3 producing regions?

1. One
2. Two
3. Three
4. Zero

# CAT 2015 based paper

Answer the following questions based on the information given below: In a sports event, six teams (A, B, C, D, E and F) are competing against each other. Matches are scheduled in two stages. Each team plays three matches in stage – I and two matches in Stage – II. No team plays against the same team more than once in the event. No ties are permitted in any of the matches. The observations after the completion of Stage – I and Stage – II are as given below.

Stage-I:

- One team won all the three matches.
- Two teams lost all the matches.
- D lost to A but won against C and F.
- E lost to B but won against C and F.
- B lost at least one match.
- F did not play against the top team of Stage-I.

Stage-II:

- The leader of Stage-I lost the next two matches.
- Of the two teams at the bottom after Stage-I, one team won both matches, while the other lost both matches.
- One more team lost both matches in Stage-II.

13.The two teams that defeated the leader of Stage-I are:

- (1) F & D
- (2) E & F
- (3) B & D
- (4) E & D
- (5) F & D

14.The only team(s) that won both matches in Stage-II is (are):

- (1) B
- (2) E & F
- (3) A, E & F
- (4) B, E & F
- (5) B & F

15.The teams that won exactly two matches in the event are:

- (1) A, D & F
- (2) D & E
- (3) E & F
- (4) D, E & F
- (5) D & F

16.The team(s) with the most wins in the event is (are):

- (1) A
- (2) A & C
- (3) F
- (4) E
- (5) B & E

# CAT 2015 based paper

## Section 2 DI LR

### Logical Reasoning

Answer the questions on the basis of the information given below:

Two traders, Harshit and Dhara, were involved in the buying and selling of MCS shares over five trading days. At the beginning of the first day, the MCS share was priced at Rs 100, while at the end of the fifth day it was priced at Rs 110. At the end of each day, the MCS share price either went up by Rs 10, or else, it came down by Rs 10. Both Harshit and Dhara took buying and selling decisions at the end of each trading day. The beginning price of MCS share on a given day was the same as the ending price of the previous day. Harshit and Dhara started with the same number of shares and amount of cash, and had enough of both. Below are some additional facts about how Harshit and Dhara traded over the five trading days.

Each day if the price went up, Harshit sold 10 shares of MCS at the closing price. On the other hand, each day if the price went down, he bought 10 shares at the closing price. 2 If on any day, the closing price was above Rs 110, then Dhara sold 10 shares of MCS, while if it was below Rs 90, he bought 10 shares, all at the closing price.

17.If Harshit sold 10 shares of MCS on three consecutive days, while Dhara sold 10 shares only once during the five days, what was the price of MCS at the end of day 3?

- (1) Rs 90
- (2) Rs 100
- (3) Rs 110
- (4) Rs 120
- (5) Rs 130

18. If Harshit ended up with Rs 1300 more cash than Dhara at the end of day 5, what was the price of MCS share at the end of day 4?

- (1) Rs 90
- (2) Rs 100
- (3) Rs 110
- (4) Rs 120
- (5) Not uniquely determinable

19. If Dhara ended up with 20 more shares than Harshit at the end of day 5, what was the price of the share at the end of day 3?

- (1) Rs 90
- (2) Rs 100
- (3) Rs 110
- (4) Rs 120
- (5) Rs 130

20.What could have been the maximum possible increase in combined cash balance of Harshit and Dhara at the end of the fifth day?

- (1) Rs 3700
- (2) Rs 4000
- (3) Rs 4700
- (4) Rs 5000
- (5) Rs 6000

# CAT 2015 based paper

Answer the questions on the basis of the information given below:

Mathematicians are assigned a number called Zohos number (named after the famous mathematician, Paul Zohos). Only Paul Zohos himself has an Zohos number of zero. Any mathematician who has written a research paper with Zohos has an Zohos number of 1. For other mathematicians, the calculation of his/ her Zohos number is illustrated below:

Suppose that a mathematician X has co-authored papers with several other mathematicians. From among them, mathematician Y has the smallest Zohos number. Let the Zohos number of Y be  $y$ . Then X has an Zohos number of  $y+1$ . Hence any mathematician with no co-authorship chain connected to Zohos has an Zohos number of infinity.

In a seven day long mini-conference organized in memory of Paul Zohos, a close group of eight mathematicians, call them A, B, C, D, E, F, G and H, discussed some research problems. At the beginning of the conference, A was the only participant who had an infinite Zohos number. Nobody had an Zohos number less than that of F.

1 On the third day of the conference F co-authored a paper jointly with A and C. This reduced the average Zohos number of the group of eight mathematicians to 3. The Zohos numbers of B, D, E, G and H remained unchanged with the writing of this paper. Further, no other co-authorship among any three members would have reduced the average Zohos number of the group of eight to as low as 3.

2 At the end of the third day, five members of this group had identical Zohos numbers while the other three had Zohos numbers distinct from each other.

3 On the fifth day, E co-authored a paper with F which reduced the group's average Zohos number by 0.5. The Zohos numbers of the remaining six were unchanged with the writing of this paper.

4 No other paper was written during the conference.

21. How many participants in the conference did not change their Zohos number during the conference?

Type in the answer here: \_\_\_\_\_

22. The person having the largest Zohos number at the end of the conference must have had Zohos number (at that time):

Type in the answer here: \_\_\_\_\_

23. How many participants had the same Zohos number at the beginning of the conference?

Type in the answer here: \_\_\_\_\_

24. The Zohos number of C at the end of the conference was:

Type in the answer here: \_\_\_\_\_

# CAT 2015 based paper

Answer the questions on the basis of the information given below. Coach John sat with the score cards of Indian players from the 3 games in a one-day cricket tournament where the same set of players played for India and all the major batsmen got out. John summarized the batting performance through a table, one column for each game. In each column, the three entries communicate the number of runs scored by the three top scores from India. The last row in the table denotes the percentage of the total score that was scored by the top three Indian scorers in that game. No two players score the same number of runs in the same game. John also calculated two batting indices for each player based on his scores in the tournaments; the R-index of a batsman is the difference between his highest and lowest scores in the 3 games while the M-index is the middle number, if his scores are arranged in a non-increasing order.

| Player     | Pakistan | South Africa | Australia |
|------------|----------|--------------|-----------|
| Yuvraj     | 40       |              | 87        |
| Virender   | 130      |              |           |
| Kaif       | 28       | 51           |           |
| Saurav     |          | 75           | 50        |
| Rahul      |          | 49           | 55        |
| Percentage | 90%      | 70%          | 80%       |

25. For how many Indian players is it possible to calculate the exact M-index?

- (1) 0
- (2) 1
- (3) 2
- (4) More than 2

26. Among the players mentioned, who can have the lowest R-index from the tournament?

- (1) Only Kaif, Rahul or Yuvraj
- (2) Only Kaif or Rahul
- (3) Only Kaif or Yuvraj
- (4) Only Kaif

27. How many players among those listed definitely scored less than Yuvraj in the tournament?

- (1) 0
- (2) 1
- (3) 2
- (4) More than 2

28. Which of the players had the best M-index from the tournament?

- (1) Rahul
- (2) Saurav
- (3) Virender
- (4) Yuvraj

# CAT 2015 based paper

Answer the following questions based on the information given below:

For admission to various affiliated colleges, a university conducts a written test with four different sections, each with a maximum of 50 marks. The following table gives the aggregate as well as the sectional cut-off marks fixed by six different colleges affiliated to the university. A student will get admission only if he/she gets marks greater than or equal to the cut-off marks in each of the sections and his/her aggregate marks are at least equal to the aggregate cut-off marks as specified by the college.

| College   | Sectional Cut – off Marks |           |          |       | Aggregate Cut-off Marks |
|-----------|---------------------------|-----------|----------|-------|-------------------------|
|           | A. Quant                  | B. Verbal | C. Logic | D. DI |                         |
| College 1 | 42                        | 42        | 42       |       | 176                     |
| College 2 |                           | 45        | 45       |       | 175                     |
| College 3 |                           |           | 46       |       | 171                     |
| College 4 | 43                        |           |          | 45    | 178                     |
| College 5 | 45                        |           | 43       |       | 180                     |
| College 6 |                           | 41        |          | 44    | 176                     |

29. Ramaya got calls from all colleges. What could be the minimum aggregate marks obtained by her?

Type in the answer here: \_\_\_\_\_

30. Gauri got calls from two colleges. What could be the minimum marks obtained by him in a section?

Type in the answer here: \_\_\_\_\_

31. Minakshi did not get a call from even a single college. What could be the maximum aggregate marks obtained by him?

Type in the answer here: \_\_\_\_\_

32. What is the maximum score required by a Cetking student in Section D so that student clear all colleges cut-off?

Type in the answer here: \_\_\_\_\_