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— THE CLAT COMBAT —
THE MATHEMAGICIAN



QUANTITATIVE TECHNIQUES (DI)

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THE CLAT COMBAT

Quantitative Techniques 1

Directions (1-5): Read the following information carefully and answer the questions that follow.

'Vidhan Think Tank' decided to conduct a survey solely for the people who are above 60 years of age. This organisation works for the welfare of people who belongs to this age category. It is operating in the country in 10 cities Bangalore, Hyderabad, Kolkata, Delhi, Jodhpur, Bhopal, Gandhinagar, Lucknow, Raipur and Mumbai. The survey was conducted over 513 people from these cities only. After applying their various parameters and completing the analysis of the data collected in the survey, they found that there are 25 people who are in very critical condition when it comes to their survival. The names of these people are V1, V2, V3V25 respectively. Also, the age of V1 is 61 years, age of V2 is 62 years, the age of V3 is 63 years and so on. These 25 people are further grouped into five groups G1, G2, G3, G4 and G5.

1. What is the average age of all the 25 people?

- (a) 65 years (b) 73 years (c) 69 years (d) Cannot be determined

2. All the 25 people are further divided into 5 groups namely G1, G2, G3, G4 and G5. The group G1, consists of the people aged 65 years, 69 years, 71 years, 72 years & 78 years. In the group G2, people are of age 61, 63, 64, 67 & 70 years. People of age 75, 81, 83, 84 & 85 years belongs to the group G3. The group G4 consists of age 74, 76, 77, 80 & 82 years. The group G5 consists of people aged 62, 66, 68, 73 & 79 years. Use this additional data to answer this and the remaining questions.

Which group has the highest average age?

- (a) G5 (b) G1 (c) G3 (d) G2

3. Which group has the lowest average age?

- (a) G5 (b) G2 (c) G1 (d) G3

4. Player V17 belongs to which group?

- (a) G4 (b) G2 (c) G3 (d) G5

5. If the two oldest people of the group G5 were to be replaced by the two youngest people of the group G1 then, what is the new average age of the group G5?

- (a) 60 (b) 65 (c) 66 (d) 69

1. Ans. b

Sol.

Here we are provided with the age of different people

V1 = 61, V2 = 62, V3 = 63 and so on.

Also, the age of the last person (V25) will be $61+25-1 = 85$ years

Here the age of the people is in A.P, so the average value will be the middle term which will be 73.

Hence, option (b) is correct.

2. Ans. c

Sol.

The given data can be converted into the tabular form

| G1 | G2 | G3 | G4 | G5 |
|----|----|----|----|----|
| 65 | 61 | 75 | 74 | 62 |
| 69 | 63 | 81 | 76 | 66 |
| 71 | 64 | 83 | 77 | 68 |
| 72 | 67 | 84 | 80 | 73 |
| 78 | 70 | 85 | 82 | 79 |

Without even actually calculating, we can easily conclude that as the group G3 consists of the larger numbers (80s), the highest average will be of the group G3.

Hence, option (c) is correct.

THE CLAT COMBAT

3. Ans. b

Sol. Without even actually calculating, we can easily conclude that as the group G2 consists of the smaller numbers (60s), the lowest average will be of the group G2.

4. Ans. a

Sol.

Firstly we have calculate the age of the person V17.

Age of V1 is 61, V2 is 62 so the age of the person V17 = $60+17 = 77$

The person V17 with age 77 years belongs to the group G4.

Hence, option (a) is correct.

5. Ans. c

Sol. Group G5 consists of 62, 66, 68, 73 and 79 years.

Two oldest ones = 73 and 79 years

G1 consists of 65, 69, 71, 72 and 78 years.

Two younger ones = 65 and 69 years

So, now the group G5 consists of 62, 66, 68, 65 and 69 years.

The new average age of G5 = 66 years.