

# CAT Mock Paper 1

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## Data Interpretation & Logical Reasoning

**DIRECTIONS for questions 35 to 37:** Answer the questions on the basis of the information given below.

The table below gives details of all the models of cars at a car rental agency.

Model	Manufacturer	Classification	Engine Capacity (in cc.)	Plus Points of the Car	Minus Points of the Car
M800	Maruti	Entry Level	< 1000	Price, Fuel efficiency	Comforts, Space
Zen	Maruti	Small	1000 – 1300	Service, Fuel efficiency	Comforts, Space
Santro	Hyundai	Small	1000 – 1300	Price, Fuel efficiency	Design, Space
Ikon	Ford	Mid Size	1301 – 1500	Technology, Comforts	Service, Fuel efficiency
City	Honda	Mid Size	1301 – 1500	Technology, Comforts	Design, Price
Optra	General Motors	Executive	1501 – 1800	Comforts, Price	Engine, Fuel efficiency
Corolla	Toyota	Executive	1501 – 1800	Engine, Comforts	Design, Price
Accord	Honda	Luxury	1800+	Price, Space	Design, Fuel efficiency
C-Class	Mercedes	Luxury	1800+	Technology, Safety	Space, Price
Swift	Maruti	Mid Size	1301 – 1500	Design, Technology	Space, Price
Octavia	Skoda	Executive	1501 – 1800	Fuel efficiency, Price	Space, Service
Lancer	Mitsubishi	Executive	1501 – 1800	Price, Service	Technology, Comforts
Wagon R	Maruti	Small	1000 – 1300	Technology, Service	Design, Space
Camry	Toyota	Luxury	1800+	Space, Technology	Price, Fuel efficiency
Alto	Maruti	Entry Level	< 1000	Price, Fuel efficiency	Space, Comforts
Fiesta	Ford	Mid Size	1301 – 1500	Technology, Price	Space, Comforts
E-Class	Mercedes	Luxury	1800+	Technology, Comforts	Price, Fuel efficiency
Vectra	General Motors	Luxury	1800+	Technology, Comforts	Design, Space
Mondeo	Ford	Luxury	1800+	Engine, Comforts	Price, Service
Baleno	Maruti	Executive	1501 – 1800	Price, Service	Design, Comforts

The agency has three major clients - companies A, B and C - which regularly source cars from the agency. The specifications of cars required by each company are given below.

**Company A:** *Any car with an engine capacity of more than 1300 cc. and with comforts or space as one of the plus points.*

**Company B:** *All cars with a classification up to executive level (i.e., entry level, small, mid size and executive level) with good fuel efficiency (i.e., fuel efficiency must be one of the plus points of the car).*

**Company C:** *Any car for which space or fuel efficiency is not one of its minus points.*

**Q 35.** If the agency has only one car of each model and Honda City and Toyota Corolla have already been sent to company A, then which of the following models of cars can be sent to company C?

- (1) Lancer
- (2) Mondeo
- (3) Baleno
- (4) All of the above
- (5) None of the above

**Q 36.** Which of the following models of cars cannot be sent to any of the three companies?

- (1) M800, Ikon, C-class, Wagon R
- (2) Swift, Wagon R, C-class, Fiesta
- (3) Swift, Alto, Fiesta, Baleno
- (4) Zen, Santro, Wagon R, Fiesta
- (5) Wagon R, Fiesta, Alto, Baleno

**Q 37.** How many different models of cars can be sent to more than one of the three companies?

- (1) 5
- (2) 4
- (3) 6
- (4) 2
- (5) 3

**DIRECTIONS for questions 38 to 41:** Answer the questions on the basis of the information given below.

At the finals of the "Gaana Sunao" contest, which was conducted all over India, five contestants -  $C_1$ ,  $C_2$ ,  $C_3$ ,  $C_4$  and  $C_5$  - participated. Before the announcement of the results, six mischievous persons - Azad, Bose, Chand, Dev, Ehsaan and Fardeen - managed to get hold of the result sheet, which contained the scores of each of the five participants. Each of the six persons then decided to announce the sum of the final scores of exactly four contestants. So, Azad, Bose, Chand, Dev, Ehsaan and Fardeen announced their sums as 220, 260, 230, 240, 210 and 250 points respectively. However, one of them made a mistake in adding the scores. Also, the organizers of the contest decided to award an amount of Rs.10,000 for each point that a contestant scored. The score of each contestant is an integral value.

**Q 38.** If the exact scores of the contestants  $C_1$ ,  $C_2$ ,  $C_3$ ,  $C_4$  and  $C_5$  are  $a$ ,  $b$ ,  $c$ ,  $d$  and  $e$ , in no particular order, then how many of these five scores can be determined?

- (1) 0
- (2) 1
- (3) 2
- (4) 3
- (5) 4

**Q 39.** What is the highest possible amount that any of the five contestants can be eligible for?

- (1) Rs.7 lakh
- (2) Rs.7.5 lakh
- (3) Rs.8 lakh
- (4) Rs.8.5 lakh
- (5) Rs.9 lakh

**Q 40.** If one of the contestants is eligible for Rs.5 lakh, then what is the total amount that the organizers have to give away to all the five contestants put together?

- (1) Rs.30 lakh
- (2) Rs.29.5 lakh
- (3) Rs.29 lakh
- (4) Rs.28.5 lakh
- (5) Cannot be determined

**Q 41. If two of the contestants put together are eligible to receive exactly Rs.15 lakh, then who among the following could have made the mistake while adding the scores?**

- (1) Bose
- (2) Chand
- (3) Dev
- (4) Ehsaan
- (5) None of these

**DIRECTIONS for questions 42 to 44: Answer the questions on the basis of the information given below.**

**DETAILS OF STUDENTS OF FOUR COLLEGES**

Name of the college	Number of boys as a percentage of number of girls passed	Percentage of boys	Percentage of students who passed	Number of students failed	Number of sportsper as a percentage of sportsmen
A	60%	50%	80%	200	$112\frac{1}{2}\%$
B	75%	60%	60%	280	125%
C	100%	55%	70%	240	$133\frac{1}{3}\%$
D	140%	60%	50%	300	100%

**Q 42. For how many colleges is the number of students passing more than the average number of students passing from all the colleges?**

- (1) 0
- (2) 1
- (3) 2
- (4) 3
- (5) 4

**Q 43. In the college C, if there are 30 girls who are sportspersons, what percentage of the students are not sportspersons?**

- (1) 60%
- (2) 75%
- (3) 85%
- (4) 80%
- (5) Cannot be determined

**Q 44. In which institute is the number of sportspersons the least?**

- (1) A
- (2) C
- (3) D
- (4) B
- (5) Cannot be determined

**DIRECTIONS for questions 45 to 48: Answer the questions on the basis of the information given below.**

**The following table gives some financial details of twelve Indian companies.**

Company	Sales (Rs.crore)	Expenditure (Rs.crore)	Other Income (Rs.crore)	Liquidity Ratio	Net Profit (Rs.crore)
A	5800	2790	380	1.40	350
B	5490	4790	920	1.75	450
C	6400	2680	1240	1.62	180
D	3800	2190	1350	1.48	950
E	7820	6230	740	1.80	1020
F	2100	1980	980	1.73	800
G	4500	4230	650	1.36	720
H	3420	2140	1020	1.44	850
I	6500	5460	1460	1.33	650
J	6200	5840	1100	1.40	480
K	3680	2200	940	1.75	525
L	4500	3680	1130	1.45	550

**Each of the above twelve companies belongs to exactly one of the four sectors - Pharmaceuticals, Automobiles, Mobiles and Construction. It is**

also known that, there are at least two of the above twelve companies in each of the four sectors.

Further, it is also known that,

(i) For any two mobile companies X and Y, if sales of X are more than Y, the expenditure of X will be more than that of Y and the other income of X will be less than that of Y.

(ii) For any two automobile companies X and Y, if the expenditure of X is less than that of Y, the liquidity ratio of X will be more than that of Y.

(iii) For any two pharmaceutical companies X and Y, if the other income of X is more than that of Y, the net profit of X is more than that of Y.

(iv) For any two construction companies X and Y, if the liquidity ratio of X is less than that of Y, the net profit of X is more than that of Y.

Further,

- For every pharmaceutical company, the sales are more than Rs.5000 crore.
- For every mobile company, the liquidity ratio is more than 1.6.
- For every construction company, the other income is more than Rs.1000 crore.
- For every automobile company, the net profit is more than Rs.700 crore

**Q 45. Which among the following must be a construction company?**

- (1) I
- (2) D
- (3) J
- (4) C
- (5) None of these

**Q 46. If there are four companies in sector S, then S can be**

- (1) Only Pharmaceuticals
- (2) Only Automobiles
- (3) Only Pharmaceuticals or Mobiles
- (4) Only Construction
- (5) Only Pharmaceuticals, Mobiles and Construction

**Q 47. Which among the following cannot be a pharmaceutical company?**

- (1) A
- (2) E
- (3) B
- (4) J
- (5) None of these

**Q 48. If all the four sectors have the same number of companies, then which of the following is true?**

- (1) B is a pharmaceutical company.
- (2) F is a mobile company.
- (3) I is a construction company.
- (4) B is a construction company.
- (5) None of these

**DIRECTIONS for questions 49 and 50: Answer the questions on the basis of the information given below.**

Each of the eight students Akash, Balu, Chakri, Diren, Ehsaan, Fatima, Giri and Hari, is of a different height. All of them are standing in a row in the increasing order of their heights such that the shortest person is at the extreme left. Three of them are from 1<sup>st</sup> standard, three from 2<sup>nd</sup> standard and two from 3<sup>rd</sup> standard.

- (i) Akash, the second tallest, is not from 1<sup>st</sup> standard and Balu, who is the fourth tallest is from 2<sup>nd</sup> standard.
- (ii) Ehsaan is from 2<sup>nd</sup> standard but Chakri is not from 3<sup>rd</sup> standard.
- (iii) Hari is taller than Giri but shorter than Balu, while Diren is shorter than Akash.
- (iv) Chakri is shorter than Giri but taller than Fatima.
- (v) Neither the shortest nor the second shortest is from 1<sup>st</sup> standard.

**Q 49. Which of the following statements is definitely true?**

- (1) Each 2<sup>nd</sup> standard student is next to at least one 3<sup>rd</sup> standard student.
- (2) Each 3<sup>rd</sup> standard student is next to at least one 2<sup>nd</sup> standard student.
- (3) No two students of the same standard are adjacent to each other.
- (4) All the above

(5) None of the above

**Q 50. Which two students from the same standard are adjacent to each other?**

- (1) Hari and Balu
- (2) Balu and Giri
- (3) Giri and Hari
- (4) Chakri and Balu
- (5) None of these

**DIRECTIONS for questions 51 to 54:** The questions given below are followed by two statements, I and II. Study the information given in the two statements and assess whether the statements are sufficient to answer the questions and choose the appropriate option from among the choices given below.

**Q 51. In a class, the number of students who passed in both Physics and Chemistry is same as that who passed in neither Physics nor Chemistry. Find the difference between the number of students who passed in only Physics and those who passed in only Chemistry.**

**I. 100 students passed in Physics and 40 of them failed in Chemistry.**

**II. The number of students who failed in Chemistry is equal that who failed in Physics.**

- (1) Statement I alone is sufficient and statement II alone is not sufficient to answer the question.
- (2) Statement II alone is sufficient and statement I alone is not sufficient to answer the question.
- (3) Statements I and II together are sufficient but neither statement alone is sufficient to answer the question.
- (4) Statement alone is sufficient to answer the question.
- (5) Statements I and II together are not sufficient to answer the question and additional data, specific to the problem, is needed.

**Q 52. The average marks scored by the students in a class is 75. What is the number of students in the class?**

**I. The highest and the lowest marks in the class are 95 and 55 respectively.**

**II. Exclusion of the students who scored the highest and the lowest marks does not change the average marks of the remaining students.**



- (1) Statement I alone is sufficient and statement II alone is not sufficient to answer the question.
- (2) Statement II alone is sufficient and statement I alone is not sufficient to answer the question.
- (3) Statements I and II together are sufficient but neither statement alone is sufficient to answer the question.
- (4) Statement alone is sufficient to answer the question.
- (5) Statements I and II together are not sufficient to answer the question and additional data, specific to the problem, is needed.

**Q 53. A shepherd had 100 sheep which he used for breeding. The sheep were of two colours - white and brown and each sheep produced an offspring. The offspring of a white sheep was always white or black while that of a brown sheep was white or brown. How many brown sheep were used for breeding?**

**I. The number of white offsprings were 50.**

**II. The number of brown offsprings were ten more than the black offsprings.**

- (1) Statement I alone is sufficient and statement II alone is not sufficient to answer the question.
- (2) Statement II alone is sufficient and statement I alone is not sufficient to answer the question.
- (3) Statements I and II together are sufficient but neither statement alone is sufficient to answer the question.
- (4) Statement alone is sufficient to answer the question.
- (5) Statements I and II together are not sufficient to answer the question and additional data, specific to the problem, is needed.

**Q 54. How many among the four players - A, B, C and D scored a century?**

**I. Ram said A and B scored centuries while Mohan said at least two among A, C and D scored centuries.**

**II. Ram always tell the truth while Mohan always lies.**

- (1) Statement I alone is sufficient and statement II alone is not sufficient to answer the question.

- (2) Statement II alone is sufficient and statement I alone is not sufficient to answer the question.
- (3) Statements I and II together are sufficient but neither statement alone is sufficient to answer the question.
- (4) Statement alone is sufficient to answer the question.
- (5) Statements I and II together are not sufficient to answer the question and additional data, specific to the problem, is needed.

**DIRECTIONS for questions 55 to 58: Answer the questions on the basis of the information given below.**

**In Rangeela land, there are only three types of people: Lalpilas, Pilharas and Haralals. Lalpilas always get confused between red and yellow (i.e. they see yellow as red and vice versa.) and can see any other colour properly. Pilharas always get confused between yellow and green and can see any other colour properly and Haralals always get confused between red and green and can see any other colour properly.**

**Q 55. Three persons Amar, Akbar and Anthony, who belong to Rangeela land made the following statements.**

**Amar : Gabbar Singh is wearing a green shirt. Akbar : Gabbar Singh is not wearing a yellow shirt. Anthony : Gabbar Singh is wearing a red shirt.**

**If none of them is a Haralal, then what is the colour of Gabbar Singh's shirt?**

- (1) Red
- (2) Yellow
- (3) Green
- (4) Cannot be determined

**Q 56. Two persons - Dhiraj and Suraj, of Rangeela land made the following statements.**

**Dhiraj : Feroz is wearing a red hat. Feroz is wearing a yellow shirt.**

**Suraj : Feroz is wearing a red hat. Feroz is wearing a green shirt.**

**Suraj is a**

- (1) Lalpila
- (2) Pilhara
- (3) Haralal

(4) Such a conversation is not possible.

**Q 57. Veeru is a**

- (1) Lalpila
- (2) Pilhara
- (3) Haralal
- (4) Cannot be determined

**Q 58. What is the colour of Basanti's saree?**

- (1) Green
- (2) Red
- (3) Yellow
- (4) Cannot be determined

**DIRECTIONS for questions 59 to 62: Answer the questions independently of each other.**

**Q 59. Each of companies A, B and C - have a tradition of rewarding their employees with a bonus, once every year, during Ramzan, Christmas or Deepavali. For each company every year the bonus is paid during the same time. Use the clues below to answer the following question.**

- (1) For no two companies is either the amount of bonus paid or the time of the year when bonus is paid the same
- (2) Company B distributes bonus during Deepavali.
- (3) The company that gives Rs.5,000 as bonus is in the manufacturing sector.
- (4) Company, A distributes bonus during Christmas.
- (5) The company that gives a bonus of Rs.10,000 is not in the IT sector.
- (6) The company that gives bonus for Ramzan gives Rs.5,000.
- (7) The company that gives bonus for Christmas gives Rs.12,000 as bonus.

**Which of the following is true?**

- (1) Company A gives a bonus of Rs.12,000 for Christmas, company B gives a bonus of Rs.5,000 for Deepavali and Company C gives a bonus of Rs.10,000 and is in the IT sector.
- (2) Company B gives a bonus of Rs.10,000 and is in the finance sector. Company C gives a bonus of Rs.5,000 during Ramzan and company A gives a bonus of Rs.12,000 and is in the manufacturing sector.

- (3) Company A gives a bonus of Rs.12,000 and is in the finance sector. Company B gives a bonus of Rs.5,000 during Deepavali and company C gives a bonus of Rs.10,000 and is in the IT sector.
- (4) Company B gives a bonus of Rs.10,000 for Deepavali. Company C gives a bonus of Rs.5,000 and is in the manufacturing sector. Company A gives a bonus of Rs.12,000 and is in the IT sector.

**Q 60. Seven people, A through G, sit in a row (not necessarily in the same order). Exactly three people sit between A and G, while exactly three people sit between B and E. Exactly four people sit between C and E, while exactly four people sit between D and G. Exactly two people sit between B and D, while exactly two people sit between C and A. Given that either B or A sits to the immediate right of D, then who sits exactly at the middle of the row?**

- (1) C  
(2) B  
(3) F  
(4) Cannot be determined

**Q 61. According to probability theory, when a normal dice is thrown a large number of times, the probability of each number turning up will be  $\frac{1}{6}$ . A group of friends decided to try this and got the following results after 50 tries:**

**All numbers were obtained at least once.**

**The number of 1's obtained was an even number.**

**The number of 2's obtained was equal to the number of 5's obtained.**

**The number of 3's obtained was five times the number of 1's obtained. Exactly six 4's were obtained.**

**The number of six's obtained was twenty-two, which was the highest among all the numbers obtained.**

**What was the total number of odd numbers obtained?**

- (1) 22  
(2) 17  
(3) 25  
(4) 18

**Q 62. Four friends Ashwath, Charan, Karthik and Srinivas are nicknamed Essi, KK, Kit and Maha, not necessarily in that order.**

**(1) Karthik is stronger than Essi but can't run as fast as Kit.**

**(2) Essi is stronger than Ashwath but weaker than KK.**

**(3) Srinivas is faster than Karthik and slower than Maha but weaker than**

**Essi.**

**Who is nicknamed Maha?**

- (1) Karthik
- (2) Ashwath
- (3) Charan
- (4) Srinivas

**DIRECTIONS for questions 63 to 66:** The questions given below are followed by two statements, I and II. Study the information given in the two statements and assess whether the statements are sufficient to answer the questions and choose the appropriate option from among the choices given below.

**Q 63.** Did more than 50 employees leave Company A in the year 2002? I. At the start of 2002, the difference between the number of male and female employees in company A is 90.  
II. By the end of 2002, the total number of employees in company A is 50.

- (1) Statement I alone is sufficient and statement II alone is not sufficient to answer the question.
- (2) Statement II alone is sufficient and statement I alone is not sufficient to answer the question.
- (3) Statements I and II together are sufficient but neither statement alone is sufficient to answer the question.
- (4) Both statements I and II together are not sufficient to answer the question and additional data, specific to the problem, is needed.

**Q 64.** Six persons - Irfan, Jagan, Karan, Lala, Manoj and Niran - participated in a race in which every participant finished in a different time. At least two persons finished before Jagan. The number of persons who finished before Lala is same as the number of persons who finished after Niran. Irfan finished before Manoj. Who finished the race in second position?

- I. Manoj finished the race in third position.
- II. Only Lala finished the race after Karan.

- (1) Statement I alone is sufficient and statement II alone is not sufficient to answer the question.
- (2) Statement II alone is sufficient and statement I alone is not sufficient to answer the question.

- (3) Statements I and II together are sufficient but neither statement alone is sufficient to answer the question.
- (4) Both statements I and II together are not sufficient to answer the question and additional data, specific to the problem, is needed.

**Q 65. M and N are the father and mother of P respectively. P has four uncles and three aunts. None of the siblings of M and N are married. N has two siblings. How many sisters does M have?**

**I. N has two brothers.**

**II. M has a total of 5 siblings.**

- (1) Statement I alone is sufficient and statement II alone is not sufficient to answer the question.
- (2) Statement II alone is sufficient and statement I alone is not sufficient to answer the question.
- (3) Statements I and II together are sufficient but neither statement alone is sufficient to answer the question.
- (4) Both statements I and II together are not sufficient to answer the question and additional data, specific to the problem, is needed.

**Q 66. When J and K run a race, J beats K by 20 seconds. When K and L run the same race, K beats L by 40 seconds. Find the speed of K (in m/s).**

**I. J beats L by 250 m.**

**II. The length of the race track is 1 km.**

- (1) Statement I alone is sufficient and statement II alone is not sufficient to answer the question.
- (2) Statement II alone is sufficient and statement I alone is not sufficient to answer the question.
- (3) Statements I and II together are sufficient but neither statement alone is sufficient to answer the question.
- (4) Both statements I and II together are not sufficient to answer the question and additional data, specific to the problem, is needed.