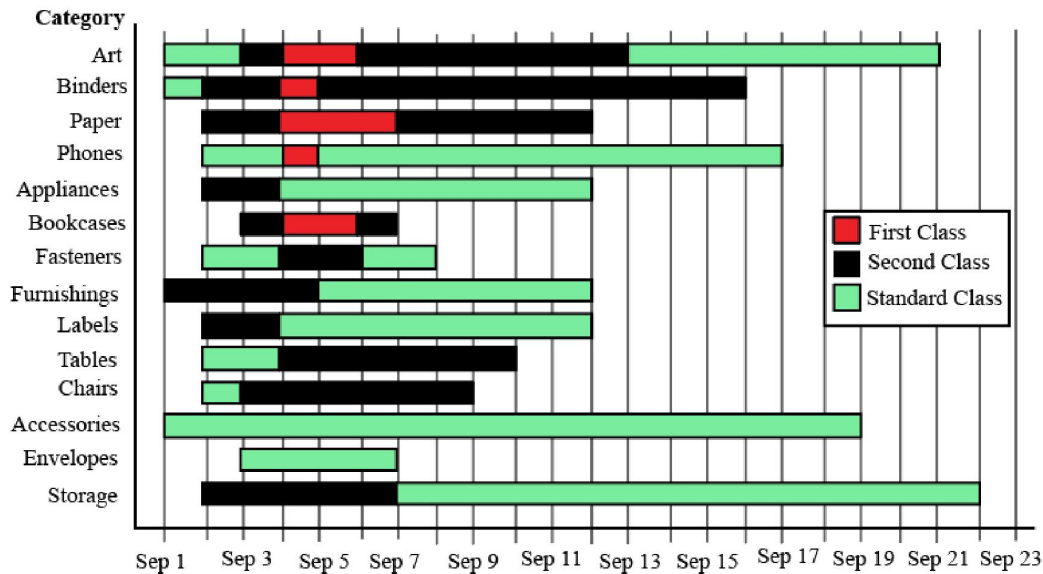


# CAT 2021 Question Paper Slot 2

LRDI

Instructions [25 - 28 ]



The different bars in the diagram above provide information about different orders in various categories (Art, Binders, ...) that were booked in the first two weeks of September of a store for one client. The colour and pattern of a bar denotes the ship mode (First Class / Second Class / Standard Class). The left end point of a bar indicates the booking day of the order, while the right end point indicates the dispatch day of the order. The difference between the dispatch day and the booking day (measured in terms of the number of days) is called the processing time of the order. For the same category, an order is considered for booking only after the previous order of the same category is dispatched. No two consecutive orders of the same category had identical ship mode during this period.

For example, there were only two orders in the furnishing category during this period. The first one was shipped in the Second Class. It was booked on Sep 1 and dispatched on Sep 5. The second order was shipped in the Standard class. It was booked on Sep 5 (although the order might have been placed before that) and dispatched on Sep 12. So the processing times were 4 and 7 days respectively for these orders.

25. How many days between Sep 1 and Sep 14 (both inclusive) had no booking from this client considering all the above categories?

26. What was the average processing time of all orders in the categories which had only one type of ship mode?

27. The sequence of categories -- Art, Binders, Paper and Phones -- in decreasing order of average processing time of their orders in this period is:

- A Art, Binders, Paper, Phones
- B Phones, Art, Binders, Paper
- C Phones, Binders, Art, Paper
- D Paper, Binders, Art, Phones

28. Approximately what percentage of orders had a processing time of one day during the period Sep 1 to Sep 22 (both dates inclusive)?

- A 22%
- B 16%
- C 20%
- D 25%

**Instructions [29 - 34 ]**

Ten objects o1, o2, ..., o10 were distributed among Amar, Barat, Charles, Disha, and Elise. Each item went to exactly one person. Each person got exactly two of the items, and this pair of objects is called her/his bundle.

The following table shows how each person values each object.

	<b>o1</b>	<b>o2</b>	<b>o3</b>	<b>o4</b>	<b>o5</b>	<b>o6</b>	<b>o7</b>	<b>o8</b>	<b>o9</b>	<b>o10</b>
<b>Amar</b>	4	9	9	3	7	3	8	7	9	5
<b>Barat</b>	5	9	7	5	5	3	6	8	10	8
<b>Charles</b>	8	8	8	3	6	4	5	8	9	6
<b>Disha</b>	8	8	8	5	5	3	6	4	9	8
<b>Elise</b>	6	8	9	5	6	5	6	3	7	10

The value of any bundle by a person is the sum of that person's values of the objects in that bundle. A person X envies another person Y if X values Y's bundle more than X's own bundle.

For example, hypothetically suppose Amar's bundle consists of o1 and o2, and Barat's bundle consists of o3 and o4. Then Amar values his own bundle at  $4 + 9 = 13$  and Barat's bundle at  $9 + 3 = 12$ . Hence Amar does not envy Barat. On the other hand, Barat values his own bundle at  $7 + 5 = 12$  and Amar's bundle at  $5 + 9 = 14$ . Hence Barat envies Amar.

The following facts are known about the actual distribution of the objects among the five people.

1. If someone's value for an object is 10, then she/he received that object.
2. Objects o1, o2, and o3 were given to three different people.
3. Objects o1 and o8 were given to different people.
4. Three people value their own bundles at 16. No one values her/his own bundle at a number higher than 16.
5. Disha values her own bundle at an odd number. All others value their own bundles at an even number.
6. Some people who value their own bundles less than 16 envy some other people who value their own bundle at 16. No one else envies others.

29. What BEST can be said about object o8?

- A o8 was given to Amar, Charles, or Disha
- B o8 was given to Disha
- C o8 was given to Charles
- D o8 was given to Charles or Disha

30. Who among the following envies someone else?

- A Barat
- B Charles
- C Amar
- D Elise

31. What is Amar's value for his own bundle?

32. Object o4 was given to

- A Elise
- B Barat
- C Charles
- D Disha

33. Object o5 was given to

- A Disha
- B Elise
- C Amar
- D Charles

34. What BEST can be said about the distribution of object o1?

- A o1 was given to Disha
- B o1 was given to Charles
- C o1 was given to Charles, Disha, or Elise
- D o1 was given to Charles or Disha

**Instructions [35 - 38 ]**

The game of Chango is a game where two people play against each other; one of them wins and the other loses, i.e., there are no drawn Chango games. 12 players participated in a Chango championship. They were divided into four groups: Group A consisted of Aruna, Azul, and Arif; Group B consisted of Brinda, Brij, and Biju; Group C consisted of Chitra, Chetan, and Chhavi; and Group D consisted of Dipen, Donna, and Deb.

Players within each group had a distinct rank going into the championship. The players have NOT been listed necessarily according to their ranks. In the group stage of the game, the second and third ranked players play against each other, and the winner of that game plays against the first ranked player of the group. The winner of this second game is considered as the winner of the group and enters a semi-final.

The winners from Groups A and B play against each other in one semi-final, while the winners from Groups C and D play against each other in the other semi-final. The winners of the two semi-finals play against each other in the final to decide the winner of the championship.

It is known that:

1. Chitra did not win the championship.
2. Aruna did not play against Arif. Brij did not play against Brinda.
3. Aruna, Biju, Chitra, and Dipen played three games each, Azul and Chetan played two games each, and the remaining players played one game each.

35. Who among the following was DEFINITELY NOT ranked first in his/her group?

- A Dipen
- B Aruna
- C Brij
- D Chitra

36. Which of the following pairs must have played against each other in the championship?

- A Deb, Donna
- B Azul, Biju
- C Donna, Chetan
- D Chitra, Dipen

37. Who won the championship?

- A Chitra
- B Aruna
- C Brij
- D Cannot be determined

38. Who among the following did NOT play against Chitra in the championship?

- A Aruna
- B Chetan
- C Dipen
- D Biju

**Instructions [39 - 44 ]**

Ravi works in an online food-delivery company. After each delivery, customers rate Ravi on each of four parameters - Behaviour, Packaging, Hygiene, and Timeliness, on a scale from 1 to 9. If the total of the four rating points is 25 or more, then Ravi gets a bonus of ₹20 for that delivery. Additionally, a customer may or may not give Ravi a tip. If the customer gives a tip, it is either ₹30 or ₹50.

One day, Ravi made four deliveries - one to each of Atal, Bihari, Chirag, and Deepak, and received a total of ₹120 in bonus and tips. He did not get both a bonus and a tip from the same customer.

The following additional facts are also known.

1. In Timeliness, Ravi received a total of 21 points, and three of the customers gave him the same rating points in this parameter. Atal gave higher rating points than Bihari and Chirag in this parameter.
2. Ravi received distinct rating points in Packaging from the four customers adding up to 29 points. Similarly, Ravi received distinct rating points in Hygiene from the four customers adding up to 26 points.
3. Chirag gave the same rating points for Packaging and Hygiene.
4. Among the four customers, Bihari gave the highest rating points in Packaging, and Chirag gave the highest rating points in Hygiene.
5. Everyone rated Ravi between 5 and 7 in Behaviour. Unique maximum and minimum ratings in this parameter were given by Atal and Deepak respectively.
6. If the customers are ranked based on ratings given by them in individual parameters, then Atal's rank based on Packaging is the same as that based on Hygiene. This is also true for Deepak.

39. What was the minimum rating that Ravi received from any customer in any parameter?

40. The COMPLETE list of customers who gave the maximum total rating points to Ravi is

- A Atal
- B Bihari
- C Bihari and Chirag
- D Atal and Bihari

41. What rating did Atal give on Timeliness?

42. What BEST can be concluded about the tip amount given by Deepak?

- A Either ₹0 or ₹30 or ₹50
- B Either ₹30 or ₹50
- C ₹50
- D ₹30

43. In which parameter did Atal give the maximum rating points to Ravi?

- A Hygiene
- B Behaviour
- C Timeliness
- D Packaging

44. What rating did Deepak give on Packaging?

- A 7
- B 8
- C 5
- D 6

## Answers

### LRDI

25.6	26.11	27.B	28.C	29.C	30.C	31.12	32.D
33.B	34.A	35.A	36.D	37.B	38.D	39.5	40.C
41.6	42.B	43.B	44.A				

# Explanations

## LRDI

### 25.6

Accumulating all the data :

We get the following table :

Categories	Standard Class	First Class	Second Class
Arts	1-3 , 13-21	4-6	3-4 , 6-13
Binders	1-2	4-5	2-4 ,5-16
Paper	x	4-7	2-4 ,7-12
Phones	2-4 ,5-17	4-5	x
Appliances	4-12	x	2-4
Bookcases	x	4-6	3-4 , 6-7
Fasteners	2-4 , 6-8	x	4-6
Furnishings	5-12	x	1-5
Labels	4-12	x	1-3
Tables	2-4	x	4-10
Chairs	2-3	x	3-9
Accessories	1-19	x	x
Envelopes	3-7	x	x
Storage	7-22	x	2-7

Note a-b : represents the duration where a is the day when order is booked and b is the day when it is dispatched .

Now No booking days from the table are : September 8,9,10,11,12 and 14.

So a total of 6 days .

### 26.11

Accumulating all the data :

We get the following table :

Categories	Standard Class	First Class	Second Class
Arts	1-3 , 13-21	4-6	3-4 , 6-13
Binders	1-2	4-5	2-4 ,5-16
Paper	x	4-7	2-4 ,7-12
Phones	2-4 ,5-17	4-5	x
Appliances	4-12	x	2-4
Bookcases	x	4-6	3-4 , 6-7
Fasteners	2-4 , 6-8	x	4-6
Furnishings	5-12	x	1-5
Labels	4-12	x	1-3
Tables	2-4	x	4-10
Chairs	2-3	x	3-9
Accessories	1-19	x	x
Envelopes	3-7	x	x
Storage	7-22	x	2-7

Note a-b : represents the duration where a is the day when order is booked and b is the day when it is dispatched .

Now Envelopes and Accessories has only 1 ship mode i.e Standard class .

So therefore processing days for envelopes = 7-3 =4

and processing days for accessories = 19-1 =18

Therefore average =  $\frac{(18+4)}{2} = 11$

**27. B**

Accumulating all the data :

We get the following table :

Categories	Standard Class	First Class	Second Class
Arts	1-3 , 13-21	4-6	3-4 , 6-13
Binders	1-2	4-5	2-4 ,5-16
Paper	x	4-7	2-4 ,7-12
Phones	2-4 ,5-17	4-5	x
Appliances	4-12	x	2-4
Bookcases	x	4-6	3-4 , 6-7
Fasteners	2-4 , 6-8	x	4-6
Furnishings	5-12	x	1-5
Labels	4-12	x	1-3
Tables	2-4	x	4-10
Chairs	2-3	x	3-9
Accessories	1-19	x	x
Envelopes	3-7	x	x
Storage	7-22	x	2-7

Note a-b : represents the duration where a is the day when order is booked and b is the day when it is dispatched .

Now taking average processing time per order for the above mentioned categories we get :

$$\text{Art} = \frac{2+8+2+1+7}{5} = 4$$

$$\text{Binders} = \frac{1+1+11+2}{4} = 3.75$$

$$\text{Papers} = \frac{3+2+5}{3} = 3.33$$

$$\text{Phones} = \frac{2+12+1}{3} = 5$$

So in decreasing order we get Phones , Art ,Binder , Paper.

**28. C**

Accumulating all the data :

We get the following table :

Categories	Standard Class	First Class	Second Class
Arts	1-3 , 13-21	4-6	3-4 , 6-13
Binders	1-2	4-5	2-4 ,5-16
Paper	x	4-7	2-4 ,7-12
Phones	2-4 ,5-17	4-5	x
Appliances	4-12	x	2-4
Bookcases	x	4-6	3-4 , 6-7
Fasteners	2-4 , 6-8	x	4-6
Furnishings	5-12	x	1-5
Labels	4-12	x	1-3
Tables	2-4	x	4-10
Chairs	2-3	x	3-9
Accessories	1-19	x	x
Envelopes	3-7	x	x
Storage	7-22	x	2-7

Note a-b : represents the duration where a is the day when order is booked and b is the day when it is dispatched .

Now from the table we observe that the total number of orders are 35 and 7 orders have a processing time of 1 unit

The 7 orders are : Arts Standard class, Binders First class and standard class, Phones First class, Bookcases second class ( 2 orders) and Chairs standard class.

So the percentage =  $\frac{7}{35} \times 100 = 20$

29. C

We have the following table :

	<b>o1</b>	<b>o2</b>	<b>o3</b>	<b>o4</b>	<b>o5</b>	<b>o6</b>	<b>o7</b>	<b>o8</b>	<b>o9</b>	<b>o10</b>
<b>Amar</b>	4	9	9	3	7	3	8	7	9	5
<b>Barat</b>	5	9	7	5	5	3	6	8	10	8
<b>Charles</b>	8	8	8	3	6	4	5	8	9	6
<b>Disha</b>	8	8	8	5	5	3	6	4	9	8
<b>Elise</b>	6	8	9	5	6	5	6	3	7	10

o10 is given to Elise and o9 is given to Bharat .

Now as Elise values his own bundle at an even number so the only two objects which can be given to Elise is o1 or o5 or o7.

Case 1 :

o1 is given to Elise

Now the total valuation of Elise = 12

Valuation of Disha is an odd number

So we can say Amar , Bharat and Charles values their bundles at 16 .

So for Bharat the valuation to be 16, o7 will be given to him

so we get

Bharat - o9 and o7 and Elise -o10 and o1

For charles to have valuation 16

the only way = 8+8

so we can say o8 is given to charles along with either o2 or o3 .(o1 and o8 cannot be together )

Now for Amart to have a valuation of 16

the only way possible = 9+7

Now so we can say

Amar will receive either o2 or o3 and o5 .

Now we are left with O4 and o6

So if Disha receives o4 and o6

The valuation of Disha will be 5+3 =8 which is not an odd number

so this case is discarded.

Case 2 Elise receives o5 or o7 .

Now Valuation of Elise = 16 .

And Elise receives o10 and o5/o7.

Bharat received o9 and we know the evaluation of Bharat is an even number and the minimum even number possible for valuation of Bharat is 16 and no one can have evaluation more than 16 so Bharat received o7 .

So Elise received o5 .

So we have

Bharat - o9 ,o7

Elise -o10,o5.

Now as we know o1 ,o2 and o3 are given to three different persons so they are Amar, Charles and Disha .

Now As per Amar

he values Bharat at 17 so he envy him

So Amar will value his bundle less than 16

So the only possibility for Amar to value his bundle less than 16 = 12 =9+3.

Now we can say Charu will have 16 as his own valuation so he will get 8+8 .

Now o8 will be given to Charu, and he cannot have o1 , also he cannot have o2 because if he has o2 he will value Bharat's bundle as 17 and will envy him which is not possible so Charu will have o3,o8

Now Amar will have o2 and Disha will have o1.

Now Amar will not have o4 because in that case Charles will envy Amar and is not possible so we can say Amar will have o6 and Disha will have o4.

So we have the following :

Amar - o2,o6

Bharat -o9,o7

Charu -o3,o8



Disha o1,o4

Elise -o10,o5

So o8 is given to Charu.

30. C

We have the following table :

	<b>o1</b>	<b>o2</b>	<b>o3</b>	<b>o4</b>	<b>o5</b>	<b>o6</b>	<b>o7</b>	<b>o8</b>	<b>o9</b>	<b>o10</b>
<b>Amar</b>	4	9	9	3	7	3	8	7	9	5
<b>Barat</b>	5	9	7	5	5	3	6	8	10	8
<b>Charles</b>	8	8	8	3	6	4	5	8	9	6
<b>Disha</b>	8	8	8	5	5	3	6	4	9	8
<b>Elise</b>	6	8	9	5	6	5	6	3	7	10

o10 is given to Elise and o9 is given to Bharat .

Now as Elise values his own bundle at an even number so the only two objects which can be given to Elise is o1 or o5 or o7.

Case 1 :

o1 is given to Elise

Now the total valuation of Elise = 12

Valuation of Disha is an odd number

So we can say Amar , Bharat and Charles values their bundles at 16 .

So for Bharat the valuation to be 16, o7 will be given to him

so we get

Bharat - o9 and o7 and Elise -o10 and o1

For charles to have valuation 16

the only way = 8+8

so we can say o8 is given to charles along with either o2 or o3 .(o1 and o8 cannot be together )

Now for Amart to have a valuation of 16

the only way possible = 9+7

Now so we can say

Amar will receive either o2 or o3 and o5 .

Now we are left with 04 and o6

So if Disha receives o4 and o6

The valuation of Disha will be 5+3 =8 which is not an odd number

so this case is discarded.

Case 2 Elise receives o5 or o7 .

Now Valuation of Elise = 16 .

And Elise receives o10 and o5/o7.

Bharat received o9 and we know the evaluation of Bharat is an even number and the minimum even number possible for valuation of Bharat is 16 and no one can have evaluation more than 16 so Bharat received o7 .

So Elise received o5 .

So we have

Bharat - o9 ,o7

Elise -o10,o5.

Now as we know o1 ,o2 and o3 are given to three different persons so they are Amar, Charles and Disha .

Now As per Amar

he values Bharat at 17 so he envy him

So Amar will value his bundle less than 16

So the only possibility for Amar to value his bundle less than 16 = 12 =9+3.

Now we can say Charu will have 16 as his own valuation so he will get 8+8 .

Now o8 will be given to Charu, and he cannot have o1 , also he cannot have o2 because if he has o2 he will value Bharat's bundle as 17 and will envy him which is not possible so Charu will have o3,o8

Now Amar will have o2 and Disha will have o1.

Now Amar will not have o4 because in that case Charles will envy Amar and is not possible so we can say Amar will have o6 and Disha will have o4.

So we have the following :

Amar - 02,06

Bharat -09,07

Charu -03,08

Disha 01,04

Elise -010,05

So Amar envies someone else

### 31.12

We have the following table :

	o1	o2	o3	o4	o5	o6	o7	o8	o9	o10
Amar	4	9	9	3	7	3	8	7	9	5
Barat	5	9	7	5	5	3	6	8	10	8
Charles	8	8	8	3	6	4	5	8	9	6
Disha	8	8	8	5	5	3	6	4	9	8
Elise	6	8	9	5	6	5	6	3	7	10

o10 is given to Elise and o9 is given to Bharat .

Now as Elise values his own bundle at an even number so the only two objects which can be given to Elise is o1 or o5 or o7.

Case 1 :

o1 is given to Elise

Now the total valuation of Elise = 12

Valuation of Disha is an odd number

So we can say Amar , Bharat and Charles values their bundles at 16 .

So for Bharat the valuation to be 16, o7 will be given to him

so we get

Bharat - o9 and o7 and Elise -o10 and o1

For charles to have valuation 16

the only way = 8+8

so we can say o8 is given to charles along with either o2 or o3 .(o1 and o8 cannot be together )

Now for Amart to have a valuation of 16

the only way possible = 9+7

Now so we can say

Amar will receive either o2 or o3 and o5 .

Now we are left with 04 and o6

So if Disha receives o4 and o6

The valuation of Disha will be 5+3 =8 which is not an odd number

so this case is discarded.

Case 2 Elise receives o5 or o7 .

Now Valuation of Elise = 16 .

And Elise receives o10 and o5/o7.

Bharat received o9 and we know the evaluation of Bharat is an even number and the minimum even number possible for valuation of Bharat is 16 and no one can have evaluation more than 16 so Bharat received o7 .

So Elise received o5 .

So we have

Bharat - o9 ,o7

Elise -o10,o5.

Now as we know o1 ,o2 and o3 are given to three different persons so they are Amar, Charles and Disha .

Now As per Amar

he values Bharat at 17 so he envy him

So Amar will value his bundle less than 16

So the only possibility for Amar to value his bundle less than 16 = 12 =9+3.

Now we can say Charu will have 16 as his own valuation so he will get 8+8 .

Now o8 will be given to Charu, and he cannot have o1 , also he cannot have o2 because if he has o2 he will value Bharat's bundle as 17 and will envy him which is not possible so Charu will have o3,o8

Now Amar will have o2 and Disha will have o1.

Now Amar will not have o4 because in that case Charles will envy Amar and is not possible so we can say Amar will have o6 and Disha will have o4.

So we have the following :

Amar - o2,o6

Bharat -o9,o7

Charu -o3,o8

Disha o1,o4

Elise -o10,o5

Amar's own valuation =  $9+3 = 12$

32. D

We have the following table :

	o1	o2	o3	o4	o5	o6	o7	o8	o9	o10
Amar	4	9	9	3	7	3	8	7	9	5
Barat	5	9	7	5	5	3	6	8	10	8
Charles	8	8	8	3	6	4	5	8	9	6
Disha	8	8	8	5	5	3	6	4	9	8
Elise	6	8	9	5	6	5	6	3	7	10

o10 is given to Elise and o9 is given to Bharat .

Now as Elise values his own bundle at an even number so the only two objects which can be given to Elise is o1 or o5 or o7.

Case 1 :

o1 is given to Elise

Now the total valuation of Elise = 12

Valuation of Disha is an odd number

So we can say Amar , Bharat and Charles values their bundles at 16 .

So for Bharat the valuation to be 16, o7 will be given to him

so we get

Bharat - o9 and o7 and Elise -o10 and o1

For charles to have valuation 16

the only way =  $8+8$

so we can say o8 is given to charles along with either o2 or o3 .(o1 and o8 cannot be together )

Now for Amart to have a valuation of 16

the only way possible =  $9+7$

Now so we can say

Amar will receive either o2 or o3 and o5 .

Now we are left with O4 and o6

So if Disha receives o4 and o6

The valuation of Disha will be  $5+3 = 8$  which is not an odd number

so this case is discarded.

Case 2 Elise receives o5 or o7 .

Now Valuation of Elise = 16 .

And Elise receives o10 and o5/o7.

Bharat received o9 and we know the evaluation of Bharat is an even number and the minimum even number possible for valuation of Bharat is 16 and no one can have evaluation more than 16 so Bharat received o7 .

So Elise received o5 .

So we have

Bharat - o9 ,o7

Elise -o10,o5.

Now as we know o1 ,o2 and o3 are given to three different persons so they are Amar, Charles and Disha .

Now As per Amar

he values Bharat at 17 so he envy him

So Amar will value his bundle less than 16

So the only possibility for Amar to value his bundle less than 16 =  $12 = 9+3$ .

Now we can say Charu will have 16 as his own valuation so he will get  $8+8$  .

Now o8 will be given to Charu, and he cannot have o1 , also he cannot have o2 because if he has o2 he will

value Bharat's bundle as 17 and will envy him which is not possible so Charu will have o3,o8

Now Amar will have o2 and Disha will have o1.

Now Amar will not have o4 because in that case Charles will envy Amar and is not possible so we can say Amar will have o6 and Disha will have o4.

So we have the following :

Amar - o2,o6

Bharat -o9,o7

Charu -o3,o8

Disha o1,o4

Elise -o10,o5

o4 is given to Disha

33. B

We have the following table :

	o1	o2	o3	o4	o5	o6	o7	o8	o9	o10
Amar	4	9	9	3	7	3	8	7	9	5
Barat	5	9	7	5	5	3	6	8	10	8
Charles	8	8	8	3	6	4	5	8	9	6
Disha	8	8	8	5	5	3	6	4	9	8
Elise	6	8	9	5	6	5	6	3	7	10

o10 is given to Elise and o9 is given to Bharat .

Now as Elise values his own bundle at an even number so the only two objects which can be given to Elise is o1 or o5 or o7.

Case 1 :

o1 is given to Elise

Now the total valuation of Elise = 12

Valuation of Disha is an odd number

So we can say Amar , Bharat and Charles values their bundles at 16 .

So for Bharat the valuation to be 16, o7 will be given to him

so we get

Bharat - o9 and o7 and Elise -o10 and o1

For charles to have valuation 16

the only way = 8+8

so we can say o8 is given to charles along with either o2 or o3 .(o1 and o8 cannot be together )

Now for Amart to have a valuation of 16

the only way possible = 9+7

Now so we can say

Amar will receive either o2 or o3 and o5 .

Now we are left with O4 and o6

So if Disha receives o4 and o6

The valuation of Disha will be 5+3 =8 which is not an odd number

so this case is discarded.

Case 2 Elise receives o5 or o7 .

Now Valuation of Elise = 16 .

And Elise receives o10 and o5/o7.

Bharat received o9 and we know the evaluation of Bharat is an even number and the minimum even number possible for valuation of Bharat is 16 and no one can have evaluation more than 16 so Bharat received o7 .

So Elise received o5 .

So we have

Bharat - o9 ,o7

Elise -o10,o5.

Now as we know o1 ,o2 and o3 are given to three different persons so they are Amar, Charles and Disha .

Now As per Amar

he values Bharat at 17 so he envy him

So Amar will value his bundle less than 16

So the only possibility for Amar to value his bundle less than 16 = 12 =9+3.

Now we can say Charu will have 16 as his own valuation so he will get 8+8 .

Now o8 will be given to Charu, and he cannot have o1 , also he cannot have o2 because if he has o2 he will value Bharat's bundle as 17 and will envy him which is not possible so Charu will have o3,o8

Now Amar will have o2 and Disha will have o1.

Now Amar will not have o4 because in that case Charles will envy Amar and is not possible so we can say Amar will have o6 and Disha will have o4.

So we have the following :

Amar - o2,o6

Bharat -o9,o7

Charu -o3,o8

Disha o1,o4

Elise -o10,o5

o5 is given to Elise

34. A

We have the following table :

	<b>o1</b>	<b>o2</b>	<b>o3</b>	<b>o4</b>	<b>o5</b>	<b>o6</b>	<b>o7</b>	<b>o8</b>	<b>o9</b>	<b>o10</b>
<b>Amar</b>	4	9	9	3	7	3	8	7	9	5
<b>Barat</b>	5	9	7	5	5	3	6	8	10	8
<b>Charles</b>	8	8	8	3	6	4	5	8	9	6
<b>Disha</b>	8	8	8	5	5	3	6	4	9	8
<b>Elise</b>	6	8	9	5	6	5	6	3	7	10

o10 is given to Elise and o9 is given to Bharat .

Now as Elise values his own bundle at an even number so the only two objects which can be given to Elise is o1 or o5 or o7.

Case 1 :

o1 is given to Elise

Now the total valuation of Elise = 12

Valuation of Disha is an odd number

So we can say Amar , Bharat and Charles values their bundles at 16 .

So for Bharat the valuation to be 16, o7 will be given to him

so we get

Bharat - o9 and o7 and Elise -o10 and o1

For charles to have valuation 16

the only way = 8+8

so we can say o8 is given to charles along with either o2 or o3 .(o1 and o8 cannot be together )

Now for Amart to have a valuation of 16

the only way possible = 9+7

Now so we can say

Amar will receive either o2 or o3 and o5 .

Now we are left with 04 and o6

So if Disha receives o4 and o6

The valuation of Disha will be 5+3 =8 which is not an odd number

so this case is discarded.

Case 2 Elise receives 05 or 07 .

Now Valuation of Elise = 16 .

And Elise receives 010 and 05/07.

Bharat received 09 and we know the evaluation of Bharat is an even number and the minimum even number possible for valuation of Bharat is 16 and no one can have evaluation more than 16 so Bharat received 07 .

So Elise received 05 .

So we have

Bharat - 09 ,07

Elise -010,05.

Now as we know 01 ,02 and 03 are given to three different persons so they are Amar, Charles and Disha .

Now As per Amar

he values Bharat at 17 so he envy him

So Amar will value his bundle less than 16

So the only possibility for Amar to value his bundle less than 16 = 12 =9+3.

Now we can say Charu will have 16 as his own valuation so he will get 8+8 .

Now 08 will be given to Charu, and he cannot have 01 , also he cannot have 02 because if he has 02 he will value Bharat's bundle as 17 and will envy him which is not possible so Charu will have 03,08

Now Amar will have 02 and Disha will have 01.

Now Amar will not have 04 because in that case Charles will envy Amar and is not possible so we can say Amar will have 06 and Disha will have 04.

So we have the following :

Amar - 02,06

Bharat -09,07

Charu -03,08

Disha 01,04

Elise -010,05

So 01 is given to Disha

**Explanation [35 - 38]:**

Group A :

Since Aruna played 3 games if she belongs to rank 2 or rank 3 in her group she must have reached the semifinals and lost in the semifinals. But for this case, she must play against rank 1 and rank 3 in her group. But she did not play against Arif from her group.

Hence Aruna was ranked 1 in her group, Among Azul and Arif one of them was ranked 2 and the other was ranked 3. Azul defeated Arif in the first round and in the second round lost to Aruna. Aruna played her first round with Azul and won the round and played against the winner from group B and defeated them and moved to the finals.

Group B :

Brij did not play against Brinda. Biju played three games, Brij and Brinda played one game each.

Since Brij and Brinda played only one game each one of them was ranked 1 and the other was ranked 2 and 3. Brij did not play against Brinda. We are aware that Aruna reached finals and hence the person from Group B did not reach the finals. Biju played three games and hence must have played with Brij/Brinda in the first round and won the round. Plays with Brij/ Brinda and wins the second round. Plays with Aruna and loses the third round.

**35. A**

Group - A	Group - B
Aruna	vs Biju
Azul vs Aruna	Biju vs Brinda/ Brij
Azul vs Arif	Biju vs Brinda/ Brij

Group - C :

Chitra played 2 matches and Chetan played 2 matches. For Chitra to play 2 matches if she is rank 2 or rank 3 in her group. She must at least reach the semifinals. But in this case, Chetan will be defeated in his first round. So Chitra must be ranked 1 in her group and Chetan must be ranked 2 or rank 3 in his group. He defeats Chhavi in his first round and loses to Chitra in his second round. Chitra plays Chetan in her first round, wins over the winner of group D in her second round, and loses in the final against Aruna as per condition 1.

Group -D :

The person from Group D did not reach the finals because Chitra reached the finals. In order for Dipen to play 3 matches before his finals. Dipen must be ranked 2 or rank 3 in his group and plays Deb and Donna in the first two rounds in any order and wins over both of them. Dipen loses to Chitra in his third round.

Group - C	Group - D
Chitra	vs Dipen
Chetan vs Chitra	Dipen vs Deb/Donna
Chetan vs Chavvi	Dipen vs Deb/Donna

Aruna plays Chitra in the finals and wins the final round.

Dipen was ranked 2 or 3 in his group

**36. D**

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Group - C :

Chitra played 2 matches and Chetan played 2 matches. For Chitra to play 2 matches if she is rank 2 or rank 3 in her group. She must at least reach the semifinals. But in this case, Chetan will be defeated in his first round. So Chitra must be ranked 1 in her group and Chetan must be ranked 2 or rank 3 in his group. He defeats Chhavi in his first round and loses to Chitra in his second round. Chitra plays Chetan in her first round, wins over the winner of group D in her second round, and loses in the final against Aruna as per condition 1.

Group -D :

The person from Group D did not reach the finals because Chitra reached the finals. In order for Dipen to play 3 matches before his finals. Dipen must be ranked 2 or rank 3 in his group and plays Deb and Donna in the first two rounds in any order and wins over both of them. Dipen loses to Chitra in his third round.

Group - C	Group - D
Chitra	vs Dipen
Chetan vs Chitra	Dipen vs Deb/Donna
Chetan vs Chavvi	Dipen vs Deb/Donna

Aruna plays Chitra in the finals and wins the final round.

Chitra and Dipen played in the semifinals

**37. B**

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Group - C :

Chitra played 2 matches and Chetan played 2 matches. For Chitra to play 2 matches if she is rank 2 or rank 3 in her group. She must at least reach the semifinals. But in this case, Chetan will be defeated in his first round. So Chitra must be ranked 1 in her group and Chetan must be ranked 2 or rank 3 in his group. He defeats Chhavi in his first round and loses to Chitra in his second round. Chitra plays Chetan in her first round, wins over the winner of group D in her second round, and loses in the final against Aruna as per condition 1.

Group -D :

The person from Group D did not reach the finals because Chitra reached the finals. In order for Dipen to play 3 matches before his finals. Dipen must be ranked 2 or rank 3 in his group and plays Deb and Donna in the first two rounds in any order and wins over both of them. Dipen loses to Chitra in his third round.

Group - C	Group - D
Chitra	vs Dipen
Chetan vs Chitra	Dipen vs Deb/Donna
Chetan vs Chavvi	Dipen vs Deb/Donna

Aruna plays Chitra in the finals and wins the final round.

Aruna is the winner.

**38. D**

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Group - C :

Chitra played 2 matches and Chetan played 2 matches. For Chitra to play 2 matches if she is rank 2 or rank 3 in her group. She must at least reach the semifinals. But in this case, Chetan will be defeated in his first round. So Chitra must be ranked 1 in her group and Chetan must be ranked 2 or rank 3 in his group. He defeats Chhavi in his first round and loses to Chitra in his second round. Chitra plays Chetan in her first round, wins over the winner of group D in her second round, and loses in the final against Aruna as per condition 1.

Group -D :

The person from Group D did not reach the finals because Chitra reached the finals. In order for Dipen to play 3 matches before his finals. Dipen must be ranked 2 or rank 3 in his group and plays Deb and Donna in the first two rounds in any order and wins over both of them. Dipen loses to Chitra in his third round.

Group - C	Group - D
Chitra	vs Dipen
Chetan vs Chitra	Dipen vs Deb/Donna
Chetan vs Chavvi	Dipen vs Deb/Donna

Aruna plays Chitra in the finals and wins the final round.

Brij was the player from group B who played Chitra. Aruna played in finals, Chetan in round 2, and Dipen in semi finals

**Explanation [39 - 44]:**

Using condition 1 :

Ravi had a total of 21 points in timeliness. 3 of the four customers among Atal, Bihari, Chirag, and Deepak gave him the same ratings. Atal gave the highest rating in timeliness in comparison with Bihari and Chirag. Hence he must have given the distinct rating.

Using condition 2 :

The possibilities are A - 9, B - 4, C - 4, D - 4.

A - 6, B - 5, C - 5, D - 5.

Ravi received a total of 29 points in the Packaging and for this, the possibility of the four scores are (5, 7, 8, 9) awarded by the four customers.

In Hygiene the sum of the ratings awarded was 26. This could possibly be awarded by considering the following cases :



A-(4,6,7,9) , B-( 5,6,7,8), C-(4,5,8,9).

Using condition 4: Bihari gave the highest rating in packaging and thus Bihari must have given a 9 rating in the packaging.

Chirag gave the highest rating in Hygiene. In condition 3 it was mentioned that Chirag gave the same points for packaging and hygiene. Since 9 was rated by Bihari packaging it cannot be awarded by Chirag in packaging and hygiene. Since Chirag was awarded the highest in Hygiene. He must award 8 points in Hygiene and Packaging.

**39.5**

Hence of the three possibilities among A, B, and C for Hygiene only B is the possible case with 8 as the maximum score.

In condition 5 it was mentioned that everyone awarded Ravi between 5 and 7 in Behaviour. Unique maximum and minimum ratings in this parameter were given by Atal and Deepak respectively.

Hence Atal must have awarded 7, Deepak 6, Bihari, and Chirag 6 each in Behaviour.

The two possible cases are :

Case 1 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			9
Bihari	6	9		4
Chirag	6	8	8	4
Deepak	5			4

Case 2 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			6
Bihari	6	9		5
Chirag	6	8	8	5
Deepak	5			5

The ratings awarded by Atal and Deepak in Packaging are among 5 and 7.

The ratings awarded by Atal, Bihari, Deepak are among 5,6, and 7.

Atal individual ranking in Packaging and Hygiene are the same. The same is true for Deepak.

Since Atal and Deepak can give the ranking among 3 and 4 in Packaging as Bihari is first and Chirag is second in this parameter.

They can rank 3 or 4 in the Hygiene parameter also. Hence Bihari must rate 7 points in Hygiene.

In both the possibilities Bihari and Chirag award a total of 26 points. Hence he wins 40 because the total ratings are greater than 25 received from Bihari and Chirag.

Since he gets a total of 120 in bonuses and tips. He must have 80 from Atal and Deepak.

This is possible if he gets a tip of 30 and 50 from them respectively.

In case 1 irrespective of Atal standing at rank 3 or rank 4 in Hygiene and Packaging Atal total rating is greater than 25 which implies Ravi gets a tip from Atal but this is not a possible case because Ravi needs a total of Rs 80 from Atal and Deepak. From Atal if he gets Rs 20 as a bonus he cannot get a total of Rs 120 and hence this case fails.

Hence case 1 fails.

In case 2 there are two possibilities :

Atal ranking 3 in both the parameters and Deepak 4<sup>th</sup>. Atal ranking 4<sup>th</sup> in both the parameters and Deepak 3<sup>rd</sup>

In the case where Atal ranks 3<sup>rd</sup> in Packaging and Hygiene the total score is 26 and is not a feasible case.

Case - 2A

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	7	6	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	5	5	5

Case - 2B :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	5	5	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	7	6	5

Case - 2A fails because Atal's total rating is greater than 25 which should not be the case.

The minimum rating awarded is 5.

40. C

Three possibilities among A, B, and C for Hygiene only B is the possible case with 8 as the maximum score.

In condition 5 it was mentioned that everyone awarded Ravi between 5 and 7 in Behaviour. Unique maximum and minimum ratings in this parameter were given by Atal and Deepak respectively.

Hence Atal must have awarded 7, Deepak 6, Bihari, and Chirag 6 each in Behaviour.

The two possible cases are :

Case 1 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			9
Bihari	6	9		4
Chirag	6	8	8	4
Deepak	5			4

Case 2 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			6
Bihari	6	9		5
Chirag	6	8	8	5
Deepak	5			5

The ratings awarded by Atal and Deepak in Packaging are among 5 and 7.

The ratings awarded by Atal, Bihari, Deepak are among 5,6, and 7.

Atal individual ranking in Packaging and Hygiene are the same. The same is true for Deepak.

Since Atal and Deepak can give the ranking among 3 and 4 in Packaging as Bihari is first and Chirag is second in this parameter.

They can rank 3 or 4 in the Hygiene parameter also. Hence Bihari must rate 7 points in Hygiene.

In both the possibilities Bihari and Chirag award a total of 26 points. Hence he wins 40 because the total ratings are greater than 25 received from Bihari and Chirag.

Since he gets a total of 120 in bonuses and tips. He must have 80 from Atal and Deepak.

This is possible if he gets a tip of 30 and 50 from them respectively.

In case 1 irrespective of Atal standing at rank 3 or rank 4 in Hygiene and Packaging Atal total rating is greater than 25 which implies Ravi gets a tip from Atal but this is not a possible case because Ravi needs a total of Rs 80 from Atal and Deepak. From Atal if he gets Rs 20 as a bonus he cannot get a total of Rs 120 and hence this case fails.

Hence case 1 fails.

In case 2 there are two possibilities :

Atal ranking 3 in both the parameters and Deepak 4<sup>th</sup>. Atal ranking 4<sup>th</sup> in both the parameters and Deepak 3<sup>rd</sup>

In the case where Atal ranks 3<sup>rd</sup> in Packaging and Hygiene the total score is 26 and is not a feasible case.

Case - 2A:

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	7	6	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	5	5	5

Case - 2B :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	5	5	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	7	6	5

Case - 2A : fails because Atal's total rating is greater than 25 which should not be the case.

Bihari and Chirag has given the highest ratings

41.6

three possibilities among A, B, and C for Hygiene only B is the possible case with 8 as the maximum score.

In condition 5 it was mentioned that everyone awarded Ravi between 5 and 7 in Behaviour. Unique maximum and minimum ratings in this parameter were given by Atal and Deepak respectively.

Hence Atal must have awarded 7, Deepak 6, Bihari, and Chirag 6 each in Behaviour.

The two possible cases are :

Case 1 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			9
Bihari	6	9		4
Chirag	6	8	8	4
Deepak	5			4

Case 2 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			6
Bihari	6	9		5
Chirag	6	8	8	5
Deepak	5			5

The ratings awarded by Atal and Deepak in Packaging are among 5 and 7.

The ratings awarded by Atal, Bihari, Deepak are among 5,6, and 7.

Atal individual ranking in Packaging and Hygiene are the same. The same is true for Deepak.

Since Atal and Deepak can give the ranking among 3 and 4 in Packaging as Bihari is first and Chirag is second in this parameter.

They can rank 3 or 4 in the Hygiene parameter also. Hence Bihari must rate 7 points in Hygiene.

In both the possibilities Bihari and Chirag award a total of 26 points. Hence he wins 40 because the total ratings are greater than 25 received from Bihari and Chirag.

Since he gets a total of 120 in bonuses and tips. He must have 80 from Atal and Deepak.

This is possible if he gets a tip of 30 and 50 from them respectively.

In case 1 irrespective of Atal standing at rank 3 or rank 4 in Hygiene and Packaging Atal total rating is greater than 25 which implies Ravi gets a tip from Atal but this is not a possible case because Ravi needs a total of Rs 80 from Atal and Deepak. From Atal if he gets Rs 20 as a bonus he cannot get a total of Rs 120 and hence this case fails.

Hence case 1 fails.

In case 2 there are two possibilities :

Atal ranking 3 in both the parameters and Deepak 4<sup>th</sup>. Atal ranking 4<sup>th</sup> in both the parameters and Deepak 3<sup>rd</sup>

In the case where Atal ranks 3<sup>rd</sup> in Packaging and Hygiene the total score is 26 and is not a feasible case.

Case - 2A:

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	7	6	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	5	5	5

Case - 2B :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	5	5	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	7	6	5

Case - 2A: fails because Atal's total rating is greater than 25 which should not be the case.

Atal has given a rating of 6 in timeliness

42. B

three possibilities among A, B, and C for Hygiene only B is the possible case with 8 as the maximum score.

In condition 5 it was mentioned that everyone awarded Ravi between 5 and 7 in Behaviour. Unique maximum and minimum ratings in this parameter were given by Atal and Deepak respectively.

Hence Atal must have awarded 7, Deepak 6, Bihari, and Chirag 6 each in Behaviour.

The two possible cases are :

Case 1 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			9
Bihari	6	9		4
Chirag	6	8	8	4
Deepak	5			4

Case 2 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			6
Bihari	6	9		5
Chirag	6	8	8	5
Deepak	5			5

The ratings awarded by Atal and Deepak in Packaging are among 5 and 7.

The ratings awarded by Atal, Bihari, Deepak are among 5,6, and 7.

Atal individual ranking in Packaging and Hygiene are the same. The same is true for Deepak.

Since Atal and Deepak can give the ranking among 3 and 4 in Packaging as Bihari is first and Chirag is second in this parameter.

They can rank 3 or 4 in the Hygiene parameter also. Hence Bihari must rate 7 points in Hygiene.

In both the possibilities Bihari and Chirag award a total of 26 points. Hence he wins 40 because the total ratings are greater than 25 received from Bihari and Chirag.

Since he gets a total of 120 in bonuses and tips. He must have 80 from Atal and Deepak.

This is possible if he gets a tip of 30 and 50 from them respectively.

In case 1 irrespective of Atal standing at rank 3 or rank 4 in Hygiene and Packaging Atal total rating is greater than 25 which implies Ravi gets a tip from Atal but this is not a possible case because Ravi needs a total of Rs 80 from Atal and Deepak. From Atal if he gets Rs 20 as a bonus he cannot get a total of Rs 120 and hence this case fails.

Hence case 1 fails.

In case 2 there are two possibilities :

Atal ranking 3 in both the parameters and Deepak 4<sup>th</sup>. Atal ranking 4<sup>th</sup> in both the parameters and Deepak 3<sup>rd</sup>

In the case where Atal ranks 3<sup>rd</sup> in Packaging and Hygiene the total score is 26 and is not a feasible case.

Case - 2A:

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	7	6	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	5	5	5

Case - 2B :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	5	5	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	7	6	5

Case - 2A: fails because Atal's total rating is greater than 25 which should not be the case.

Among Atal and Deepak, one of them gives a tip of 30 and the other gives a tip of 50. Hence 30 or 50 any case is possible

#### 43. B

three possibilities among A, B, and C for Hygiene only B is the possible case with 8 as the maximum score.

In condition 5 it was mentioned that everyone awarded Ravi between 5 and 7 in Behaviour. Unique maximum and minimum ratings in this parameter were given by Atal and Deepak respectively.

Hence Atal must have awarded 7, Deepak 6, Bihari, and Chirag 6 each in Behaviour.

The two possible cases are :

Case 1 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			9
Bihari	6	9		4
Chirag	6	8	8	4
Deepak	5			4

Case 2 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			6
Bihari	6	9		5
Chirag	6	8	8	5
Deepak	5			5

The ratings awarded by Atal and Deepak in Packaging are among 5 and 7.

The ratings awarded by Atal, Bihari, Deepak are among 5,6, and 7.

Atal individual ranking in Packaging and Hygiene are the same. The same is true for Deepak.

Since Atal and Deepak can give the ranking among 3 and 4 in Packaging as Bihari is first and Chirag is second in this parameter.

They can rank 3 or 4 in the Hygiene parameter also. Hence Bihari must rate 7 points in Hygiene.

In both the possibilities Bihari and Chirag award a total of 26 points. Hence he wins 40 because the total ratings are greater than 25 received from Bihari and Chirag.

Since he gets a total of 120 in bonuses and tips. He must have 80 from Atal and Deepak.

This is possible if he gets a tip of 30 and 50 from them respectively.

In case 1 irrespective of Atal standing at rank 3 or rank 4 in Hygiene and Packaging Atal total rating is greater than 25 which implies Ravi gets a tip from Atal but this is not a possible case because Ravi needs a total of Rs 80 from Atal and Deepak. From Atal if he gets Rs 20 as a bonus he cannot get a total of Rs 120 and hence this case fails.

Hence case 1 fails.

In case 2 there are two possibilities :

Atal ranking 3 in both the parameters and Deepak 4<sup>th</sup>. Atal ranking 4<sup>th</sup> in both the parameters and Deepak 3<sup>rd</sup>

In the case where Atal ranks 3<sup>rd</sup> in Packaging and Hygiene the total score is 26 and is not a feasible case.

Case - 2A:

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	7	6	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	5	5	5

Case - 2B :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	5	5	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	7	6	5

Case - 2A: fails because Atal's total rating is greater than 25 which should not be the case.

Atal has given the maximum rating in Behaviour.

**44. A**

Three possibilities among A, B, and C for Hygiene only B is the possible case with 8 as the maximum score.

In condition 5 it was mentioned that everyone awarded Ravi between 5 and 7 in Behaviour. Unique maximum and minimum ratings in this parameter were given by Atal and Deepak respectively.

Hence Atal must have awarded 7, Deepak 6, Bihari, and Chirag 6 each in Behaviour.

The two possible cases are :

Case 1 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			9
Bihari	6	9		4
Chirag	6	8	8	4
Deepak	5			4

Case 2 :

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7			6
Bihari	6	9		5
Chirag	6	8	8	5
Deepak	5			5

The ratings awarded by Atal and Deepak in Packaging are among 5 and 7.

The ratings awarded by Atal, Bihari, Deepak are among 5,6, and 7.

Atal individual ranking in Packaging and Hygiene are the same. The same is true for Deepak.

Since Atal and Deepak can give the ranking among 3 and 4 in Packaging as Bihari is first and Chirag is second in this parameter.

They can rank 3 or 4 in the Hygiene parameter also. Hence Bihari must rate 7 points in Hygiene.

In both the possibilities Bihari and Chirag award a total of 26 points. Hence he wins 40 because the total ratings are greater than 25 received from Bihari and Chirag.

Since he gets a total of 120 in bonuses and tips. He must have 80 from Atal and Deepak.

This is possible if he gets a tip of 30 and 50 from them respectively.

In case 1 irrespective of Atal standing at rank 3 or rank 4 in Hygiene and Packaging Atal total rating is greater than 25 which implies Ravi gets a tip from Atal but this is not a possible case because Ravi needs a total of Rs 80 from Atal and Deepak. From Atal if he gets Rs 20 as a bonus he cannot get a total of Rs 120 and hence this case fails.

Hence case 1 fails.

In case 2 there are two possibilities :

Atal ranking 3 in both the parameters and Deepak 4<sup>th</sup>. Atal ranking 4<sup>th</sup> in both the parameters and Deepak 3<sup>rd</sup>

In the case where Atal ranks 3<sup>rd</sup> in Packaging and Hygiene the total score is 26 and is not a feasible case.

Case - 2A:

	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	7	6	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	5	5	5

Case - 2B :



	Behaviour	Packaging	Hygiene	Timeliness
Atal	7	5	5	6
Bihari	6	9	7	5
Chirag	6	8	8	5
Deepak	5	7	6	5

Case - 2A : fails because Atal's total rating is greater than 25 which should not be the case.

Deepak gives a rating of 7 in Packaging.