



Prime CAT 07 2022 DILR

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Section-1

Sec 1

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

A written exam for government jobs consisted of two objective type papers - Paper 1 and Paper 2. Paper 1 was of Mathematics and the maximum marks were 300. Each question in Paper 1 carried 2.5 marks. Paper 2 was divided into two parts - Part A (English) and Part B - General Knowledge (GK). The maximum marks for Part A and Part B were 200 and 400 respectively. Each question in this paper was of 4 marks. The composite score (out of 900) of a student was the sum of his marks in two papers. There was no negative marking in the papers. Students securing less than 25% and 35% marks in Paper 1 and Paper 2 or both respectively were disqualified. Out of the rest, the four with the highest composite score qualified the written test.

Ten students from a school appeared in the written test. The partial details of their marks in the written test are given in the table below.

| Candidate | Paper 1 | Paper 2 | |
|-----------|-----------------------------|--------------------------------|---------------------------|
| | Mathematics (out of 300) | Part A (English-out of 200) | Part B (GK-out of 400) |
| A | 70 | | |
| B | | 40 | |
| C | 135 | 28 | 92 |
| D | 85 | 72 | |
| E | 90 | 60 | 160 |
| F | 105 | | 120 |
| G | 155 | 48 | 100 |
| H | | 80 | 140 |
| I | | 44 | 112 |
| J | 95 | | 176 |

The following facts are also known.

- (i) No two students had the same composite score.
- (ii) B and H both scored 40% in exactly one paper. B's composite score was 20 less than H's. B qualified the written test.
- (iii) A, B and D scored the same marks in GK.
- (iv) J was the unique second lowest scorer in English. A did not score the lowest in English.
- (v) Among the four qualified students, F had the lowest composite score.

Q.1 [11831809]

How many marks did B score in Paper 1?

1 ☐ 76

2 ☐ 84

3 ☐ 90

**Solution:****Correct Answer : 4****Your Answer : 4**
[Answer key/Solution](#)
Step 1:

Total number of questions in Paper 1 (Mathematics) = $300/2.5 = 120$

Total number of questions in Paper 2 (Part A -English) = $200/4 = 50$

Total number of questions in Paper 2 (Part B -General Knowledge) = $400/4 = 100$

Qualifying marks in Paper 1 = $300 \times 0.25 = 75$ and in Paper 2 = 210.

From the table, A did not qualify Paper 1 and, C, G and I did not qualify Paper 2.

From condition (ii), H scored 120 marks in Paper 1 (Mathematics), so his total score was 340. Since B qualified the written test and his composite score was 320. So, B scored 40% exactly in Paper 2. Hence, B scored 80 marks in Mathematics.

From condition (iii), A, B and D scored 200 marks in GK.

From condition (iv), J scored either 32 or 36 marks in English. If J scored 32 marks in English, then his composite score was 303 which is equal to G's score. So, from condition (i), it is not possible. Hence, J scored 36 marks in English.

From condition (v), F had the lowest composite score. So, F scored 92 marks in English. Hence, his composite score was 317.

Hence, B, D, F and H qualified the written test.

Step 2:

The final table can be shown as:

| Candidate | Paper 1 | Paper 2 | | Total Marks |
|-----------|-----------------------------|--------------------------------|----------------------------|-------------|
| | Mathematics (out of 300) | Part A (English-out of 200) | Part B (GK -out of 400) | |
| A | 70 | | 200 | |
| B | 80 | 40 | 200 | 320 |
| C | 135 | 28 | 92 | 255 |
| D | 85 | 72 | 200 | 357 |
| E | 90 | 60 | 160 | 310 |
| F | 105 | 92 | 120 | 317 |
| G | 155 | 48 | 100 | 303 |
| H | 120 | 80 | 140 | 340 |
| I | | 44 | 112 | |
| J | 95 | 36 | 176 | 307 |

B scored 80 marks in Paper 1.

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The following facts are also known.

- (i) No two students had the same composite score.
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- (iv) J was the unique second lowest scorer in English. A did not score the lowest in English.
- (v) Among the four qualified students, F had the lowest composite score.

Q.2 [11831809]

What was the composite score of F in Paper 1 and Paper 2?



Solution:

Correct Answer : 317

Your Answer : 317

 Answer key/Solution

Step 1:

Total number of questions in Paper 1 (Mathematics) = $300/2.5 = 120$

Total number of questions in Paper 2 (Part A -English) = $200/4 = 50$

Total number of questions in Paper 2 (Part B -General Knowledge) = $400/4 = 100$

Qualifying marks in Paper 1 = $300 \times 0.25 = 75$ and in Paper 2 = 210.

From the table, A did not qualify Paper 1 and, C, G and I did not qualify Paper 2.

From condition (ii), H scored 120 marks in Paper 1 (Mathematics), so his total score was 340. Since B qualified the written test and his composite score was 320. So, B scored 40% exactly in Paper 2. Hence, B scored 80 marks in Mathematics.

From condition (iii), A, B and D scored 200 marks in GK.

From condition (iv), J scored either 32 or 36 marks in English. If J scored 32 marks in English, then his composite score was 303 which is equal to G's score. So, from condition (i), it is not possible. Hence, J scored 36 marks in English.

From condition (v), F had the lowest composite score. So, F scored 92 marks in English. Hence, his composite score was 317.

Hence, B, D, F and H qualified the written test.

Step 2:

The final table can be shown as:

| Candidate | Paper 1 | Paper 2 | | Total Marks |
|-----------|------------------------------|--------------------------------|----------------------------|-------------|
| | Mathem atics (out of 300) | Part A (English-out of 200) | Part B (GK -out of 400) | |
| A | 70 | | 200 | |
| B | 80 | 40 | 200 | 320 |
| C | 135 | 28 | 92 | 255 |
| D | 85 | 72 | 200 | 357 |
| E | 90 | 60 | 160 | 310 |
| F | 105 | 92 | 120 | 317 |
| G | 155 | 48 | 100 | 303 |
| H | 120 | 80 | 140 | 340 |
| I | | 44 | 112 | |
| J | 95 | 36 | 176 | 307 |

The composite score of F in Paper 1 and Paper 2 was 317.

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The following facts are also known.

- (i) No two students had the same composite score.
- (ii) B and H both scored 40% in exactly one paper. B's composite score was 20 less than H's. B qualified the written test.
- (iii) A, B and D scored the same marks in GK.
- (iv) J was the unique second lowest scorer in English. A did not score the lowest in English.
- (v) Among the four qualified students, F had the lowest composite score.

Q.3 [11831809]

Which of the following statements MUST be FALSE?

- 1 ☐ F's composite score was less than that of B.
- 2 ☐ Two students were definitely disqualified in Paper 2.
- 3 ☐ A attempted 40 correct questions in GK.

4 ○ D's composite score was more than that of H.



Solution:

Correct Answer : 3

Your Answer : 3

[Answer key/Solution](#)

Step 1:

Total number of questions in Paper 1 (Mathematics) = $300/2.5 = 120$

Total number of questions in Paper 2 (Part A -English) = $200/4 = 50$

Total number of questions in Paper 2 (Part B -General Knowledge) = $400/4 = 100$

Qualifying marks in Paper 1 = $300 \times 0.25 = 75$ and in Paper 2 = 210.

From the table, A did not qualify Paper 1 and, C, G and I did not qualify Paper 2.

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From condition (v), F had the lowest composite score. So, F scored 92 marks in English. Hence, his composite score was 317.

Hence, B, D, F and H qualified the written test.

Step 2:

The final table can be shown as:

| Candidate | Paper 1 | Paper 2 | | Total Marks |
|-----------|-----------------------------|--------------------------------|----------------------------|-------------|
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| A | 70 | | 200 | |
| B | 80 | 40 | 200 | 320 |
| C | 135 | 28 | 92 | 255 |
| D | 85 | 72 | 200 | 357 |
| E | 90 | 60 | 160 | 310 |
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| G | 155 | 48 | 100 | 303 |
| H | 120 | 80 | 140 | 340 |
| I | | 44 | 112 | |
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A scored 200 marks in GK. So, number of questions attempted by A in GK = $200/4 = 50$.

Hence, the statement given in option (3) MUST be FALSE.

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The following facts are also known.

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- (iv) J was the unique second lowest scorer in English. A did not score the lowest in English.
- (v) Among the four qualified students, F had the lowest composite score.

Q.4 [11831809]

Which of the following statements MUST be TRUE?

- I. J attempted more number of correct questions than B in GK.
- II. B attempted less number of correct questions than H in Mathematics.
- III. G attempted less total number of correct questions than J.

1 ☐ II only

2 ☐ Both II and III

3 ☐ III only

4 ☐ Both I and II



Solution:

Correct Answer : 1

Your Answer : 1

[🔍 Answer key/Solution](#)

Step 1:

Total number of questions in Paper 1 (Mathematics) = $300/2.5 = 120$

Total number of questions in Paper 2 (Part A -English) = $200/4 = 50$

Total number of questions in Paper 2 (Part B -General Knowledge) = $400/4 = 100$

Qualifying marks in Paper 1 = $300 \times 0.25 = 75$ and in Paper 2 = 210.

From the table, A did not qualify Paper 1 and, C, G and I did not qualify Paper 2.

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Hence, B, D, F and H qualified the written test.

Step 2:

The final table can be shown as:

| Candidate | Paper 1 | Paper 2 | | Total Marks |
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| | Mathematics (out of 300) | Part A (English-out of 200) | Part B (GK -out of 400) | |
| A | 70 | | 200 | |
| B | 80 | 40 | 200 | 320 |
| C | 135 | 28 | 92 | 255 |
| D | 85 | 72 | 200 | 357 |
| E | 90 | 60 | 160 | 310 |
| F | 105 | 92 | 120 | 317 |
| G | 155 | 48 | 100 | 303 |
| H | 120 | 80 | 140 | 340 |
| I | | 44 | 112 | |
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Statement II MUST be TRUE. Hence, option (1) is correct.

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- (iv) J was the unique second lowest scorer in English. A did not score the lowest in English.
- (v) Among the four qualified students, F had the lowest composite score.

Q.5 [11831809]

What was the difference between the correct questions attempted by F and J in English?



Solution:

Correct Answer : 14

Your Answer : 14

 Answer key/Solution

Step 1:

Total number of questions in Paper 1 (Mathematics) = $300/2.5 = 120$

Total number of questions in Paper 2 (Part A -English) = $200/4 = 50$

Total number of questions in Paper 2 (Part B -General Knowledge) = $400/4 = 100$

Qualifying marks in Paper 1 = $300 \times 0.25 = 75$ and in Paper 2 = 210.

From the table, A did not qualify Paper 1 and, C, G and I did not qualify Paper 2.

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From condition (v), F had the lowest composite score. So, F scored 92 marks in English. Hence, his composite score was 317.

Hence, B, D, F and H qualified the written test.

Step 2:

The final table can be shown as:

| Candidate | Paper 1 | Paper 2 | | Total Marks |
|-----------|------------------------------|--------------------------------|----------------------------|-------------|
| | Mathem atics (out of 300) | Part A (English-out of 200) | Part B (GK -out of 400) | |
| A | 70 | | 200 | |
| B | 80 | 40 | 200 | 320 |
| C | 135 | 28 | 92 | 255 |
| D | 85 | 72 | 200 | 357 |
| E | 90 | 60 | 160 | 310 |
| F | 105 | 92 | 120 | 317 |
| G | 155 | 48 | 100 | 303 |
| H | 120 | 80 | 140 | 340 |
| I | | 44 | 112 | |
| J | 95 | 36 | 176 | 307 |

The required difference = $(92 - 36)/4 = 14$.

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| G | 155 | 48 | 100 |
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The following facts are also known.

- (i) No two students had the same composite score.
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- (iii) A, B and D scored the same marks in GK.
- (iv) J was the unique second lowest scorer in English. A did not score the lowest in English.
- (v) Among the four qualified students, F had the lowest composite score.

Q.6 [11831809]

It is known that A qualified Paper 2. If I's composite score was more than A's composite score, then what could be the minimum number of correct questions attempted by I in Mathematics?

1 ☐ 51

2 ☐ 62

3 ☐ 64

**Solution:****Correct Answer : 3****Your Answer : 3**
[Answer key/Solution](#)
Step 1:

Total number of questions in Paper 1 (Mathematics) = $300/2.5 = 120$

Total number of questions in Paper 2 (Part A -English) = $200/4 = 50$

Total number of questions in Paper 2 (Part B -General Knowledge) = $400/4 = 100$

Qualifying marks in Paper 1 = $300 \times 0.25 = 75$ and in Paper 2 = 210.

From the table, A did not qualify Paper 1 and, C, G and I did not qualify Paper 2.

From condition (ii), H scored 120 marks in Paper 1 (Mathematics), so his total score was 340. Since B qualified the written test and his composite score was 320. So, B scored 40% exactly in Paper 2. Hence, B scored 80 marks in Mathematics.

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Hence, B, D, F and H qualified the written test.

Step 2:

The final table can be shown as:

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| E | 90 | 60 | 160 | 310 |
| F | 105 | 92 | 120 | 317 |
| G | 155 | 48 | 100 | 303 |
| H | 120 | 80 | 140 | 340 |
| I | | 44 | 112 | |
| J | 95 | 36 | 176 | 307 |

A's score in English cannot be the lowest or 2nd lowest. Also, A cannot score 40 marks in English. Otherwise the composite score of A will be equal to that of E.

To qualify Paper 2, A has to score a minimum of 44 marks (i.e., 11 correct questions) in English.

Now, the composite score of A will be = $70 + 44 + 200 = 314$.

So, I's composite score should be ≥ 315 .

So, I scored in Mathematics $\geq 315 - (44 + 112) = 159$

Therefore, the number of correct questions attempted by I in Mathematics $\geq 159/2.5 = 63.6$

Hence, the minimum number of correct questions that I could attempt in Mathematics is 64.

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Directions for questions 7 to 10: Answer the questions on the basis of the information given below.

At a college canteen a new coffee vending machine is placed and a sales person helps people in getting their desired cup of coffee with the right concentration. The coffee dispenser has a touch screen display, with choices for coffee decoction, milk and sugar syrup along with numeric choices from 0 to 9 for the preferred quantity of each liquid to be poured. Each of the liquids are dispensed in multiples of 10 ml, for example if 5 is chosen for milk, then 50 ml of milk is dispensed. Further, it is also known that:

- (i) The coffee cups available have a capacity of 150 ml. The cost price of 10 ml each of coffee decoction is Rs.3, milk is Rs.2 and sugar syrup is Re.1.
- (ii) According to the safety standards of the company, in the preparation of any cup of coffee only these three liquids are mixed and nothing else is added.
- (iii) Each coffee cup sold has exactly 150 ml of liquid, not less or more. Each cup of coffee contains at least 10 ml of each of the three liquids and the quantity of coffee decoction is never less than either milk or sugar syrup.
- (iv) The machine is programmed to set the selling price of each cup at 10% above the cost price.

Q.7 [11831809]

The preferred drink of the professors is a cup with minimum 50% coffee decoction. In how many ways can coffee be served to the professors from the vending machine?

1 ☐ 15

2 ☐ 21

3 ☐ 28

4 ☐ 18



Solution:

Correct Answer : 2

Your Answer : 2

[Answer key/Solution](#)

The volume of a cup is 150 ml and the minimum quantity of liquid dispensed is in multiples of 10 ml. So for the coffee decoction to be more than 50%, its quantity can be 80 ml, 90 ml, 100 ml, 110 ml, 120 ml or 130 ml. It cannot be more than 130 ml as the quantities of milk and sugar syrup should be at least 10 ml each.

| Coffee (in ml) | Milk and sugar syrup (in ml) | Number of ways |
|----------------|--|----------------|
| 80 | (60, 10), (50, 20), (40, 30), (30, 40), (20, 50), (10, 60) | 6 |
| 90 | (50, 10), (40, 20), (30, 30), (20, 40), (10, 50) | 5 |
| 100 | (40, 10), (30, 20), (20, 30), (10, 40) | 4 |
| 110 | (30, 10), (20, 20), (10, 30) | 3 |
| 120 | (20, 10), (10, 20) | 2 |
| 130 | (10, 10) | 1 |

Hence, total number of ways = $6 + 5 + 4 + 3 + 2 + 1 = 21$ ways.

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Directions for questions 7 to 10: Answer the questions on the basis of the information given below.

At a college canteen a new coffee vending machine is placed and a sales person helps people in getting their desired cup of coffee with the right concentration. The coffee dispenser has a touch screen display, with choices for coffee decoction, milk and sugar syrup along with numeric choices from 0 to 9 for the preferred quantity of each liquid to be poured. Each of the liquids are dispensed in multiples of 10 ml, for example if 5 is chosen for milk, then 50 ml of milk is dispensed. Further, it is also known that:

- (i) The coffee cups available have a capacity of 150 ml. The cost price of 10 ml each of coffee decoction is Rs.3, milk is Rs.2 and sugar syrup is Re.1.
- (ii) According to the safety standards of the company, in the preparation of any cup of coffee only these three liquids are mixed and nothing else is added.
- (iii) Each coffee cup sold has exactly 150 ml of liquid, not less or more. Each cup of coffee contains at least 10 ml of each of the three liquids and the quantity of coffee decoction is never less than either milk or sugar syrup.
- (iv) The machine is programmed to set the selling price of each cup at 10% above the cost price.

Q.8 [11831809]

What is the difference between the maximum and minimum profit (in Rs.) earned by the sales of 1000 cups of coffee?

1 ☐ 1200

2 ☐ 1250

3 ☐ 1100

4 ☐ 1350



Solution:

Correct Answer : 1

Your Answer : 1

The minimum cost price of a cup will be $15 + 10 + 5 = \text{Rs.}30$
The minimum profit of 10% = $30 \times 0.1 = \text{Rs.}3$ per cup
The maximum cost price of a cup of coffee will be $13 \times 3 + 2 + 1 = \text{Rs.}42$
The maximum profit of 10% = $42 \times 0.1 = \text{Rs.}4.20$ per cup
Hence, required difference in maximum and minimum profit
= $1000 \times (4.20 - 3) = \text{Rs. } 1,200$.

Bookmark

FeedBack

Answer key/Solution

Directions for questions 7 to 10: Answer the questions on the basis of the information given below.

At a college canteen a new coffee vending machine is placed and a sales person helps people in getting their desired cup of coffee with the right concentration. The coffee dispenser has a touch screen display, with choices for coffee decoction, milk and sugar syrup along with numeric choices from 0 to 9 for the preferred quantity of each liquid to be poured. Each of the liquids are dispensed in multiples of 10 ml, for example if 5 is chosen for milk, then 50 ml of milk is dispensed. Further, it is also known that:

- (i) The coffee cups available have a capacity of 150 ml. The cost price of 10 ml each of coffee decoction is Rs.3, milk is Rs.2 and sugar syrup is Re.1.
- (ii) According to the safety standards of the company, in the preparation of any cup of coffee only these three liquids are mixed and nothing else is added.
- (iii) Each coffee cup sold has exactly 150 ml of liquid, not less or more. Each cup of coffee contains at least 10 ml of each of the three liquids and the quantity of coffee decoction is never less than either milk or sugar syrup.
- (iv) The machine is programmed to set the selling price of each cup at 10% above the cost price.

Q.9 [11831809]

If undergraduate students prefer at least 60 ml of milk in their cup of coffee, then what is the minimum amount of sugar syrup (in liter) that can be contained in 100 cups of coffee?

1 ☐ 2

2 ☐ 3

3 ☐ 4

4 ☐ 1



Solution:

Correct Answer : 4

Your Answer : 4

It is given that in each cup the quantity of coffee decoction is never less than either milk or sugar syrup. So the quantity of coffee decoction can be 60 ml, 70 ml or 80 ml but not more than that because out of 150 ml at least 10 ml of sugar syrup has to be there.

Hence, the minimum amount of sugar syrup that can be contained in 100 cups of coffee = $10 \times 100 = 1000$ ml or 1 liter.

Bookmark

FeedBack

[🔍 Answer key/Solution](#)

Directions for questions 7 to 10: Answer the questions on the basis of the information given below.

At a college canteen a new coffee vending machine is placed and a sales person helps people in getting their desired cup of coffee with the right concentration. The coffee dispenser has a touch screen display, with choices for coffee decoction, milk and sugar syrup along with numeric choices from 0 to 9 for the preferred quantity of each liquid to be poured. Each of the liquids are dispensed in multiples of 10 ml, for example if 5 is chosen for milk, then 50 ml of milk is dispensed. Further, it is also known that:

- (i) The coffee cups available have a capacity of 150 ml. The cost price of 10 ml each of coffee decoction is Rs.3, milk is Rs.2 and sugar syrup is Re.1.
- (ii) According to the safety standards of the company, in the preparation of any cup of coffee only these three liquids are mixed and nothing else is added.
- (iii) Each coffee cup sold has exactly 150 ml of liquid, not less or more. Each cup of coffee contains at least 10 ml of each of the three liquids and the quantity of coffee decoction is never less than either milk or sugar syrup.
- (iv) The machine is programmed to set the selling price of each cup at 10% above the cost price.

Q.10 [11831809]

On a particular day the coffee dispenser is filled with 20 liters each of milk and coffee decoction. What is the maximum number of cups of coffee dispensed such that there is no wastage? (Assume that any quantity of sugar syrup can be provided.)

1 ☐ 250

2 ☐ 200

3 ☐ 400

4 ☐ 500



Solution:

Correct Answer : 3

Your Answer : 3

Maximum number of cups can be dispensed without wastage if equal quantities milk and coffee decoction are used. Since the quantity of coffee decoction cannot be less than milk or sugar syrup, the maximum quantity of sugar syrup that can be used in a cup can never be more than 50 ml. So the maximum number of cups that can be dispensed = $20000/50 = 400$ cups.

Bookmark

FeedBack

 Answer key/Solution

Directions for questions 11 to 16: Answer the questions on the basis of the information given below.

In a hospital five doctors – A, B, C, D and E are on duty from Monday to Thursday on different time slots starting from 9 AM to 5 PM. Each slot is of 1 hour. Every person gets an appointment as per available time slots. Five persons – Adam, Bush, Cole, Dev, and Eshan – have their appointments fixed for four days. They all have a preference for a doctor but none of them except Eshan gets to meet the doctor of their choice. Visiting fees (in Rs.) of A, B, C, D and E is 100, 200, 300, 400 and 500 respectively. The below table shows the available doctor for each time slot for four days.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Additional information known to us:

- (i) These five persons visit the hospital twice in a day hoping to meet the doctor of their choice. Each person never visits on the time-slot they visited before. Adam prefers doctor C, Bush prefers doctor B, Cole prefers doctor D, Dev prefers doctor A and Eshan prefers doctor E.
- (ii) Adam visited A exactly 4 times but not from 9 AM to 10 AM.
- (iii) Bush visited D exactly 5 times but never on Thursday.
- (iv) Cole visited B exactly 4 times but not from 11 AM to 12 Noon.
- (v) Dev visited C exactly 5 times but not on Tuesday.
- (vi) Eshan visited E exactly 3 times but not from 1 PM to 2 PM. Also, Eshan never get to visit doctors B and D.

Q.11 [11831809]

Which of the following is the list of doctors whom Dev visit other than doctor C?

1 ☐ B, E, D

2 ☐ D, E

3 ☐ B, E

4 ☐ B, D

Solution:

Correct Answer : 2

 Answer key/Solution

Step 1:

As per condition (ii), Adam visited doctor A exactly 4 times, but not from 9 AM to 10 AM, therefore, from the table:

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

1. Green marked timings and days are the ones wherein Adam will visit doctor A. Orange marked timing and day depict that Adam must visit doctor A from 2 PM to 3 PM either on Tuesday or Wednesday.
2. Also, Adam prefers doctor C, but never gets to visit C. From 9 AM to 10 AM, Adam can either visit on Monday, Tuesday or Wednesday, but since preferred doctor C is on Wednesday and doctor A on Tuesday, whom he didn't visit from 9 AM to 10 AM, therefore, Adam must visit doctor B on Monday.
3. On Monday and Thursday, Adam already has two booked visits. Therefore, from 11 AM to 12 Noon, Adam must visit either doctor E or B on Tuesday or Wednesday respectively. From 1 PM to 2 PM, Adam must visit doctor D on Wednesday, from 4 PM to 5 PM, Adam must visit doctor B on Tuesday.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Step 2:

Similar conclusions can be drawn for Bush, Cole, Dev and Eshan.

| Time slot | Adam | Bush | Cole | Dev | Eshan |
|-----------|-----------------------------|---------------|-----------------------|---------------|---------------------------|
| 9-10 | Monday – B | Thursday – E | Monday – B | Wednesday – C | Thursday – E |
| 10-11 | Monday – A | Tuesday – D | Wednesday – B | Tuesday – D | Monday – A |
| 11-12 | Tuesday/ Wednesday – E/B | Tuesday – E | Tuesday – E | Tuesday – E | Tuesday – E |
| 12-1 | Thursday – A | Wednesday – D | Tuesday – B | Monday – C | Monday – C |
| 1-2 | Wednesday – D | Wednesday – D | Monday/Thursday – E/C | Thursday – C | Thursday – C |
| 2-3 | Wednesday/Tuesday – A | Monday – D | Wednesday – A | Thursday – D | Tuesday/ Wednesday – A |
| 3-4 | Thursday – A | Thursday – A | Thursday/Monday – A/C | Monday – C | Wednesday/Tuesday – E |
| 4-5 | Tuesday – B | Monday – D | Thursday – B | Wednesday – C | Wednesday – C |

List of doctors whom Dev visit other than doctor C are D and E.

Bookmark

FeedBack

Directions for questions 11 to 16: Answer the questions on the basis of the information given below.

In a hospital five doctors – A, B, C, D and E are on duty from Monday to Thursday on different time slots starting from 9 AM to 5 PM. Each slot is of 1 hour. Every person gets an appointment as per available time slots. Five persons – Adam, Bush, Cole, Dev, and Eshan – have their appointments fixed for four days. They all have a preference for a doctor but none of them except Eshan gets to meet the doctor of their choice. Visiting fees (in Rs.) of A, B, C, D and E is 100, 200, 300, 400 and 500 respectively. The below table shows the available doctor for each time slot for four days.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Additional information known to us:

- (i) These five persons visit the hospital twice in a day hoping to meet the doctor of their choice. Each person never visits on the time-slot they visited before. Adam prefers doctor C, Bush prefers doctor B, Cole prefers doctor D, Dev prefers doctor A and Eshan prefers doctor E.
- (ii) Adam visited A exactly 4 times but not from 9 AM to 10 AM.
- (iii) Bush visited D exactly 5 times but never on Thursday.
- (iv) Cole visited B exactly 4 times but not from 11 AM to 12 Noon.
- (v) Dev visited C exactly 5 times but not on Tuesday.
- (vi) Eshan visited E exactly 3 times but not from 1 PM to 2 PM. Also, Eshan never get to visit doctors B and D.

Q.12 [11831809]

On which of the following days, all of them could have visited the same doctor in the same time slot?

1 ☐ Tuesday

2 ☐ Wednesday

3 ☐ Thursday

4 ☐ Cannot be determined

Solution:

Correct Answer : 1

 Answer key/Solution

Step 1:

As per condition (ii), Adam visited doctor A exactly 4 times, but not from 9 AM to 10 AM, therefore, from the table:

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

1. Green marked timings and days are the ones wherein Adam will visit doctor A. Orange marked timing and day depict that Adam must visit doctor A from 2 PM to 3 PM either on Tuesday or Wednesday.
2. Also, Adam prefers doctor C, but never gets to visit C. From 9 AM to 10 AM, Adam can either visit on Monday, Tuesday or Wednesday, but since preferred doctor C is on Wednesday and doctor A on Tuesday, whom he didn't visit from 9 AM to 10 AM, therefore, Adam must visit doctor B on Monday.
3. On Monday and Thursday, Adam already has two booked visits. Therefore, from 11 AM to 12 Noon, Adam must visit either doctor E or B on Tuesday or Wednesday respectively. From 1 PM to 2 PM, Adam must visit doctor D on Wednesday, from 4 PM to 5 PM, Adam must visit doctor B on Tuesday.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Step 2:

Similar conclusions can be drawn for Bush, Cole, Dev and Eshan.

| Time slot | Adam | Bush | Cole | Dev | Eshan |
|-----------|-----------------------------|---------------|-----------------------|---------------|---------------------------|
| 9-10 | Monday – B | Thursday – E | Monday – B | Wednesday – C | Thursday – E |
| 10-11 | Monday – A | Tuesday – D | Wednesday – B | Tuesday – D | Monday – A |
| 11-12 | Tuesday/ Wednesday – E/B | Tuesday – E | Tuesday – E | Tuesday – E | Tuesday – E |
| 12-1 | Thursday – A | Wednesday – D | Tuesday – B | Monday – C | Monday – C |
| 1-2 | Wednesday – D | Wednesday – D | Monday/Thursday – E/C | Thursday – C | Thursday – C |
| 2-3 | Wednesday/Tuesday – A | Monday – D | Wednesday – A | Thursday – D | Tuesday/ Wednesday – A |
| 3-4 | Thursday – A | Thursday – A | Thursday/Monday – A/C | Monday – C | Wednesday/Tuesday – E |
| 4-5 | Tuesday – B | Monday – D | Thursday – B | Wednesday – C | Wednesday – C |

On Tuesday, all five of them could have visited the same doctor on the same time slot that is, 11 AM to 12 Noon.

Bookmark

FeedBack

Directions for questions 11 to 16: Answer the questions on the basis of the information given below.

In a hospital five doctors – A, B, C, D and E are on duty from Monday to Thursday on different time slots starting from 9 AM to 5 PM. Each slot is of 1 hour. Every person gets an appointment as per available time slots. Five persons – Adam, Bush, Cole, Dev, and Eshan – have their appointments fixed for four days. They all have a preference for a doctor but none of them except Eshan gets to meet the doctor of their choice. Visiting fees (in Rs.) of A, B, C, D and E is 100, 200, 300, 400 and 500 respectively. The below table shows the available doctor for each time slot for four days.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Additional information known to us:

- (i) These five persons visit the hospital twice in a day hoping to meet the doctor of their choice. Each person never visits on the time-slot they visited before. Adam prefers doctor C, Bush prefers doctor B, Cole prefers doctor D, Dev prefers doctor A and Eshan prefers doctor E.
- (ii) Adam visited A exactly 4 times but not from 9 AM to 10 AM.
- (iii) Bush visited D exactly 5 times but never on Thursday.
- (iv) Cole visited B exactly 4 times but not from 11 AM to 12 Noon.
- (v) Dev visited C exactly 5 times but not on Tuesday.
- (vi) Eshan visited E exactly 3 times but not from 1 PM to 2 PM. Also, Eshan never get to visit doctors B and D.

Q.13 [11831809]

How many different doctors does Cole visited?

1 ☐ 1

2 ☐ 2

$3 \bigcirc 3$

$4 \bigcirc 4$

Solution:

Correct Answer : 4

 Answer key/Solution

Step 1:

As per condition (ii), Adam visited doctor A exactly 4 times, but not from 9 AM to 10 AM, therefore, from the table:

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

1. Green marked timings and days are the ones wherein Adam will visit doctor A. Orange marked timing and day depict that Adam must visit doctor A from 2 PM to 3 PM either on Tuesday or Wednesday.
2. Also, Adam prefers doctor C, but never gets to visit C. From 9 AM to 10 AM, Adam can either visit on Monday, Tuesday or Wednesday, but since preferred doctor C is on Wednesday and doctor A on Tuesday, whom he didn't visit from 9 AM to 10 AM, therefore, Adam must visit doctor B on Monday.
3. On Monday and Thursday, Adam already has two booked visits. Therefore, from 11 AM to 12 Noon, Adam must visit either doctor E or B on Tuesday or Wednesday respectively. From 1 PM to 2 PM, Adam must visit doctor D on Wednesday, from 4 PM to 5 PM, Adam must visit doctor B on Tuesday.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Step 2:

Similar conclusions can be drawn for Bush, Cole, Dev and Eshan.

| Time slot | Adam | Bush | Cole | Dev | Eshan |
|-----------|-----------------------------|---------------|-----------------------|---------------|---------------------------|
| 9-10 | Monday – B | Thursday – E | Monday – B | Wednesday – C | Thursday – E |
| 10-11 | Monday – A | Tuesday – D | Wednesday – B | Tuesday – D | Monday – A |
| 11-12 | Tuesday/ Wednesday – E/B | Tuesday – E | Tuesday – E | Tuesday – E | Tuesday – E |
| 12-1 | Thursday – A | Wednesday – D | Tuesday – B | Monday – C | Monday – C |
| 1-2 | Wednesday – D | Wednesday – D | Monday/Thursday – E/C | Thursday – C | Thursday – C |
| 2-3 | Wednesday/Tuesday – A | Monday – D | Wednesday – A | Thursday – D | Tuesday/ Wednesday – A |
| 3-4 | Thursday – A | Thursday – A | Thursday/Monday – A/C | Monday – C | Wednesday/Tuesday – E |
| 4-5 | Tuesday – B | Monday – D | Thursday – B | Wednesday – C | Wednesday – C |

Cole visited 4 doctors other than the preferred doctor D.

Bookmark

FeedBack

Directions for questions 11 to 16: Answer the questions on the basis of the information given below.

In a hospital five doctors – A, B, C, D and E are on duty from Monday to Thursday on different time slots starting from 9 AM to 5 PM. Each slot is of 1 hour. Every person gets an appointment as per available time slots. Five persons – Adam, Bush, Cole, Dev, and Eshan – have their appointments fixed for four days. They all have a preference for a doctor but none of them except Eshan gets to meet the doctor of their choice. Visiting fees (in Rs.) of A, B, C, D and E is 100, 200, 300, 400 and 500 respectively. The below table shows the available doctor for each time slot for four days.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Additional information known to us:

- (i) These five persons visit the hospital twice in a day hoping to meet the doctor of their choice. Each person never visits on the time-slot they visited before. Adam prefers doctor C, Bush prefers doctor B, Cole prefers doctor D, Dev prefers doctor A and Eshan prefers doctor E.
- (ii) Adam visited A exactly 4 times but not from 9 AM to 10 AM.
- (iii) Bush visited D exactly 5 times but never on Thursday.
- (iv) Cole visited B exactly 4 times but not from 11 AM to 12 Noon.
- (v) Dev visited C exactly 5 times but not on Tuesday.
- (vi) Eshan visited E exactly 3 times but not from 1 PM to 2 PM. Also, Eshan never get to visit doctors B and D.

Q.14 [11831809]

On how many time slots, on all four days, did Eshan visited the same doctor as either Adam or Dev?

1 ☐ 4

2 ☐ 5

3 ☐ 6

4 ☐ Either (2) or (3)

Solution:

Correct Answer : 4

 Answer key/Solution

Step 1:

As per condition (ii), Adam visited doctor A exactly 4 times, but not from 9 AM to 10 AM, therefore, from the table:

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

1. Green marked timings and days are the ones wherein Adam will visit doctor A. Orange marked timing and day depict that Adam must visit doctor A from 2 PM to 3 PM either on Tuesday or Wednesday.
2. Also, Adam prefers doctor C, but never gets to visit C. From 9 AM to 10 AM, Adam can either visit on Monday, Tuesday or Wednesday, but since preferred doctor C is on Wednesday and doctor A on Tuesday, whom he didn't visit from 9 AM to 10 AM, therefore, Adam must visit doctor B on Monday.
3. On Monday and Thursday, Adam already has two booked visits. Therefore, from 11 AM to 12 Noon, Adam must visit either doctor E or B on Tuesday or Wednesday respectively. From 1 PM to 2 PM, Adam must visit doctor D on Wednesday, from 4 PM to 5 PM, Adam must visit doctor B on Tuesday.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Step 2:

Similar conclusions can be drawn for Bush, Cole, Dev and Eshan.

| Time slot | Adam | Bush | Cole | Dev | Eshan |
|-----------|-----------------------------|---------------|-----------------------|---------------|---------------------------|
| 9-10 | Monday – B | Thursday – E | Monday – B | Wednesday – C | Thursday – E |
| 10-11 | Monday – A | Tuesday – D | Wednesday – B | Tuesday – D | Monday – A |
| 11-12 | Tuesday/ Wednesday – E/B | Tuesday – E | Tuesday – E | Tuesday – E | Tuesday – E |
| 12-1 | Thursday – A | Wednesday – D | Tuesday – B | Monday – C | Monday – C |
| 1-2 | Wednesday – D | Wednesday – D | Monday/Thursday – E/C | Thursday – C | Thursday – C |
| 2-3 | Wednesday/Tuesday – A | Monday – D | Wednesday – A | Thursday – D | Tuesday/ Wednesday – A |
| 3-4 | Thursday – A | Thursday – A | Thursday/Monday – A/C | Monday – C | Wednesday/Tuesday – E |
| 4-5 | Tuesday – B | Monday – D | Thursday – B | Wednesday – C | Wednesday – C |

Eshan visited along with Adam or dev on either 5 or 6 slots.

Bookmark

FeedBack

Directions for questions 11 to 16: Answer the questions on the basis of the information given below.

In a hospital five doctors – A, B, C, D and E are on duty from Monday to Thursday on different time slots starting from 9 AM to 5 PM. Each slot is of 1 hour. Every person gets an appointment as per available time slots. Five persons – Adam, Bush, Cole, Dev, and Eshan – have their appointments fixed for four days. They all have a preference for a doctor but none of them except Eshan gets to meet the doctor of their choice. Visiting fees (in Rs.) of A, B, C, D and E is 100, 200, 300, 400 and 500 respectively. The below table shows the available doctor for each time slot for four days.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Additional information known to us:

- (i) These five persons visit the hospital twice in a day hoping to meet the doctor of their choice. Each person never visits on the time-slot they visited before. Adam prefers doctor C, Bush prefers doctor B, Cole prefers doctor D, Dev prefers doctor A and Eshan prefers doctor E.
- (ii) Adam visited A exactly 4 times but not from 9 AM to 10 AM.
- (iii) Bush visited D exactly 5 times but never on Thursday.
- (iv) Cole visited B exactly 4 times but not from 11 AM to 12 Noon.
- (v) Dev visited C exactly 5 times but not on Tuesday.
- (vi) Eshan visited E exactly 3 times but not from 1 PM to 2 PM. Also, Eshan never get to visit doctors B and D.

Q.15 [11831809]

Total how much visiting fees (in Rs.) is paid by Bush?

Solution:

Correct Answer : 3100

 Answer key/Solution

Step 1:

As per condition (ii), Adam visited doctor A exactly 4 times, but not from 9 AM to 10 AM, therefore, from the table:

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

1. Green marked timings and days are the ones wherein Adam will visit doctor A. Orange marked timing and day depict that Adam must visit doctor A from 2 PM to 3 PM either on Tuesday or Wednesday.
2. Also, Adam prefers doctor C, but never gets to visit C. From 9 AM to 10 AM, Adam can either visit on Monday, Tuesday or Wednesday, but since preferred doctor C is on Wednesday and doctor A on Tuesday, whom he didn't visit from 9 AM to 10 AM, therefore, Adam must visit doctor B on Monday.
3. On Monday and Thursday, Adam already has two booked visits. Therefore, from 11 AM to 12 Noon, Adam must visit either doctor E or B on Tuesday or Wednesday respectively. From 1 PM to 2 PM, Adam must visit doctor D on Wednesday, from 4 PM to 5 PM, Adam must visit doctor B on Tuesday.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Step 2:

Similar conclusions can be drawn for Bush, Cole, Dev and Eshan.

| Time slot | Adam | Bush | Cole | Dev | Eshan |
|-----------|-----------------------------|---------------|-----------------------|---------------|---------------------------|
| 9-10 | Monday – B | Thursday – E | Monday – B | Wednesday – C | Thursday – E |
| 10-11 | Monday – A | Tuesday – D | Wednesday – B | Tuesday – D | Monday – A |
| 11-12 | Tuesday/ Wednesday – E/B | Tuesday – E | Tuesday – E | Tuesday – E | Tuesday – E |
| 12-1 | Thursday – A | Wednesday – D | Tuesday – B | Monday – C | Monday – C |
| 1-2 | Wednesday – D | Wednesday – D | Monday/Thursday – E/C | Thursday – C | Thursday – C |
| 2-3 | Wednesday/Tuesday – A | Monday – D | Wednesday – A | Thursday – D | Tuesday/ Wednesday – A |
| 3-4 | Thursday – A | Thursday – A | Thursday/Monday – A/C | Monday – C | Wednesday/Tuesday – E |
| 4-5 | Tuesday – B | Monday – D | Thursday – B | Wednesday – C | Wednesday – C |

Bush visited D exactly 5 times, E exactly 2 times and A exactly one time, therefore, he must have paid Rs. 3,100 in total as visiting fees.

Bookmark

FeedBack

Directions for questions 11 to 16: Answer the questions on the basis of the information given below.

In a hospital five doctors – A, B, C, D and E are on duty from Monday to Thursday on different time slots starting from 9 AM to 5 PM. Each slot is of 1 hour. Every person gets an appointment as per available time slots. Five persons – Adam, Bush, Cole, Dev, and Eshan – have their appointments fixed for four days. They all have a preference for a doctor but none of them except Eshan gets to meet the doctor of their choice. Visiting fees (in Rs.) of A, B, C, D and E is 100, 200, 300, 400 and 500 respectively. The below table shows the available doctor for each time slot for four days.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Additional information known to us:

- (i) These five persons visit the hospital twice in a day hoping to meet the doctor of their choice. Each person never visits on the time-slot they visited before. Adam prefers doctor C, Bush prefers doctor B, Cole prefers doctor D, Dev prefers doctor A and Eshan prefers doctor E.
- (ii) Adam visited A exactly 4 times but not from 9 AM to 10 AM.
- (iii) Bush visited D exactly 5 times but never on Thursday.
- (iv) Cole visited B exactly 4 times but not from 11 AM to 12 Noon.
- (v) Dev visited C exactly 5 times but not on Tuesday.
- (vi) Eshan visited E exactly 3 times but not from 1 PM to 2 PM. Also, Eshan never get to visit doctors B and D.

Q.16 [11831809]

It has been observed that all five persons paid minimum possible visiting fees, then arrange them in the order of ascending amount of visiting fees.

1 ☐ Adam, Dev, Cole, Eshan, Bush

2 ☐ Cole, Adam, Dev, Eshan, Bush

3 ☐ Adam, Cole, Eshan, Dev, Bush

4 ☐ Adam, Cole, Dev, Eshan, Bush

Solution:

Correct Answer : 3

 Answer key/Solution

Step 1:

As per condition (ii), Adam visited doctor A exactly 4 times, but not from 9 AM to 10 AM, therefore, from the table:

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

1. Green marked timings and days are the ones wherein Adam will visit doctor A. Orange marked timing and day depict that Adam must visit doctor A from 2 PM to 3 PM either on Tuesday or Wednesday.
2. Also, Adam prefers doctor C, but never gets to visit C. From 9 AM to 10 AM, Adam can either visit on Monday, Tuesday or Wednesday, but since preferred doctor C is on Wednesday and doctor A on Tuesday, whom he didn't visit from 9 AM to 10 AM, therefore, Adam must visit doctor B on Monday.
3. On Monday and Thursday, Adam already has two booked visits. Therefore, from 11 AM to 12 Noon, Adam must visit either doctor E or B on Tuesday or Wednesday respectively. From 1 PM to 2 PM, Adam must visit doctor D on Wednesday, from 4 PM to 5 PM, Adam must visit doctor B on Tuesday.

| Time Slot | Monday | Tuesday | Wednesday | Thursday |
|-----------|--------|---------|-----------|----------|
| 9 to 10 | B | A | C | E |
| 10 to 11 | A | D | B | D |
| 11 to 12 | B | E | B | B |
| 12 to 1 | C | B | D | A |
| 1 to 2 | E | C | D | C |
| 2 to 3 | D | A | A | D |
| 3 to 4 | C | E | E | A |
| 4 to 5 | D | B | C | B |

Step 2:

Similar conclusions can be drawn for Bush, Cole, Dev and Eshan.

| Time slot | Adam | Bush | Cole | Dev | Eshan |
|-----------|-----------------------------|---------------|-----------------------|---------------|---------------------------|
| 9-10 | Monday – B | Thursday – E | Monday – B | Wednesday – C | Thursday – E |
| 10-11 | Monday – A | Tuesday – D | Wednesday – B | Tuesday – D | Monday – A |
| 11-12 | Tuesday/ Wednesday – E/B | Tuesday – E | Tuesday – E | Tuesday – E | Tuesday – E |
| 12-1 | Thursday – A | Wednesday – D | Tuesday – B | Monday – C | Monday – C |
| 1-2 | Wednesday – D | Wednesday – D | Monday/Thursday – E/C | Thursday – C | Thursday – C |
| 2-3 | Wednesday/Tuesday – A | Monday – D | Wednesday – A | Thursday – D | Tuesday/ Wednesday – A |
| 3-4 | Thursday – A | Thursday – A | Thursday/Monday – A/C | Monday – C | Wednesday/Tuesday – E |
| 4-5 | Tuesday – B | Monday – D | Thursday – B | Wednesday – C | Wednesday – C |

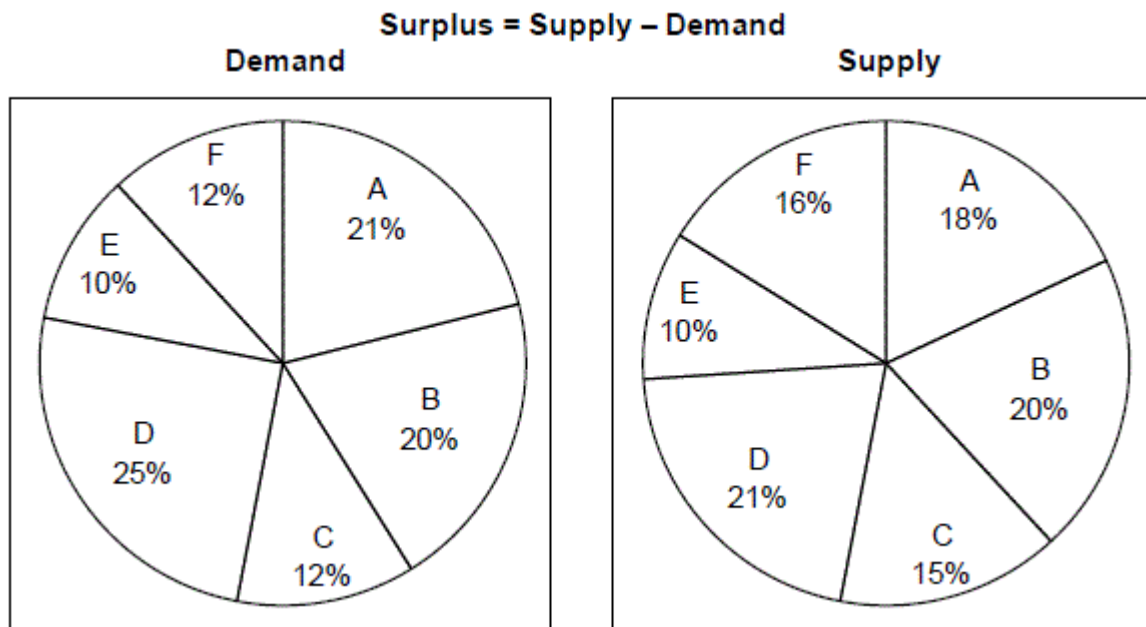
The order of ascending amount of visiting fees is: Adam, Cole, Eshan, Dev, Bush.

Bookmark

FeedBack

Directions for questions 17 to 22: Answer the questions on the basis of the information given below.

The World Health Organization arranged for the supply of food grains to six nations – A, B, C, D, E and F – during a period of severe drought. The two pie charts given below show the percentage distribution of monthly demand and supply of food grains in these six nations. The total monthly demand is 18 lakh tonnes whereas the total monthly supply is 16.67% more than the total monthly demand.



Q.17 [11831809]

What is the difference between the demand and supply of food grains in Nation A?



Solution:

Correct Answer : 0

Your Answer : 0

[Answer key/Solution](#)

Total demand is 18 lakh tonnes whereas total supply is 21 lakh tonnes.

| Nation | Demand % | Demand in tonnes | Supply % | Supply in tonnes | Surplus in tonnes |
|--------|----------|------------------|----------|------------------|-------------------|
| A | 21 | 378000 | 18 | 378000 | 0 |
| B | 20 | 360000 | 20 | 420000 | 60000 |
| C | 12 | 216000 | 15 | 315000 | 99000 |
| D | 25 | 450000 | 21 | 441000 | -9000 |
| E | 10 | 180000 | 10 | 210000 | 30000 |
| F | 12 | 216000 | 16 | 336000 | 120000 |

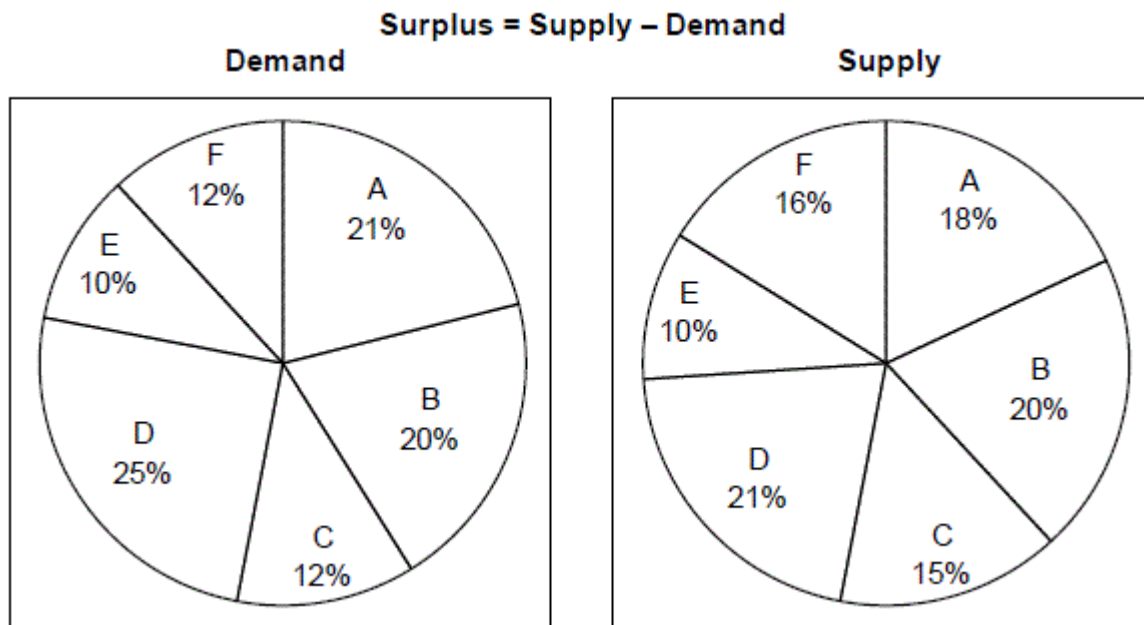
Required difference = $0.21 \times 1800000 - 0.18 \times 2100000 = 0$.

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[FeedBack](#)

Directions for questions 17 to 22: Answer the questions on the basis of the information given below.

The World Health Organization arranged for the supply of food grains to six nations – A, B, C, D, E and F – during a period of severe drought. The two pie charts given below show the percentage distribution of monthly demand and supply of food grains in these six nations. The total monthly demand is 18 lakh tonnes whereas the total monthly supply is 16.67% more than the total monthly demand.



Q.18 [11831809]

How many nations got less than their required quantity of food grains?



Solution:

Correct Answer : 1

Your Answer : 1

[Answer key/Solution](#)

Total demand is 18 lakh tonnes whereas total supply is 21 lakh tonnes.

| Nation | Demand % | Demand in tonnes | Supply % | Supply in tonnes | Surplus in tonnes |
|--------|----------|------------------|----------|------------------|-------------------|
| A | 21 | 378000 | 18 | 378000 | 0 |
| B | 20 | 360000 | 20 | 420000 | 60000 |
| C | 12 | 216000 | 15 | 315000 | 99000 |
| D | 25 | 450000 | 21 | 441000 | -9000 |
| E | 10 | 180000 | 10 | 210000 | 30000 |
| F | 12 | 216000 | 16 | 336000 | 120000 |

We can see that only Nation D received less food grains than its demand.

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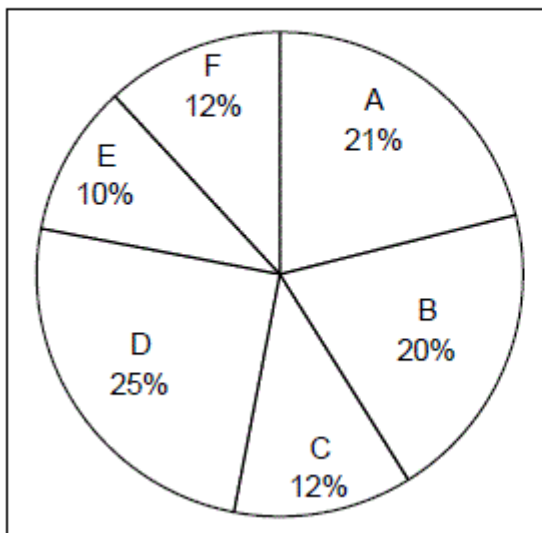
[FeedBack](#)

Directions for questions 17 to 22: Answer the questions on the basis of the information given below.

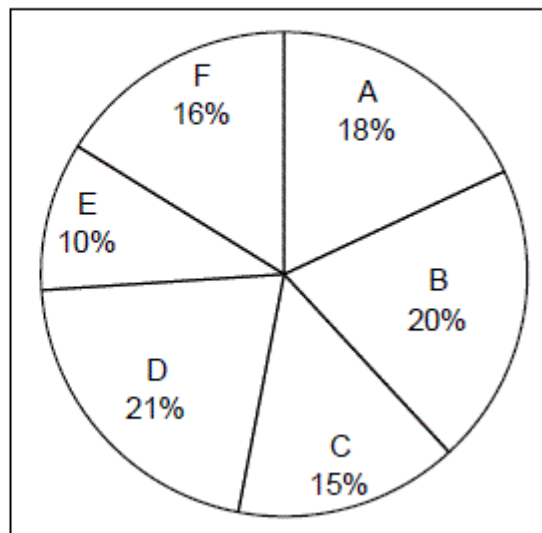
The World Health Organization arranged for the supply of food grains to six nations – A, B, C, D, E and F – during a period of severe drought. The two pie charts given below show the percentage distribution of monthly demand and supply of food grains in these six nations. The total monthly demand is 18 lakh tonnes whereas the total monthly supply is 16.67% more than the total monthly demand.

Surplus = Supply – Demand

Demand



Supply



Q.19 [11831809]

If the government of Nation F calculates the average demand of food grains per person to be 8 kg per month, then what is the total population of Nation F?

1 ☐ 3.1 crores

2 ☐ 2.7 crores

3 ☐ 2.4 crores

4 ☐ 1.8 crores



Solution:

Correct Answer : 2

Your Answer : 2

[🔍 Answer key/Solution](#)

Total demand is 18 lakh tonnes whereas total supply is 21 lakh tonnes.

| Nation | Demand % | Demand in tonnes | Supply % | Supply in tonnes | Surplus in tonnes |
|--------|----------|------------------|----------|------------------|-------------------|
| A | 21 | 378000 | 18 | 378000 | 0 |
| B | 20 | 360000 | 20 | 420000 | 60000 |
| C | 12 | 216000 | 15 | 315000 | 99000 |
| D | 25 | 450000 | 21 | 441000 | -9000 |
| E | 10 | 180000 | 10 | 210000 | 30000 |
| F | 12 | 216000 | 16 | 336000 | 120000 |

One tonne = 1000 kg

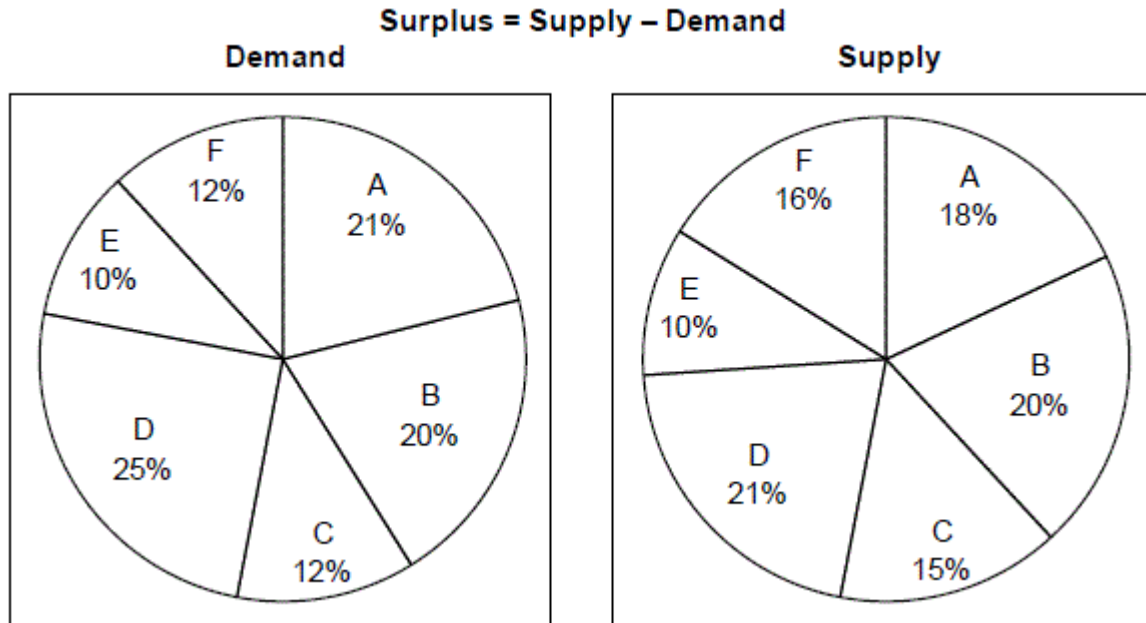
Total population of Nation F = $(\text{Total demand} \times 1000)/8 = 27000000$.

Bookmark

FeedBack

Directions for questions 17 to 22: Answer the questions on the basis of the information given below.

The World Health Organization arranged for the supply of food grains to six nations – A, B, C, D, E and F – during a period of severe drought. The two pie charts given below show the percentage distribution of monthly demand and supply of food grains in these six nations. The total monthly demand is 18 lakh tonnes whereas the total monthly supply is 16.67% more than the total monthly demand.



Q.20 [11831809]

If the existing supply was equally divided among all the six nations, then how many nations witnessed a surplus of food grains?

1 ☐ 2

2 ☐ 4

3 ☐ 3

4 ☐ 1



Solution:

Correct Answer : 3

Your Answer : 2

[Answer key/Solution](#)

Total demand is 18 lakh tonnes whereas total supply is 21 lakh tonnes.

| Nation | Demand % | Demand in tonnes | Supply % | Supply in tonnes | Surplus in tonnes |
|--------|----------|------------------|----------|------------------|-------------------|
| A | 21 | 378000 | 18 | 378000 | 0 |
| B | 20 | 360000 | 20 | 420000 | 60000 |
| C | 12 | 216000 | 15 | 315000 | 99000 |
| D | 25 | 450000 | 21 | 441000 | -9000 |
| E | 10 | 180000 | 10 | 210000 | 30000 |
| F | 12 | 216000 | 16 | 336000 | 120000 |

When the total supply of 2100000 tonnes is equally distributed, we get the following table:

| | Demand % | Demand in tonnes | Supply in tonnes | Surplus in tonnes |
|---|----------|------------------|------------------|-------------------|
| A | 21 | 378000 | 350000 | -28000 |
| B | 20 | 360000 | 350000 | -10000 |
| C | 12 | 216000 | 350000 | 134000 |
| D | 25 | 450000 | 350000 | -100000 |
| E | 10 | 180000 | 350000 | 170000 |
| F | 12 | 216000 | 350000 | 134000 |

We can see that if the total supply is equally distributed among all six nations, then 3 nations, C, E and F, will witness a surplus.

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