

CAT Mock Paper 3

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Data Interpretation & Logical Reasoning

DIRECTIONS for questions 1 to 4: Answer the questions on the basis of the information given below.

Details regarding the Performance of a few top companies during the Financial Year 2003-04

Name of the company	ET500 Rank	Sales (Rs.Cr)	Change in Sales (%)	PAT (Rs.Cr)	Change in PAT (%)	PE	DIV YIELD (%)	EPS (Rs)	Dividend (%)
Dr. Reddy's Laboratories	35	1667.9	11.0	392.0	4.9	19.0	0.5	51.2	100.0
Sun Pharmaceuticals Industries	40	934.0	16.0	265.4	34.3	22.8	0.8	28.6	100.0
Tata Iron and Steel Corporation	17	10166.9	27.6	1586.4	138.3	8.9	2.1	43.0	80.0
Jindal Steel and Power	110	1241.9	43.9	203.2	29.5	7.7	1.2	66.0	125.0
Madras Cements	139	671.7	8.7	33.3	139.7	31.5	0.8	24.6	60.0
Gammon India	209	1014.1	56.9	27.2	21.4	22.2	0.6	19.8	25.0
Hero Honda Motors	28	5381.5	4.7	666.0	14.0	14.7	3.7	33.4	900.0
TVS Motor Company	88	2762.4	5.5	134.1	18.4	14.8	1.4	5.8	120.0
Oil and Natural Gas Corporation	1	36175.8	27.5	10356.5	21.9	11.6	3.6	72.6	300.0
Hindustan Petroleum Corporation Ltd.	13	56680.5	13.9	2011.0	51.4	8.6	3.9	59.3	200.0
Satyam Computer Services	26	2359.3	21.4	379.0	-9.3	24.5	1.0	12.0	150.0
HCL Technologies	34	998.3	28.2	360.9	8.6	21.4	1.6	11.6	200.0
HCL Infosystems	86	1756.4	-0.3	112.7	241.6	20.8	1.5	31.9	100.0
Hughes Software	91	321.7	49.9	69.9	89.9	25.0	0.4	20.8	40.0
Hinduja TMT	150	148.5	58.8	75.6	21.3	11.0	3.4	18.5	70.0

Note:

- ◆ Change in Sales (%) = Change in sales from 2002-03 to 2003-04 as a percentage of sales in 2002-03.
- ◆ Change in PAT (%) = Change in PAT from 2002-03 to 2003-04 as a percentage of PAT in 2002-03.
- ◆ $PE = \frac{\text{Market value per share (in Rs.)}}{\text{EPS (in Rs.)}}$
- ◆ DIV YIELD (%) = Dividend per share (in Rs.) as a percentage of market value per share.
- ◆ Dividend (%) = Dividend per share (in Rs.) as a percentage of par value per share.
- ◆ NPM (%) = PAT as percentage of sales.

Q 1. For how many of the companies given above, is the market value per share greater than Rs.500 but less than Rs.1,000?

- (1) 4
- (2) 6
- (3) 7
- (4) 8

Q 2. For how many of the companies given above, is the dividend per share more than Rs.10?

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

Q 3. Which of the following companies has the highest NPM% in the year 2003-04?

- (1) Hinduja TMT
- (2) Oil and Natural Gas Corporation
- (3) HCL Technologies
- (4) Jindal Steel and Power

Q 4. Which company experienced the maximum growth in sales in 2003-04 over that in 2002-03?

- (1) Jindal Steel and Power Ltd.
- (2) Hindustan Petroleum Corporation Ltd.
- (3) Oil and Natural Gas Corporation
- (4) Hinduja TMT

DIRECTIONS for questions 5 to 8: 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 5. 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 6. 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 7. Veeru is a

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

Q 8. What is the colour of Basanti's saree?

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

DIRECTIONS for questions 9 to 12: Answer the questions on the basis of the information given below.

The table gives some information about the points scored by Arjun in AHC (All Hastin Championship), in five different mind games - Dice, Dance, Dupe, Digit and Dynasty.

Game	Total Problems	Problems Attempted	Successful Attempts	Failures	Net Score
Dice	35	29			
Dance	30				
Dupe	35	17		6	
Digit	40				11
Dynasty	45		30		

It is also known that,

i. For every successful attempt Arjun gets one point and for every unattempted problem he loses $1/6^{\text{th}}$ of a point and for every failure he loses $1/3^{\text{rd}}$ of a point.

- ii. Arjun scored a total of 67 points and attempted 125 problems.
- iii. The number of failures of Arjun in Digit is $\frac{1}{6}$ th of his total failures and is double of that in Dance.
- iv. Arjun's net score in Dance is double that in Dupe.

Q 9. What is the total number of failures of Arjun in the competition?

- (1) 24
- (2) 30
- (3) 36
- (4) 42

Q 10. In which of the following mind games does Arjun have the maximum number of failures?

- (1) Dice
- (2) Dupe
- (3) Digit
- (4) Dynasty

Q 11. What is the number of problems attempted by Arjun in Dance?

- (1) 12
- (2) 15
- (3) 18
- (4) 21

Q 12. What is the net score of Arjun in Dynasty?

- (1) 21
- (2) 22
- (3) 24
- (4) 26

DIRECTIONS for questions 13 to 16: Answer the questions independently of each other.

Q 13. 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.

- (a) For no two companies is either the amount of bonus paid or the time of the year when bonus is paid the same
- (b) Company B distributes bonus during Deepavali.
- (c) The company that gives Rs.5,000 as bonus is in the manufacturing sector.
- (d) Company, A distributes bonus during Christmas.
- (e) The company that gives a bonus of Rs.10,000 is not in the IT sector.
- (f) The company that gives bonus for Ramzan gives Rs.5,000.

(g) 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 14. 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 15. 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 16. Four friends Ashwath, Charan, Karthik and Srinivas are nicknamed Essi, KK, Kit and Maha, not necessarily in that order.

- (i) Karthik is stronger than Essi but can't run as fast as Kit.**
- (ii) Essi is stronger than Ashwath but weaker than KK.**
- (iii) 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 17 to 20: 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 17. 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 18. 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 19. 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 20. 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.

DIRECTIONS for questions 21 to 23: 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 21. 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 22. 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 23. 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 24 to 27: 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 24. 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 25. 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 26. 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 27. 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 28 to 30: 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 28. 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 29. 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 30. 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 31 and 32: Answer the questions on the basis of the information given below.

(A) 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 1st standard, three from 2nd standard and two from 3rd standard.

(B) Akash, the second tallest, is not from 1st standard and Balu, who is the fourth tallest is from 2nd standard.

(C) Ehsaan is from 2nd standard but Chakri is not from 3rd standard.

(D) Hari is taller than Giri but shorter than Balu, while Diren is shorter than Akash.

(E) Chakri is shorter than Giri but taller than Fatima.

(F) Neither the shortest nor the second shortest is from 1st standard.

Q 31. Which of the following statements is definitely true?

- (1) Each 2nd standard student is next to at least one 3rd standard student.
- (2) Each 3rd standard student is next to at least one 2nd 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 32. 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