

Prime CAT 10 2022 DILR

Directions for questions 1 to 6: Answer the questions on the basis of the information given below.

In a SINGLES YOGASANA COMPETITION, the top 4 finalists - Anuj, Rajan, Sunny and Vipul, are judged on 4 different parameters – Presentation (P), Sequences (S), Time Duration (TD) and Difficulty Level (DL), by a panel of 3 judges – Krishna, Mahesh, and Rama. The 3 judges use some sort of coding to rate the performance of the 4 finalists on 4 parameters. Following is the additional information about it:

(i) Krishna uses the 4 letters – A, B, C and D to rate the performance of each of the 4 finalists. In each parameter, he gave a different letter to rate the performance of each finalist and for each finalist; he gave a different letter to rate the performance in each parameter. The same is also true for Mahesh except that he uses 4 different letters – E, F, G and H.

(ii) For rating the performance of the 4 finalists, in each of the 4 parameters, Rama uses the letter whose position in the alphabetical series is equidistant from the positions of the letters used by Krishna and Mahesh to that finalists in that parameter. Further, it is observed that there is always a unique such letter in each case i.e., there are never two middle most letters. **For example**, if Krishna gives 'A' in some parameter to some finalist, then Mahesh would give either 'E' or 'G' in the same parameter to the same finalist so that there is always a single middle most letter between them. **For example:** Between A and E, C is middle most and between A and G, D is middle most.

The following table gives partial information about the rating given in some coded form by each judge to each finalist in each parameter.

Judge	Krishna				Mahesh				Rama			
Finalist	P	S	TD	DL	P	S	TD	DL	P	S	TD	DL
Anuj					E							
Rajan		A					G		D			
Sunny		D					H		E			
Vipul												

Q 1. For which finalist did Krishna used letter C to rate the performance in Time Duration (TD) parameter?

- 1) Anuj
- 2) Rajan
- 3) Sunny
- 4) Vipul

Q 2. For which finalist(s) did Rama use letter 'E' to rate the performance in 3 of the 4 parameters?

- 1) Anuj
- 2) Both Rajan & Sunny
- 3) Both Anuj & Sunny
- 4) Both Anuj & Vipul

Q 3. For which finalist(s) did Rama used a different letter to rate the performance in each of the 4 parameters?

- 1) Both Anuj & Rajan
- 2) Both Anuj & Sunny
- 3) Both Sunny & Vipul
- 4) Both Rajan & Vipul

Q 4. In which parameter did Mahesh use letter F for Vipul?

- 1) Difficulty Level (DL)
 - 2) Time Duration (TD)
 - 3) Sequences (S)
 - 4) Presentation (P)
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Q 5. Which of the following statements is correct about the ratings given to Vipul in the Time Duration (TD) parameter by Judges Krishna, Mahesh and Rama respectively?

- 1) A, C, F
 - 2) A, E, C
 - 3) D, G, C
 - 4) A, F, C
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Q 6. Which of the following statements is FALSE?

- 1) The rating given by Mahesh to Rajan in the Sequences (S) parameter is E.
 - 2) The rating given by Krishna to Anuj in the Difficulty Level (DL) parameter is C.
 - 3) The rating given by Mahesh to Sunny in the Difficulty Level (DL) parameter is F.
 - 4) The rating given by Rama to Vipul in the Time Duration (TD) parameter is C.
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Direction for questions 7 to 10: Answer the questions on the basis of the information given below.

Four friends - Azad, Bipin, Chirag and Dhruv went to a shopping mall and bought a total of 36 items of three categories - Accessory, Clothing and Grocery. None of the 4 friends bought the same number of items. And each of them bought at least one item from each category. The following facts are also known about the categories:

- (i) The number of accessories and grocery items purchased by Azad were the same, while the number of clothing items purchased by him was twice that of his accessory items.
- (ii) The number of accessories purchased by Bipin was the average of the number of articles purchased by him in the other two categories. The number of grocery items purchased by Bipin was more than the number of accessories purchased by him.
- (iii) Out of the total items purchased by Chirag, $\frac{3}{5}$ th belonged to accessory category and $\frac{1}{5}$ th belonged to grocery category.
- (iv) Accessories, clothing and grocery items purchased by Dhruv were in the ratio 1:1:3.
- (v) The total number of items purchased by Dhruv was less than the number of items of clothing purchased by Azad.

Q 7. Based on the given information, which of the following statements MUST be TRUE?

- 1) The number of grocery items purchased by Azad and Bipin were equal.
 - 2) The total number of accessories purchased was more than the number of clothing items.
 - 3) The total number of grocery items purchased was less than the number of clothing items.
 - 4) The number of items of clothing purchased by Bipin and Chirag were equal.
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Q 8. What was the absolute difference between the number of items of clothing purchased by Azad and Dhruv?

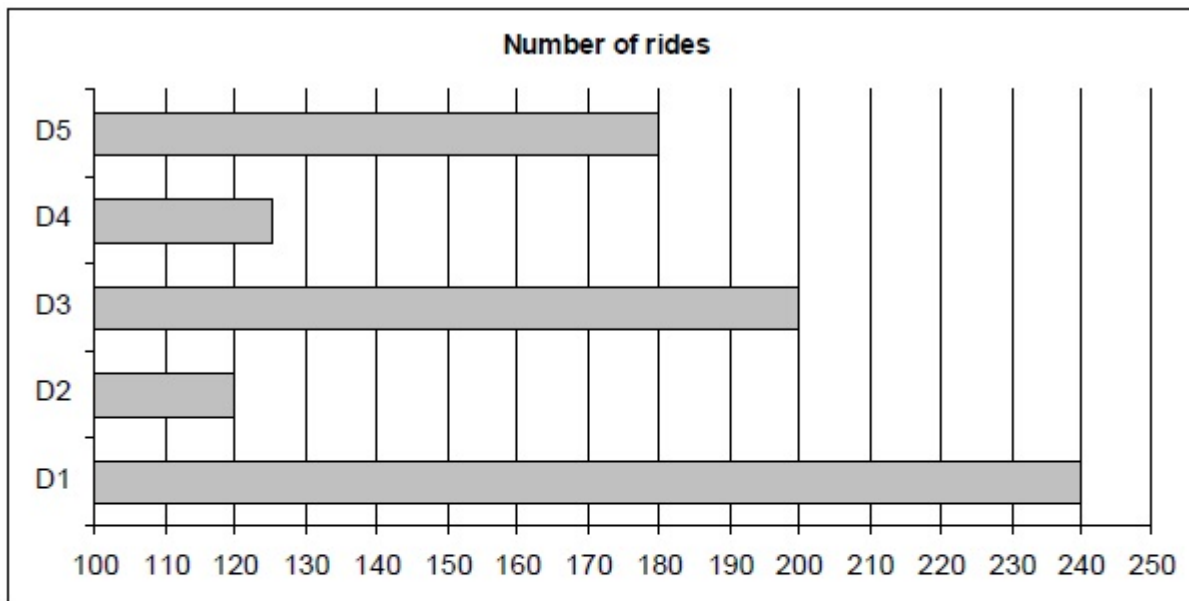
Q 9. What was the total number of items purchased by Bipin?

Q 10. Which of the following could not be uniquely determined on the basis of the given information?

- 1) The number of accessories purchased by Bipin.
- 2) The total number of items purchased by Dhruv in the three categories.
- 3) Total number of grocery items purchased.
- 4) The total number of accessories purchased.

Direction for questions 11 to 14: Answer the questions on the basis of the information given below.

The bar graph given below shows the number of rides completed by 5 different drivers D1, D2, D3, D4, and D5 in a month and the table given below provides their earnings (in Rs.) as per individual rides accepted via different platforms – Uber, Ola, Meru and Rapido. Every driver earns Rs. a, b, c and d per ride for one ride completed in Uber, Ola, Meru and Rapido respectively.



Driver	Uber	Ola	Meru	Rapido
D1	30000	8800	9000	2000
D2	22500	3300	1500	500
D3	31250	3300	4500	3000
D4	26250	1760	1500	200
D5	37500	1100	2250	1000

In addition to their regular earnings for every 10th ride completed by any driver in Uber, Ola, Meru and Rapido, the driver gets Rs. 1,000, Rs. 800, Rs. 500 and Rs. 200 respectively as an incentive. In Uber, five drivers completed exactly 590 rides in total.

Q 11. How many rides did D2 complete in Meru?

Q 12. How much more or less total amount (in Rs.) did D1 earn than D3?

- 1) 12,650
- 2) 11,250
- 3) 11,450
- 4) 10,450

Q 13. If the incentives were not provided to any driver, then the percentage decrease in money of driver D4 earned in the month than the money he would have earned if incentives were given is closest to:

- 1) 24%
- 2) 26%
- 3) 28%

4) 30%

Q 14. The driver rating from 1 to 5 is determined by " $R = \text{Factor 1} + \text{Factor 2} - \text{Factor 3}$ " where factor 1 is 30% of total earnings of the month, factor 2 is 150% of number of rides completed and factor 3 is 100% of number of rides cancelled by a driver in the month. The driver with highest R value is given a rating of 5 and driver with the least R value is given a rating of 1. If the number of rides cancelled was equal to 20% of Uber rides for each driver, then correct order of drivers as per their ratings in increasing order is:

- 1) $D2 < D4 < D5 < D3 < D1$
- 2) $D4 < D2 < D5 < D3 < D1$
- 3) $D2 < D4 < D3 < D1 < D5$
- 4) $D2 < D4 < D3 < D5 < D1$

Direction for questions 15 to 20: Answer the questions on the basis of the information given below.

The Defense Research Organization conducts a series of tests to recruit eligible candidates for some high profile jobs. It requires a candidate to take six tests - A, B, C, D, E and F - from Monday to Saturday, such that one test is held on each day. When an aspirant fills the application form he is supposed to enter the sequence for tests A to F in terms of the days on which the tests are taken, from Monday to Saturday and then when he appears for the tests he has to take the tests in the same sequence. The organization is considering some relaxations of the sequence of tests since it is observed that some aspirants often find it inconvenient to follow the sequence that is previously entered in the form. The organization decides to allow one out of three variations in the sequence of the six tests.

Variation 1: At most two out of the six tests are taken on different days. For example, if the original sequence of tests entered from Monday to Saturday was ABCDEF, then ABFDEC is allowed but EACDBF is not.

Variation 2: The first three tests in the application form can be taken in any order during the first three days and the last three tests can be taken in any order but in the last three days. For example, if CEABDF was the sequence of tests filled in the form from Monday to Saturday, then ACEDFB is allowed but CDEAFB is not.

Variation 3: The tests mentioned in the application form can be taken with a variation of one day before or after the actual day mentioned. For example, if ABCDEF is the original sequence of tests filled in the form from Monday to Saturday, then any one out of BACDEF or BADCEF or BADCFE is possible. That is one; two or three pairs of consecutive tests can be swapped.

Q 15. In case of variation 1, how many different sequences of tests are allowed for any given person's original sequence entered in the form?

Q 16. If the original sequence was ABCDEF, then find the number of ways for variation 1 in which the tests A and F taken either first or last.

- 1) 4
- 2) 6
- 3) 7
- 4) 8

Q 17. It is known that passing in tests A and C is a prerequisite to appear for test E, then which of the following statements cannot be true in case a candidate opts for Variation 1?

- I. Test F is taken on Tuesday
- II. Test D is taken on Saturday
- III. Test B is taken on Friday

- 1) I only
 - 2) III only
 - 3) Both I & III
 - 4) Both II & III
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Q 18. Let X be the number of ways in which the tests can be taken if the tests mentioned in the original sequence for Wednesday and Thursday cannot be shifted and Y be the total number of ways in which the tests can be taken in case the candidate opts for variation 2. Find the ratio of X : Y respectively.

- 1) 1 : 9
 - 2) 1 : 6
 - 3) 2 : 9
 - 4) 5 : 18
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Q 19. If the original sequence from Monday to Saturday was ABCDEF and the candidate realized that the topics in tests A, C and E are difficult and he requires at least one gap in between to prepare for these topics, then in how many ways can he appear for the tests in case he opts for variation 2?

- 1) 6
 - 2) 5
 - 3) 8
 - 4) 12
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Q 20. In case a candidate opts for variation 3, then in how many ways can he take his tests such that none of the tests are taken as per the original sequence?
