Standard Questions Asked in CAT DILR

Question 1

Odsville has five firms – Alfloo, Bzygoo, Czechy, Drjbna and Elavalaki. Each of these firms was founded in some years and also closed down a few years later.

Each firm raised Rs. 1 crore in its first and last year of existence. The amount each firm raised every year increased until it reached a maximum, and then decreased until the firm closed down. No firm raised the same amount of money in two consecutive years. Each annual increase and decrease was either by Rs. 1 crore or by Rs. 2 crores.

The table below provides partial information about the five firms.

Firm	First year of existence	Last year of existence	Total amount raised (Rs. crores)
Alfloo	2009	2016	21
Bzygoo	2012	2015	
Czechy	2013		9
Drjbna	2011	2015	10
Elavalaki	2010		13

Q. 1) For which firm(s) can the amounts raised by them be concluded with certainty in each year?
   A. Only Bzygoo and Czechy and Drjbna
   B. Only Czechy
   C. Only Czechy and Drjbna
   D. Only Drjbna

Q. 2) What best can be concluded about the total amount of money raised in 2015?
   A. It is either Rs. 7 crores or Rs. 8 crores or Rs. 9 crores.
   B. It is either Rs. 7 crores or Rs. 8 crores.
   C. It is either Rs. 8 crores or Rs. 9 crores.
   D. It is exactly Rs. 8 crores.

Q. 3) What is the largest possible total amount of money (in Rs. crores) that could have been raised in 2013?

Q. 4) If Elavalaki raised Rs. 3 crores in 2013, then what is the smallest possible total amount of money (in Rs. crores) that could have been raised by all the companies in 2012?
A. 12
B. 9
C. 11
D. 10

Q. 5) If the total amount of money raised in 2014 is Rs. 12 crores, then which of the following is not possible?
1. Bzygoo raised more money than Elavalaki in 2014.
2. Alfloo raised the same amount of money as Bzygoo in 2014.
3. Alfloo raised the same amount of money as Drjbna in 2013.
4. Bzygoo raised the same amount of money as Elavalaki in 2013.

Question 2

There are nine boxes arranged in a 3×3 array as shown in Tables 1 and 2. Each box contains three sacks. Each sack has a certain number of coins, between 1 and 9, both inclusive. The average number of coins per sack in the boxes are all distinct integers. The total number of coins in each row are the same. The total number of coins in each column is also the same.

Table 1 gives information regarding the median of the numbers of coins in the three sacks in a box for some of the boxes. In Table 2 each box has a number which represents the number of sacks in that box having more than 5 coins. That number is followed by a * if the sacks in that box satisfy exactly one among the following three conditions, and it is followed by ** if two or more of these conditions are satisfied.
i) The minimum among the numbers of coins in the three sacks in the box is 1.
ii) The median of the numbers of coins in the three sacks is 1.
iii) The maximum among the numbers of coins in the three sacks in the box is 9.

Q.1) How many boxes have at least one sack containing 9 coins?
   A. 3
   B. 4
   C. 5
   D. 8

Q.2) For how many boxes are the average and median of the numbers of coins contained in the three sacks in that box the same?

Q.3) How many sacks have exactly one coin?

Q.4) In how many boxes do all three sacks contain different numbers of coins?

Question 3

Anjali, Bipasha, and Chitra visited an entertainment park that has four rides. Each ride lasts one hour and can accommodate one visitor at one point. All rides begin at 9 am and must be completed by 5 pm except for Ride-3, for which the last ride has to be completed by 1 pm. Ride gates open every 30 minutes, e.g. 10 am, 10:30 am, and so on. Whenever a ride gate opens, and there is no visitor inside, the first visitor waiting in the queue buys the ticket just before taking the ride. The ticket prices are Rs. 20, Rs. 50, Rs. 30 and Rs. 40 for Rides 1 to 4, respectively. Each of the three visitors took at least one ride and did not necessarily take all

rides. None of them took the same ride more than once. The movement time from one ride to another is negligible, and a visitor leaves the ride immediately after the completion of the ride. No one takes a break inside the park unless mentioned explicitly.
The following information is also known.

1. Chitra never waited in the queue and completed her visit by 11 am after spending Rs. 50 to pay for the ticket(s).
2. Anjali took Ride-1 at 11 am after waiting for 30 mins for Chitra to complete it. It was the only ride where Anjali waited.
3. Bipasha began her first of three rides at 11:30 am. All three visitors incurred the same amount of ticket expense by 12:15 pm.
4. The last ride taken by Anjali and Bipasha was the same, where Bipasha waited 30 mins for Anjali to complete her ride. Before standing in the queue for that ride, Bipasha took a 1-hour coffee break after completing her previous ride.

Q. 1) Which were all the rides that Anjali completed by 2:00 pm?
   A. Ride-1, Ride-2, and Ride-3
   B. Ride-1 and Ride-3
   C. Ride-1, Ride-2, and Ride-4
   D. Ride-1 and Ride-4

Q. 2) Which ride was taken by all three visitors?
   A. Ride-1
   B. Ride-3
   C. Ride-4
   D. Ride-2

Q. 3) How many rides did Anjali and Chitra take in total?

Q. 4) What was the total amount spent on tickets (in Rs.) by Bipasha?
   A. 110
   B. 120
   C. 90
   D. 100

Question 4

A visa processing office (VPO) accepts visa applications in four categories - US, UK, Schengen, and Others. The applications are scheduled for processing in twenty 15-minute slots starting at 9:00 am and ending at 2:00 pm. Ten applications are scheduled in each slot.
There are ten counters in the office, four dedicated to US applications, and two each for UK applications, Schengen applications and Others applications. Applicants are called in for processing sequentially on a first-come-first-served basis whenever a counter gets freed for their category. The processing time for an application is the same within each category. But it may vary across the categories. Each US and UK application requires 10 minutes of processing time. Depending on the number of applications in a category and time required to process an

application for that category, it is possible that an applicant for a slot may be processed later. On a particular day, Ira, Vijay and Nandini were scheduled for Schengen visa processing in that order. They had a 9:15 am slot but entered the VPO at 9:20 am. When they entered the office, exactly six out of the ten counters were either processing applications, or had finished processing one and ready to start processing the next.
Mahira and Osman were scheduled in the 9:30 am slot on that day for visa processing in the Others category.
The following additional information is known about that day.
1. All slots were full.
2. The number of US applications was the same in all the slots. The same was true for the other three categories.
3. 50% of the applications were US applications.
4. All applicants except Ira, Vijay and Nandini arrived on time.
5. Vijay was called to a counter at 9:25 am.

Q. 1) How many UK applications were scheduled on that day?

Q. 2) What is the maximum possible value of the total time (in minutes, nearest to its integer value) required to process all applications in the Others category on that day?

Q. 3) Which of the following is the closest to the time when Nandini's application process got over?
    A. 9: 45am
    B. 9: 50am
    C. 9: 35am
    D. 9: 37am

Q. 4) Which of the following statements is false?
    A. The application process of Osman was completed before 9:45 am
    B. The application process of Mahira started after Nandini's.
    C. The application process of Mahira was completed before Nandini's.
    D. The application process of Osman was completed before Vijay's.

Q. 15) When did the application processing for all US applicants get over on that day?
    A. 3 : 40 pm
    B. 2 : 00 pm
    C. 2: 25 pm
    D. 2 : 05 pm

Question 5

There are 15 girls and some boys among the graduating students in a class. They are planning a get-together, which can be either a 1-day event, or a 2-day event, or a 3-day event. There are 6 singers in the class, 4 of them are boys. There are 10 dancers in the class, 4 of them are girls. No dancer in the class is a singer. Some students are not interested in attending the

get-together. Those students who are interested in attending a 3-day event are also interested in attending a 2-day event; those who are interested in attending a 2-day event are also interested in attending a 1-day event.

The following facts are also known:
1. All the girls and 80% of the boys are interested in attending a 1-day event. 60% of the boys are interested in attending a 2-day event.
2. Some of the girls are interested in attending a 1-day event, but not a 2-day event; some of the other girls are interested in attending both.
3. 70% of the boys who are interested in attending a 2-day event are neither singers nor dancers. 60% of the girls who are interested in attending a 2-day event are neither singers nor dancers.
4. No girl is interested in attending a 3-day event. All male singers and 2 of the dancers are interested in attending a 3-day event.
5. The number of singers interested in attending a 2-day event is one more than the number of dancers interested in attending a 2-day event.

Q.1) How many boys are there in the class?

Q.2) Which of the following can be determined from the given information?
 I. The number of boys who are interested in attending a 1-day event and are neither dancers nor singers.
 II. The number of female dancers who are interested in attending a 1-day event.
[1] Only II
[2] Neither I nor II
[3] Both I and II
[4] Only I

Q.13) What fraction of the class are interested in attending a 2-day event?
[1] 7/10
[2] 2/3
[3] 9/13
[4] 7/13

Q.14) What BEST can be concluded about the number of male dancers who are interested in attending a 1-day event?
[1] 4 or 6
[2] 6
[3] 5 or 6
[4] 5