CAT Mock Paper 2
By www.collegedunia.com

<u>Data Interpretation & Logical Reasoning</u>

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

After facing yet another World Cup debacle, the Board of Cricket Control in India (BCCI) is in search of a new coach for the team. It shortlisted five persons - Anshuman, Buchanen, John, Whatmore and Chappel. Each of them is from a different country among Australia, India, Japan, Pakistan and Canada, not necessarily in that order. At present, each of them is coaching the team of a different country among Australia, Bangladesh, China, Wales and Bermuda, not necessarily in that order. The following details were also observed about their particulars:

(i) For any person, each of his three particulars - his name, the name of the country from which he is and the name of the country that he is coaching at present, starts with a different letter.

(ii) Whatmore is coaching Australia and John is from neither Australia nor Pakistan.

(iii) Buchanen is not coaching China and the person who is coaching Bermuda is from Canada.

(iv) Anshuman is neither from Canada nor from Pakistan and also the person from Pakistan is coaching Bangladesh.

35. Whatmore is from which country?

(1) India
(2) Japan
(3) Canada
(4) Cannot be determined

36. Who is the person from Australia?

(1) Buchanen
(2) John

(3) Whatmore

(4) Cannot be determined

37. The person from Japan is definitely not coaching

(1) China

(2) Wales.

(3) Australia.

(4) More than one of the above

DIRECTIONS *for questions 38 to 42:* **Answer the questions on the basis of the information given below.**

Mr Suzuki, a car dealer, sold cars of only two brands, A and B, in the previous year. This year, he introduced a new brand, C. The number of cars of brand A and brand B sold in the previous year were in the ratio 3 : 2, and the ratio of the number of cars sold in the previous year to that sold in this year is 2 : 3 for brand A and 2 : 5 for brand B. Further, the number of cars of brand C sold this year forms 81% of the total number of cars sold this year.

38. Find the number of cars of brand C sold this year, given that a total of 24 cars of brand A were sold in the previous year.

(1) 324

(2) 648

(3) 162

(4) 243

39. What is the percentage increase in the total number of cars sold this year when compared to the total number of cars sold in the previous year?

(1) 400%

(2) 600%

(3) 900%

(4) 1000%

40. In the next year, Mr.Suzuki wants to increase the total sales by 80%, compared to the total sales this year, by keeping the sales of each of A, B and C at the same level as that in this year and introducing a new

brand D. By what percent will the number of cars of brand D (to be sold next year) be more than the total number of cars sold last year?

(1) 400%
(2) 600%
(3) 900%
(4) 700%

41. If a total of 380 cars were sold this year, and the sales of C this year were nil, instead of 81% of total sales, then how many cars of brand A were sold in the previous year?

(1) 140
(2) 120
(3) 100
(4) 160

DIRECTIONS *for questions 42 and 43:* **The question given below is 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 question and choose the appropriate option from among the choices given below:**

42. Two of the three cricketers Pavan, Rajan and Tarun are selected to the national team. Each of these three persons scored a different number of centuries and a different number of runs. Further, among these three, Tarun scored the highest number of centuries. Who among Pavan, Rajan and Tarun is not selected to the national team?

I. The person with the higher number of runs between Tarun and Pavan, is the person who scored the lesser number of centuries between the two persons selected.
II. The person with the least number of runs between Rajan and Tarun, is the person who scored the higher number of centuries between the two persons selected.

(1) The question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.

(2) The question can be answered by using either statement alone.

(3) The question can be answered by using both statements together, but cannot be answered using either statement alone.

(4) The question cannot be answered even by using both statements together.

43. Triangle ABC is right angled at B. What is the value of AB + BC?
I. Diameter of the circle inscribed in the triangle ABC is 10 cm.
II. Diameter of the circle circumscribing the triangle ABC is 27 cm.

(1) The question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.

(2) The question can be answered by using either statement alone
(3) The question can be answered by using both statements together, but cannot be answered using either statement alone.

(4) The question cannot be answered even by using both statements together.

DIRECTIONS *for questions 44 and 45:* **Answer the questions on the basis of the information given below.**

Each point in the graph below shows the sales and expenses of a company. Each company belongs to one of the three sectors among manufacturing, automobiles and software.

Sales (in Rs.crore)

× Manufactring   O Automobiles   □ Software
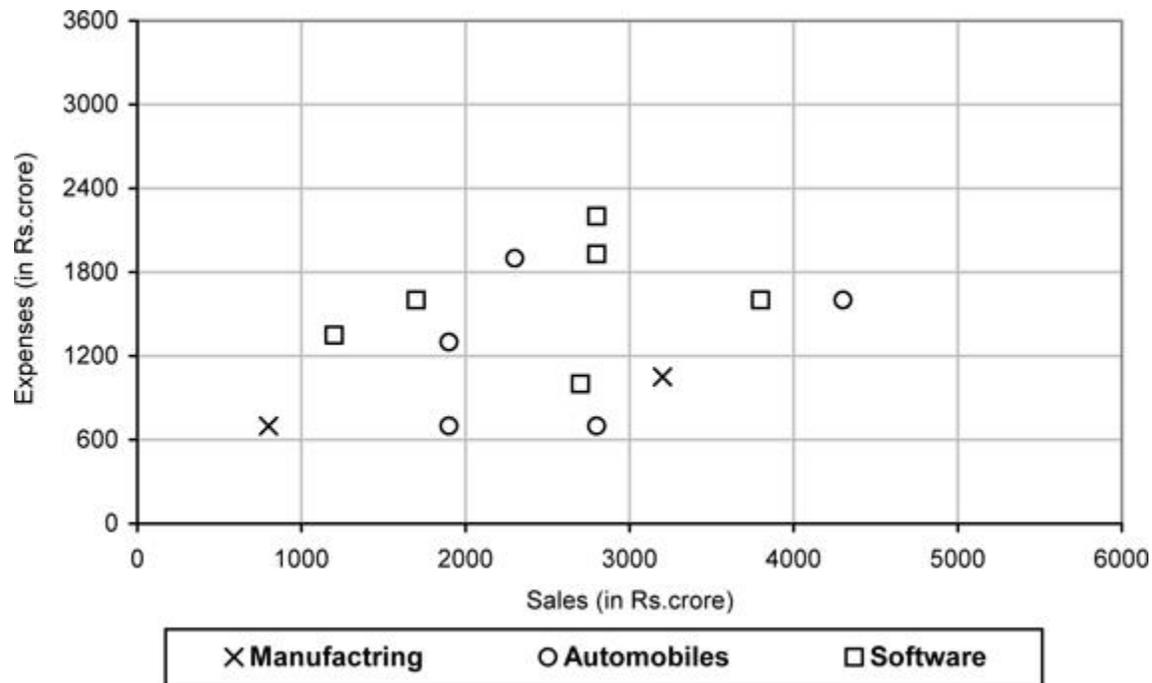
44. For how many of the companies, is the profit more than 40% of the sales (Profit = Sales - Expenses)?

(1) 4
(2) 5
(3) 6
(4) 7

45. For how many software companies are the sales more than Rs.2500 crore but the expenses less than Rs.2100 crore?

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

DIRECTIONS *for questions 46 to 49:* **Answer the questions on the basis of the information given below.**

A team must be selected from ten probables - A, B, C, D, E, F, G, H, I and J. Of these, A, C, E and J are forwards, B, G and H are point guards and D, F and I are defenders.

Further the following conditions need to be observed:

• **The team must have at least one forward, one point guard and one defender.**

• **If the team includes J, it must also include F.**

• **The team must include E or B, but not both.**

• **If the team includes G, it must also include F.**

• **The team must include exactly one among C, G and I.**

• **C and F cannot be members of the same team.**

• **D and H cannot be members of the same team.**

• **The team must include both A and D or neither of them.**

There is no restriction on the number of members in the team.

46. What could be the size of the team that includes G?

(1) 4
(2) 5
(3) 6
(4) More than one of the above

47. What would be the size of the largest possible team?

(1) 4
(2) 5
(3) 6
(4) 7

48. Who cannot be included in a team of size 6?

(1) A
(2) H
(3) J
(4) E

49. What can be the size of the team that includes C?

(1) 3
(2) 4
(3) 5
(4) More than one of the above

DIRECTIONS *for questions 50 and 51:* **The question given below is 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 question and choose the appropriate option from among the choices given below:**

50. What percentage of the questions were attempted by Ramya in the exam?
I. 30% of the questions are attempted by both Ramya and Swathi. II. The number of questions attempted by Ramya but not by Swathi is (5/8)th of the total number of questions attempted by Ramya.

(1) The question can be answered by using one of the statements alone but not by the other.
(2) The question can be answered by using either statement alone.

(3) The question can be answered by using both the statements together, but cannot be answered by using either statement alone.

(4) The question cannot be answered even by using both the statements together.

51. Each of Ankit and Bhanu belong to one of the tribes between truth tellers i.e., those who always speak the truth, and liars i.e., those who always lie. Do both of them belong to the same tribe? I. Ankit : I am a liar, only if Bhanu is a truth teller.
II. Bhanu : I am a truth teller, only if Ankit is a liar.

(1) The question can be answered by using one of the statements alone but not by the other.

(2) The question can be answered by using either statement alone.

(3) The question can be answered by using both the statements together,

but cannot be answered by using either statement alone.
(4) The question cannot be answered even by using both the statements together.

DIRECTIONS *for questions 52 to 54:* **Answer the questions on the basis of the information given below.**

  Pie chart - 1 gives the percentage shares of all the five cement companies - A, B, C, D and E - in the total quantity of cement sold in country XYZ. Pie chart - 2 gives the percentage shares of all the eleven states - P through Z - in the total quantity of cement sold in the country.

Pie chart - 1

E 14%
A 28%
D 23%
B 17%
C 18%

Pie chart - 2

P 12%
Z 13%
Q 9%
Y 9%
R 10%
X 6%
S 4%
W 9%
T 8%
V 14%
U 6%
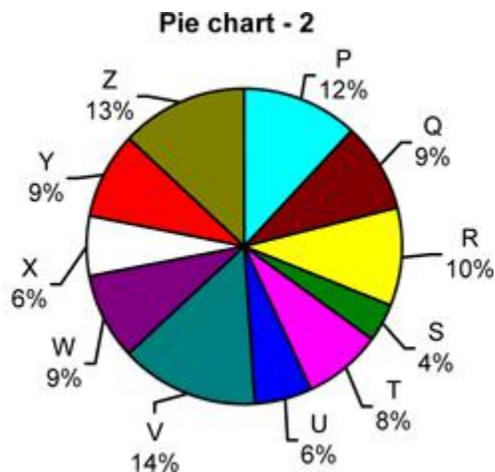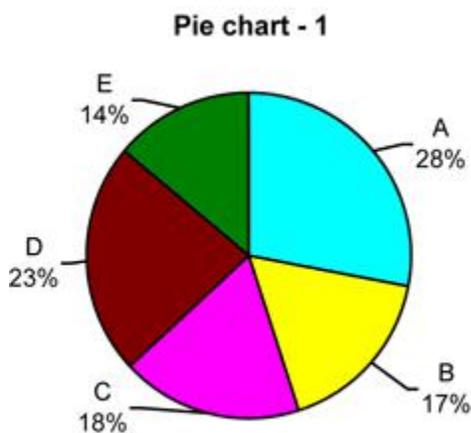
The *market share* of any company in a state is the total quantity of cement sold by the company in that state as a percentage of the total quantity of cement sold in that state.

52. In any state, if no company had more than 50% *market share*, then in at least how many states did company A sell cement?

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

53. If in all the states in which company E was present, it had a *market share* of at least 25%, in at most how many states did company E sell cement?

(1) 9
(2) 8
(3) 7
(4) 6

54. The number of companies which had sales in more than two states, is at least

(1) 1
(2) 2
(3) 3
(4) 4

DIRECTIONS *for questions 55 to 57:* Answer the questions on the basis of the information given below.

The following table gives the percentage of marks scored by three students - Ramu, Rakesh and Rohan, in five subjects. The maximum mark in two of the five subjects is 50 and the maximum mark in the other subjects is 100. Further, the marks scored by any person in any subject need not be an integer.

Subject	Student		
	Ramu	Rakesh	Rohan
A	80%	84%	52%
B	68%	85%	88%
C	56%	72%	76%
D	92%	63%	60%
E	76%	66%	80%

55. If it is known that Rohan had the highest total marks among the three, then how many marks did Ramu score in total?

(1) 372
(2) 286
(3) 284
(4) 312
(5) Cannot be determined

56. If Ramu scored 72% marks in total, then for which two subjects was the maximum mark 50?

(1) A and E
(2) B and D
(3) A and B
(4) C and E
(5) None of these

57. Which two subjects had the maximum mark as 50, if it is known that Rakesh had the highest total marks among the three?

(1) A and E
(2) B and D
(3) C and D

DIRECTIONS *for questions 58 to 61:* **Answer the questions on the basis of the information given below.**

  Each person, out of the 200 people in a certain community, speaks at least one language among English, Spanish and French. 37% of the people speak at least two of the three languages, while 15% of the people speak only Spanish. It was also known that 23% of the people speak English and French, while 20% speak English and Spanish and 12% speak all the three languages.

58. If the number of people who speak English is less than that of those who speak French, at least what percentage of the people do not speak English?

(1) 46.50%
(2) 41.50%
(3) 39.50%
(4) 37.50%
(5) 42.50%

59. If the number of people who speak Spanish is less than that of those who speak English, then at most what percentage of the people speak French but not Spanish?

(1) 46.50%
(2) 48.50%
(3) 53.50%
(4) 50.50%
(5) None of these

60. If the total number of people who speak English is twice that of those who speak French, what percentage of the people speak English or Spanish?

(1) 82%
(2) 84%
(3) 87%
(4) 93%
(5) 91%

61. If the number of people who speak French or Spanish is 144. Then what is the ratio of number of people who speak Spanish to that of English?

(1) 41 : 59
(2) 59 : 41
(3) 58 : 41
(4) 41 : 58

DIRECTIONS *for questions 62 and 64:* **Answer the questions independently of each other.**

62. It is believed by some cardiologists that a mechanical pump can be used as an artificial heart for those who suffer from a heart attack. Some experts however are in favour of only a human heart being used for patients who need a heart transplant.
Which of the following most seriously undermines the recommendation of mechanical pumps as an artificial heart?

(1) A heart transplant may not help patients who do not restrict the amount of salt in their diet.

(2) A major part of treatment for heart aliments is the post-operative regimen that results in strengthening of heart tissue and muscle.

(3) Only the human heart secretes a particular hormone that regulates blood pressure in the patient recuperating from a heart attack.

(4) There aren't many cardiologists who understand how a mechanical pump could be made to work efficiently.

(5) What it is that enables the body to accept an artificial heart is yet to be understood.

63. Szymanski suggests that the problem of racism in football may be present even today. He begins by verifying an earlier hypothesis that clubs' wage bills explain 90% of their performance. Thus, if players' salaries were to be only based on their abilities, clubs that spend more should finish higher. If there is pay discrimination against some group of players - fewer teams bidding for black players thus lowering the salaries for blacks with the same ability as whites - that neat relation may no longer hold. He concludes that certain clubs seem to have achieved much less than what they could have, by not recruiting black players.
Which one of the following findings would best support Szymanski's conclusion?

(1) Certain clubs took advantage of the situation by hiring above-average shares of black player

(1) Clubs hired white players at relatively high wages and did not show proportionately good performance.

(2) During the study period, clubs in towns with a history of discrimination against blacks, under-performed relative to their wage bills.

(3) Clubs in one region, which had higher proportions of black players had significantly lower wage bills than their counterparts in another region which had predominantly white players.

(4) Black players are as good as white players, in any circumstances and conditions.

64. Ashok, Akash, Akshay, Amar and Anoop are at a Party and are having a cocktail each. Each cocktail is made using exactly two drinks from among -

Whisky, Brandy, Rum, Gin and Vodka. The cocktails are named A, B, C, D and E. Whisky and Vodka cannot be mixed together. Brandy cannot be mixed with Rum or Vodka. Amar takes drinks made only from among Brandy, Rum, Gin and Vodka. Akash's cocktail is made by mixing Whisky and Brandy. Ashok does not take anything containing Whisky, Rum or Vodka. Akash, Ashok and Anoop are having cocktails A, B and C respectively. Cocktails A and E have exactly one drink in common. Only cocktails C and D are made from the same two drinks. The cocktail of Akshay can contain

(1) Gin and Rum
(2) Rum and Vodkha
(3) Gin and Whisky
(4) Gin and Brandy
(5) None of these

DIRECTIONS *for questions 65 and 66:* **Answer the questions on the basis of the information given below.**

In a Hockey Tournament, exactly three teams participated. Each team played exactly one match with the other two teams. The total number of goals scored by the teams in the three matches played was 9, 7 and 5, not necessarily in any specific order. At the end of the tournament, the teams with the highest, second highest and least number of matches won are declared as the Winner, the Runner-up and the Loser, respectively.

In the tournament, the total number of goals scored by the Winner is distinctly the highest and the Loser scored three goals less than the Winner.

The average goal difference (the difference between the number of goals scored by the two teams in a match) in the tournament was 1.

58. What is the total number of goals scored by the Runner-up in the tournament?

(1) 8
(2) 7
(3) 6
(4) 4
(5) 5

59. If the 12th goal in the tournament, made during one of the matches, made one of the teams win that match, then it could have been scored by
I) The Winner over the Loser
II) The Runner-up over the Loser III) The Winner over the Runner-up

(1) Only I or II
(2) Only II or III
(3) Only I or III
(4) Only I
(5) Cannot be determined