CAT Mock Paper 5

By www.collegedunia.com

Data Interpretation & Logical Reasoning

Directions for questions 35 to 38: Answer the question on the basis of the information given below.

A company has six production units, seven godowns and nine sales distributors. The production units are PA, PB, PC, PD, PE and PF. The godowns are GA, GB, GC, GD, GE, GF and GG. The sales distributors are SAA, SAB, SAC, SAD, SAE, SAF, SAG, SAH and SAI. Table I gives the cost (in Rs.) of transporting one unit from different production units to the godowns. Table II gives the cost (in Rs.) of transporting one unit from different godowns to the sales distributors.

Table – I

	PA	PB	PC	PD	PE	PF
GA	724.5	471.3	423.7	441.3	461.5	627.5
GB	213.2	507.8	681.3	628.5	628.5	523.4
GC	347.6	347.6	0	492.3	688.5	806.1
GD	310.2	121.3	206.3	687.4	502.3	752.4
GE	934.6	187.6	278.2	921.1	931.6	826.3
GF	543.2	386.5	562.8	858.3	0	296.4
GG	587.6	287.9	478.3	821.4	921.5	478.5

Table – II

	GA	GB	GC	GD	GE	GF	GG
SAA	421.4	731.5	231.4	761.1	0	648.2	471.4
SAB	436.5	721.3	264.1	703.4	121.3	591.4	402.5
SAC	391.5	703.4	291.3	331.4	191.2	543.4	363.4
SAD	178.6	256.3	273.4	291.6	431.5	481.3	521.3
SAE	231.4	201.4	0	161.5	381.7	406.4	193.4
SAF	323.1	456.5	431.6	253.8	761.8	396.1	281.5
SAG	479.6	231.7	543.4	171.8	639.4	0	234.3
SAH	631.4	161.8	581.4	250.7	941.5	273.4	367.2
SAI	547.0	192.0	381.5	107.5	641.3	196.3	121.5

35. What is the least cost (in Rs.) of transporting one unit from any production unit to any sales distributor?

(1) 187.6
(2) 121.3
(3) 0
(4) 347.6

36. What is the least cost (in Rs.) of transporting one unit from the production unit PD to the sales distributor SAA?

(1) 921.1

(2) 862.7

(3) 723.7

(4) None of these

37. How many possible ways are there for transporting the goods from any production unit to any sales distributor?

(1) 42

(2) 63

(3) 105

(4) 378

38. What is the maximum cost (in Rs.) of transporting one unit from any production unit to any sales distributor?

(1) 1873.1

(2) 1876.1km

(3) 9921.1

(4) 862.7

(5) 723.7

(6) None of these

(7) 1861.4

(8) None of these

Directions for question 39: The question has a set of four statements. Each statement has three segments. Choose the alternative where the third segment can be logically deduced using both the preceding two, but not just one of them.

**39. I. No crackers sparkle. Some which sparkle are electric bombs.
Some electric bombs are not crackers.**

II. All volcanoes are twisters. Some volcanoes do not burst. Some twisters do not burst.

III. All gamblers play cricket. Those who play cricket are players. Some gamblers are not players.

IV. Some lunatic people are mentally handicapped. All lunatic people are lucky. Some mentally handicapped are lucky.

(1) I, II only

(2) III, IV only

(3) I, III, IV only

(4) I, II, IV only

Directions for questions 40 and 41: The question given below is followed by two statements, I and II. Study the information given in the two statements. Assess whether the statements are sufficient to answer the question and choose the appropriate option among the given choices.

40. Is a > b?
I. $8 - (a - b)^3$ is a positive number.
II. $4 - (a - b)^2$ is a negative number.

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

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

**41. a, b, and c are three distinct integers. Is b the greatest of the three?**

I. a is less than at least one of the two integers b and c. II. c is less than at least one of the two integers a and b.

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

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

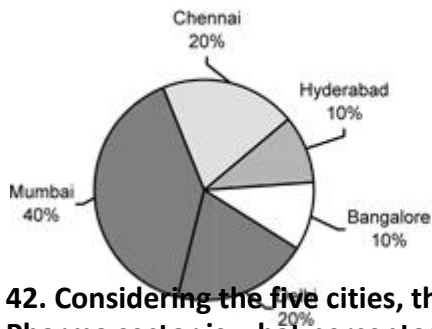**Directions for questions 42 to 45: Answer the question on the basis of the information given below**

The sector wise percentage distribution of jobs created in each of five different cities during the month of January
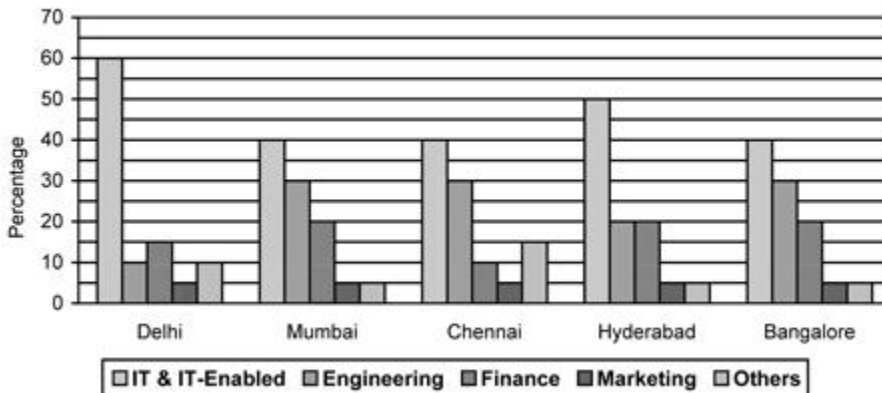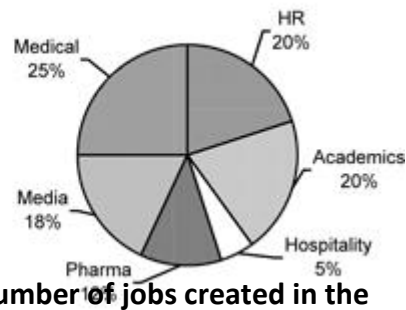
Note: The total number of jobs created during the month of January in all the five cities together is 10,000.

The following two pie-charts give further information regarding the total jobs mentioned in the above bar graph. Pie chart - I gives the city wise percentage distribution of the total number of jobs created in the month of January. Pie chart - II gives the sector wise percentage distribution of the total number of jobs created in the "Others" category in the month of January across all the five cities together.

PIE CHART – I   PIE CHART – II

Chennai 20%
Hyderabad 10%
Mumbai 40%
Bangalore 10%

HR 20%
Medical 25%
Academics 20%
Media 18%
Hospitality 5%
Pharma

42. Considering the five cities, the total number of jobs created in the Pharma sector is what percentage of the total number of jobs created in the Engineering sector?

(1) 3.84%

(2) 38.4%

(3) 0.384%

(4) None of these

43. The number of HR jobs created in Mumbai is what percentage more than the number of Media jobs created in Bangalore?

(1) 10%

(2) 25%

(3) 20%

(4) Cannot be determined

44. The difference between the total number of Finance jobs and Marketing jobs created in all the five cities together is

(1) 1200

(2) 1000

(3) 2500

(4) 2000

45. The total number of Hospitality jobs created in all the five cities together is what percentage of the total number of jobs created in Hyderabad?

(1) 4%

(2) 0.25%

(3) 40%

(4) 25%

Directions for questions 46 and 47: Answer the question independently of the other questions

46. A dealer purchased a total of 60 pairs of coloured and white shoes, all either Reebok shoes or Adidas shoes. The dealer arranged these pairs of shoes by different categories and found the following. The number of pairs of white casual Adidas shoes is a two-digit positive number. The number of pairs of white casual Adidas shoes equals the number of pairs of white casual Reebok shoes. All non-white Adidas shoes were formals and there are four times as many of them as there are white formal Adidas shoes. There are no casual Reebok shoes that are not white. There are exactly 10 pairs of white formal Reebok shoes. There are exactly 20 pairs of Reebok shoes that are neither casuals nor white coloured. Find the number of white formal Adidas shoes.

(1) 2

(2) 4

(3) 10

(4) 20

47. Four officers, designated as CEO, COO, CFO, and CIO, read a certain number of newspapers early in the morning. One of them reads four newspapers, another reads three newspapers, the third reads two newspapers while the fourth one reads one newspaper. Below are some additional facts regarding the names of these officers.
i) Michael isn't the CFO.
ii)   John is the CIO.
iii)   Michael isn't the CEO and he reads more number of newspapers than Patterson.
iv)   The one who is the CEO reads more number of newspapers than Patterson.
v)   The person who is the COO reads the maximum number of newspapers.
vi)   Anderson doesn't read two newspapers.
Which of the following statements is necessarily true?

(1)   John is the CIO and reads 2 newspapers.

(2)   Patterson is the CFO and reads 1 newspaper.

(3)   Anderson is the CEO and reads 3 newspapers.

(4)   Michael is the CFO and reads 4 newspapers.

Directions for questions 48 and 49: The question given below is followed by two statements, I and II. Study the information given in the two statements. Assess whether the statements are sufficient to answer the question and choose the appropriate option among the given choices

48. The centre of the circle is at O (0, 0). Points A and B lie on the circle and also on the y-axis. P is a point on the positive x-axis. Radius of the circle is $\sqrt{8}$. Is ∠OAP > 45°?
I. OP > 3
II. OP < 5

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

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

49. Each of the four boys named M, N, O and U has a different fruits among guava, apple, orange and apricot. Between M and N, one person had apple and the other one had apricot. Which boy has which fruit?

I. M has the apple. II.
O has the guava.

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

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

Directions for question 50: Answer the question independently of the other questions.

50. Eight persons - A, B, C, D, E, F, G and H - sit in a row facing the same direction, not necessarily in the same order. These eight persons belong to two different families. Each family comprises a father, a mother, a son and a daughter. The persons sit such that no two members of the same family are next to each other and the two fathers sit at either ends of the row. Further, the following information is available:
(i) A is the father of C, whose mother is G.
(ii) H and E belong to different families and are of different genders.

(iii) B is the brother of E.

(iv) G and F are of the same gender

(v) A sits at the left end of the row.

(vi) Each child is sitting next to at least one mother and each mother is sitting next to at least one child.

(7) F and B belong to the same family.

In how many different ways can these eight people sit?

(1) Two

(2) Four

(3) Six

(4) Eight

Directions for questions 51 to 54: Answer the question on the basis of the information given below.

In an examination there are five questions - Q.1, Q.2, Q.3, Q.4 and Q.5 - each with five choices (a), (b), (c), (d) and (e). Five students - A, B, C, D and E - wrote the exam. The choices opted by the students for the questions 1, 2, 3, 4 and 5 are shown in the table below. One mark is awarded for a right answer and no mark is awarded for a wrong answer. No two students got the same total marks in these five questions.

Name	Choice opted for				
	Q.1	Q.2	Q.3	Q.4	Q.5
A	b	c	a	d	e
B	c	d	a	e	b
C	c	d	a	b	e
D	e	a	c	b	d
E	b	c	a	e	d

It is observed that no two questions have the same choice as the right answer.

51. Who scored the least total marks?

(1) B

(2) A

(3) D

(4) E

52. What is correct answer choice for Q.3?

(1) a

(2) b

(3) c

(4) Cannot be determined

53. If A's score is more than E's score, then what is the score of B?

(1) 3

(2) 2

(3) 1

(4) Cannot be determined

54. If C's score is less than B's score, then what is the score of E?

(1) 1

(2) 0

(3) 3

(4) 2

Directions for questions 55 to 57: Answer the questions on the basis of the information given below.
The table below provides certain demographic details of 30 respondents who were part of a survey. The demographic characteristics are: gender, number of children, and age of respondents. The first number in each cell is the number of respondents in that group. The minimum and maximum age of respondents in each group is given in brackets. For example, there are five female respondents with no children and among these five, the youngest is 34 years old, while the oldest is 49

No. of Children	Male	Female	Total
0	1 (38, 38)	5 (34, 49)	6
1	1 (32, 32)	8 (35, 57)	9
2	8 (21, 65)	3 (37, 63)	7
3	2 (32, 33)	2 (27, 40)	11
Total	12	18	4

55. The percentage of respondents aged less than 40 years is at least

(1) 10%

(2) 16.67%

(3) 20.0%

(4) 30%

56. Given the information above, the percentage of respondents older than 35 can be at   most

(1)30%
(2)73.33%
(3)76.67%
(4) 90%

57. The percentage of respondents that fall into the 35 to 40 years age group (both inclusive) is at least
(1)6.67%
(2)10%
(3)13.33%
(4)26.67%

Directions for 58 to 60: Answer the following questions on the basis of information provided below:-

Rang Barsey Paint Company (RBPC) is in the business of manufacturing paints. RBPC buys RED, YELLOW, WHITE, ORANGE, and PINK paints. ORANGE paint can be also produced by mixing RED and YELLOW paints in equal proportions. Similarly, PINK paint can also be produced by mixing equal amounts of RED and WHITE paints. Among other paints, RBPC sells CREAM paint, (formed by mixing WHITE and YELLOW in the ratio 70:30) AVOCADO paint (formed by mixing equal amounts of ORANGE and PINK paint) and WASHEDORANGE paint (formed by mixing equal amounts of ORANGE and WHITE paint). The following table provides the price at which RBPC buys paints.

Color	Rs/litre
Red	20
Yellow	25
White	15
Orange	22
Pink	18

58. The cheapest way to manufacture AVOCADO paint would cost
(1)Rs.19.50 per litre
(2)Rs.19.75 per litre
(3)Rs.20.00 per litre
(4) Rs.20.25 per litre

59. WASHEDORANGE can be manufactured by mixing
(1)CREAM and RED in the ratio 14:10
(2)CREAM and RED in the ratio 3:1
(3)YELLOW and PINK in the ratio 1:1
(4)RED, YELLOW, and WHITE in the ratio 1:1:2

60. Assume that AVOCADO, CREAM, and WASHEDORANGE each sells for the same price. Which of the three is the most profitable to manufacture?
(1)AVOCADO
(2) CREAM
(3)WASHEDORANGE
(4)Sufficient data is not available

Directions for 61 to 63: Answer the questions on the basis of the information given below.

Five women decided to go shopping to M.G. Road, Bangalore. They arrived at the designated meeting place in the following order: 1. Archana, 2. Chellamma, 3. Dhenuka, 4. Helen, and 5. Shahnaz. Each woman spent at least Rs.1000. Below are some additional facts about how much they spent during their shopping spree.
      i. The woman who spent Rs. 2234 arrived before the lady who spent Rs. 1193.
      ii. One woman spent Rs. 1340 and she was not Dhenuka.
      iii.One woman spent Rs. 1378 more than Chellamma.
      iv.One woman spent Rs. 2517 and she was not Archana.
      v. Helen spent more than Dhenuka.
      vi.Shahnaz spent the largest amount and Chellamma the smallest

61. The woman who spent Rs. 1193 is
      (1)Archana
      (2)Chellamma
      (3)Dhenuka
      (4)Helen

62. What was the amount spent by Helen?
      (1)Rs. 1193.
      (2)Rs. 1340.
      (3)Rs. 2234.
      (4)Rs.2517

63. Which of the following amounts was spent by one of them?
      (1)Rs. 1139.
      (2)Rs. 1378.
      (3)Rs. 2571.
      (4)Rs. 2718

Directions for 64 to 66: Answer the questions based on the following information.
Following are the essential details of a new postpaid billing plan called 'Airtel one' which is introduced by Airtel (a GSM mobile service provider)

Pulse Rate	60 secs		
Free Airtime on Plan	Nil		
Price of plan	Rs. 99		
Incoming Calls (in Rs/min)	FREE		
Outgoing Calls (in Rs/min)	Airtel	GSM/CDMA	Landline/WLL

Local Rates	Rs. 1	Rs. 1	Rs. 2
STD Rates			
50-200 km	Rs 1.50	Rs 1.50	Rs 2
200-500 km	Rs 1.50	Rs.2.50	Rs.2.50
More than 500 km	Rs.1.50	Rs.3.00	Rs. 3.50
ISD Rates			
USA,Canada,Europe (fixed line)	Rs 7		
Gulf,Europe (Mobile),SAARC	Rs 10		
Rest of the world	Rs 40		
SMS Rates			
Local	Rs 1.50		
National	Rs. 2		
International	Rs. 5		
Value Added Services(Rs.)	Rs. 3 & Rs. 6 depending on the servics		

64. In a month Abhishek spent 150 min on local(GSM),50 min (WLL) on national (above 700 km) and 25 min on international (USA) calls and sent 14 international and 15 national SMSs,then what is the amount of his bill for that month?
(1)Rs 500
(2)Rs 599
(3)Rs 699
(4)Rs 799

65. If the Government imposes 12% service tax only on all international calls ,then in the previous question what will be the amount Abhishek would have paid for the same month
(1)Rs 699
(2)Rs 720
(3)Rs 820
(4)Rs 790

66.A new SMS scheme was introduced at a rate of 60 paise for one local SMS with an additional monthly charge of Rs 35 .Who will be benefit from the scheme?A person sending
(1)38 local SMS a month
(2)40 local SMS a month
(3)60 local SMS a month
(4)50 local SMS a month