



QUANTITATIVE ABILITY II

Data Interpretation

Data Interpretation Questions and Answers

Given below are sample Data Interpretation problems for candidates to prepare themselves and might help the candidates to get confident in the Data Interpretation section and score well in the exam.

Directions (Q1 - Q5): Study the information given below and answer the following questions:

Mr X has built a mansion with 10 rooms. He was confused about the colours he should use while painting each room. He had the following choice of colours: blue, hazy grey, jumping yellow, teal, violet latte, Terry Cherry and happy pink. It was also known that he could paint more than 1 room with a single colour. Finally, he set up an algorithm to decide the colours that he would be using.

- If he painted any room teal, then he did not paint any other room happy pink.
- If he painted any room blue, then he did not paint any other room jumping yellow.
- If he painted any room blue, then he painted at least one room happy pink.
- If he painted any room jumping yellow, then he painted at least one room violet latte.
- If he painted any room violet latte, then he painted at least one room happy pink.
- If he painted any room happy pink, then he painted at least rooms happy pink.

Q 1. Which one of the following could be a complete list of the number of rooms and colours that Mr X used to paint some of the rooms of his house?

1. one blue, one Terry cherry, one violet latte, two happy pink
2. one blue, one teal, one Terry cherry, three happy pink
3. two blue, one teal, three Terry Cherry
4. one jacket, one Terry cherry, two violet latte and one happy pink

Answer: (1) one blue, one Terry cherry, one violet latte, two happy pink

Solution:

Option 2 is a violation of condition 1.

Option 3 is violation of condition 3.

Option 4 is violation of condition 6.

Q 2. If Mr. X did not paint any room happy pink, what was the maximum number of the different types of colours that he could paint ?

1. two
2. three
3. four
4. five

Answer: (2) three

Solution: Since he did not paint any happy pink => he won't be painting any room blue (condition 3) and he also won't paint any room violet latte (condition 5) => he won't paint any room jumping yellow (condition 4). So, he can't paint 4 types of colours out of 7 => he can paint 3 different types of colours.

Q 3. Which one of the following statements must be false?

1. Mr. X painted exactly four rooms with colours, one of which was a hat.
2. Mr. X painted exactly three rooms with colours, one of which was a happy pink.
3. Mr. X painted exactly four rooms with colours, one of which was a blue.
4. None of these

Answer: (4) None of these

Solution: If Mr. X paints a violet latte => he must paint happy pink that too 2 rooms (condition 5 and 6).

If Mr. X paints happy pink => he will paint 2 rooms with it (condition 6) and he can paint 1 violet latte.

If Mr. X paints a room blue => he cannot paint jumping yellow (condition 2) , he painted happy pink that too two of them (condition 3 and 6).

He also could have painted a room hazy grey, terry cherry or violet latte as these two have got no constraints on them.

Q 4. If Mr. X painted as many different types of colours as possible, then it must be true that he did not paint one of the following types of colours.

1. blue
2. hazy grey
3. teal
4. jumping yellow

Answer: (3)

Solution: From the solution of the 2nd question, he should paint happy pink if he has to paint the maximum colours possible => he cannot paint teal (condition 1).

Q 5. If Mr. X painted at least one room, find out which one of the following are the minimum and the maximum numbers of the types of colours that he could paint ?

1. 1, 4
2. 1, 5
3. 1, 6
4. 2, 5

Answer: (2)

1. 5Solution:

He can paint hazy grey and then he will paint the minimum number of colours 1 as there are no constraints on him for painting hazy grey.

If he paints happy pink, he cannot paint teal and he can paint any one of jumping yellow or blue (condition 1 and 2). =>maximum number of colours that he can paint = 5.

Directions (Q6 - Q8): The two pie charts below show the percentage market share on value basis of the companies A to D and others in a sectorial market for 1999 and 2000



FIGURE 1: YEAR 1999

FIGURE 2 : YEAR 2000

Market size 1999= 150 crore and Market size 2000= 375 crore

Q 6. Which company had the minimum growth in sales in these two years?

1. B
2. A
3. C
4. Others

Answer: (1)

Solution:

Company	1999	2000
A	60	112.5
B	30	93.75
C	30	56.25
D	22.5	75
Others	7.5	37.5

Q 7. If each company increases its sales value by 10%, then what is the percentage growth of the detergent market?

1. 10%
2. 20%
3. 30%

4. 8%

Answer: (1)

10%Solution:

It will be equal to that of the whole market = 10%

Q 8. If the total sales of the market is doubled for 1999 and 2000, what would be the ratio of sales of D for 2000 to 1999?

1. 2:1
2. 3:4
3. 15:8
4. 10:3

Answer: (4)

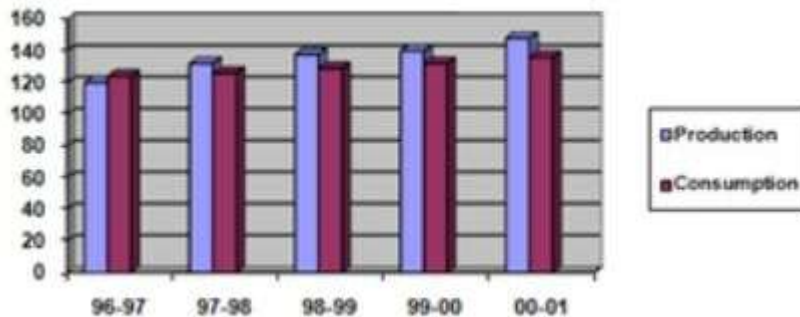
10:3Solution:

The ratio will not change because if the total sales are doubled, the sales of D will also double for both the years.

Hence the ratio will be $75:22.5=10:3$

Directions (Q9 - Q13): Study the information given below and answer the following questions:

The given figure shows the production and consumption of Ragi in India over a period of 5 years.



Q 9. If surplus ragi available each year was exported, what % of the ragi produced between the years '97-98 and '00-01 was exported?

1. 15%
2. 10%
3. 6%
4. none of these

Answer: (4) None of these

Solution:

Total ragi surplus between 98-98 to 00-01 = $6+9+8+12 = 35$ lakh tones

Total ragi produced between 97-98 and 00-01 = $132 + 138 + 140 + 148 = 558$ lakh tones

Percentage of production exported = $35/558 \times 100 = 6.27\%$

Q 10. Between the years '96-97 and '00-01, the following can be said about the cumulative production and consumption of ragi

1. Cumulative production of ragi exceeded that of consumption by 18 lac tones
2. Cumulative consumption of ragi was 89% of the cumulative consumption of ragi during this period.
3. Cumulative production of ragi exceeded cumulative consumption of ragi by 4.7% during this period.
4. Consumption of ragi never exceeded the production of ragi during this period.

Answer: (3) Cumulative production of ragi exceeded cumulative consumption of ragi by 4.7% during this period.

Solution:

Cumulative production of ragi= 678 lakh tones

Cumulative consumption of rice = 647 lakh tones

Cumulative production exceeds cumulative consumption by 4.7%

Q 11. Which of the following statements are true?

I) The YOY rate of growth of production of ragi has been greater than the YOY rate of growth of consumption of ragi during the period 97-98 to 00-01

II) The CAGR rate of growth of production of ragi has been greater than the CAGR rate of growth of consumption of ragi during the period 97-98 to 00-01

III) The amount of ragi exported in a given year was greater than the previous year during all the years in the period 97-98 to 00-01

1. I only
2. I and II only
3. III only
4. II only

Answer: (4) II only

Solution:

Year	% Production Growth	% Consumption Growth
96-97		
97-98	10	1.61
98-99	4.55	2.38
99-2000	1.45	2.33
2000-2001	5.71	3.03

From the table, we can see that not in all years in the YOY% growth of production greater than YOY% growth in consumption.

Hence, statement I is not true Overall production has grown faster than consumption. Hence, statement II is correct

In 99-00, surplus ragi was less than that in 98-99. hence statement III is also not true.

Q 12. What was the % rate of growth in production of ragi between the period 99-00 and 00-01?

1. 4.05%
2. 5.71%
3. 1.67%
4. 10%

Answer: (2) 5.71%

Solution: Production increased from 140 lakh tones to 148 lakh tones, increase $8/140 = 5.71\%$

Q 13. Which of the following years witnessed a two digit rate of growth of ragi?

- I) 97-98
II) 99-00
III) 00-01
1. I only
 2. I and II
 3. I and III
 4. None of these

Answer: (2) I and II

Solution: The year 97-98 alone witnessed a 2 digit rate of growth in production

Direction (Q14 - Q18): The International Kabbadi League (IKL) was formed last month to give a boost to the game at international standards.

It had a tournament, where 2 teams played some matches. Each team comprised of 7 players each.

The listings of the 2 teams X and Y were lost, but certain details regarding the players were available.

A,B,C,D,E,F,G,H,I,J,K,L,M and N are the players.

- D and E were in Team X, K and G were in team Y.
- H and B were in the same team, but not in the team in which F was.
- The sum of the scores of members of Team Y was not greater than 115.
- The table containing the details of the players and their scores is below

A	B	C	D	E	F	G	H	I	J	K	L	M	N
28	12	29	10	9	11	13	14	22	28	16	20	18	15

Q 14. Which of these players was definitely in Team Y?

1. L
2. M
3. N
4. None of these

Answer: (4) None of the above

Q 15. If the score for team Y was less than 110, what could be the score of team X?

1. 135
2. 137
3. 139
4. Cannot be determined

Answer: (2) 137

Q 16. Which of these players could not be in team Y, if the score of Y was 115?

1. A
2. L
3. M
4. N

Answer: (1) A

Q 17. Which of these players was definitely in team X, if the score of Y was 112?

1. I
2. L
3. M
4. N

Answer: (3) M

Q 18. Which of these players are definitely in Team X?

1. F
2. H
3. B
4. None of these

Answer: (4) None of these

Solution (Q14 - Q18):

There are 2 cases

(1) D, E, H, B in team X and K, G, F in team Y (total = 40)

So the only possible team Y is K, G, F, L, M, N and I (total=115)

(2) D, E, F in team X and K, G, H, B in team Y (total = 55)

So the possible additions to Y are

(a) L, M and N (total = 53)

(b) L, M and I (total = 60)

(c) I, M and N (total = 55)

(d) I, L and N (total = 57)

Q 19. Eight students J, K, L, M, N, O, P and Q go on for a science exhibition in two batches of four each. J and K never go together. M and O do not go together. K and Q have to go together. If K and L go in one batch, then which of the following can be in the other batch?

1. A. J, M, O and P
2. J, M, Q and P
3. J, M, N and P
4. J, L, N and P

Answer: (3) J, M, N and P

Solution:

Two batches have to be formed from students J, K, L, M, N, O, P and Q. If K and L are in one batch, then Q must be in that batch, as K and Q are together.

J cannot be in that batch as it is given that J and K cannot go together.

K, L, Q form a team of 3 members, then the fourth member may be M or N or O or P.

As M and O do not go together, either M alone or O alone should go with K, L, Q.

So the other batch may be either "J, N, O, P" or "J, M, N, P".

Q 20. Three Students – Jose, Bharath and Simon – have to select three sports each out of the six sports– Hockey, Baseball, Tennis, Basketball, Cricket and Football. If Football is selected, then Hockey cannot be selected. If Simon selects Tennis, then Jose does not select Football. If Bharath selects Baseball, then Simon cannot select Tennis and if Jose selects Hockey, then Simon selects Cricket and Football. If Simon selects Football and Bharath selects Baseball, then Simon cannot select

1. Hockey and Tennis.
2. Baseball and Tennis.
3. Tennis and Basketball.
4. Hockey and Cricket

Answer: (1) Hockey and Tennis

Solution:

It is given that A. if Football is selected, then Hockey cannot be selected. B. if Simon selects Tennis, then Jose does not select Football.

Hence if Jose selects Football, Simon cannot select Tennis. C. if Bharath selects Baseball, then Simon cannot select Tennis.

Hence if Simon selects Tennis, Bharath cannot select Baseball.

D. if Jose selects Hockey, then Simon selects Cricket and Football.

Hence if Simon does not select Cricket or does not select Football, then Jose cannot select Hockey.

Simon does not select Tennis, as Bharath selects Baseball. Further, if Football is selected, Hockey cannot be selected.

Directions (Q21 - Q25):

It's Valentine's Day and five boys Amit, Bhuvan, Chetan, Dilip and Ehsaan are buying flowers for their respective girlfriends.

Each of these boys has a preference from 1 to 5 (1 being first preference, it is given the first rank) of flowers among orchid, rose, carnation, gerbera and daffodil.

There is a level of dissimilarity between the five boys and this is measured as the sum of the differences in the ranks assigned by them to each of these 5 flowers. The greater this difference, the more dissimilar the persons.

The following table indicates the preferences of each of these five boys:

	Amit	Bhuvan	Chetan	Dilip	Ehsaan
Orchid	2	5	1	4	1
Rose	4	2	3	3	3
Carnation	3	1	4	2	2
Gerbera	5	4	5	1	4
Daffodil	1	3	2	5	5

Q 21. The pair of persons who are the most dissimilar among the following is:

1. Amit- Bhuvan
2. Bhuvan- Dilip
3. Dilip- Ehsaan
4. Chetan- Ehsaan

Answer: (1) Amit- Bhuvan

Solution:

Name	Level of Dissimilarity
Amit-Bhuvan	$3+2+2+1+2 = 10$
Bhuvan-Dilip	$1+1+1+3+2 = 8$
Dilip-Ehsaan	$3+0+0+3+0 = 6$
Chetan-Ehsaan	$0+0+2+1+3 = 6$

Q 22. Who among the following is most similar to Amit?

1. Bhuvan
2. Chetan
3. Dilip
4. Ehsaan

Answer: (3) Dilip

Solution:

Name	Level of Dissimilarity
Amit-Bhuvan	$3+2+2+1+2 = 10$
Amit-Chetan	$1+1+1+0+1 = 4$
Amit-Dilip	$2+1+1+4+4 = 12$
Amit-Ehsaan	$1+1+1+1+4 = 8$

Q 23. Which of the following pairs are the least dissimilar among the five?

1. Dilip-Ehsaan
2. Amit- Chetan
3. Chetan-Ehsaan
4. Amit- Ehsaan

Answer: (2) Amit-Chetan

Solution:

Name	Level of Dissimilarity
Dilip-Ehsaan	$3+0+0+3+0 = 6$
Amit-Chetan	$1+1+1+0+1 = 4$
Chetan-Ehsaan	$0+0+2+1+3 = 6$
Amit-Ehsaan	$1+1+1+1+4 = 8$

Q 24. For the person who's second preference is Rose, what is the level of dissimilarity with the one who's fourth preference is orchid?

1. 8
2. 6
3. 10
4. 12

Answer: (1) 8

Solution: The person who's second preference is Rose is Bhuvan and the one who's fourth preference is orchid is Dilip.

Their level of dissimilarity is 8

Q 25. What is the level of dissimilarity between Amit and Ehsaan?

1. 6
2. 8
3. 4
4. 10

Answer: (2) 8

Directions (Q26 -

Q28):

On a playing ground, Ariya, Amita, Binoy, Shama and Payal are standing as described below facing the North.

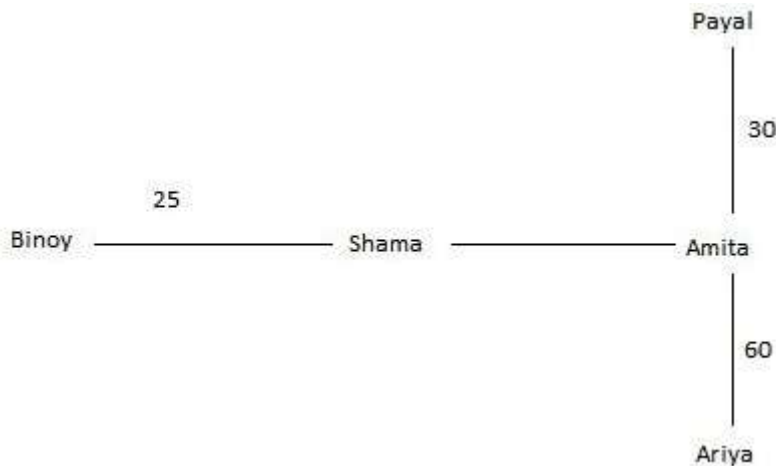
- (i) Amita is 40 metres to the right of Shama.
- (ii) Ariya is 60 metres to the south of Amita.
- (iii) Binoy is 25 metres to the west of Shama.
- (iv) Payal is 90 metres to the north of Ariya.

Q 26. Who is to the north-east of the person who is to the left of Amita?

- 1. Binoy
- 2. Shama
- 3. Ariya
- 4. **Payal**

Answer: (4)

PayalSolution:



Q 27. If a boy walks from Binoy, meets Shama followed by Amita, Ariya and then Payal, how many metres has he walked if he has travelled the straight distance all through?

- 1. 215 metres
- 2. 185 metres
- 3. 155 metres
- 4. **245 metres**

Answer: (1) 215 metres

Solution:

B-S(25) S-AM(40) AM-ARIYA(60) ARIYA-P(90) TOTAL=215

Q 28. Who is to the south of the person who is to the north-east of Shama?

- 1. Ariya
- 2. Binoy
- 3. Amita
- 4. both a & c

Answer: (4) both a & c

Solution: Northeast of Shama- Payal South of Payal- Amita and Ariya

Directions (Q29 - Q31):

Eight years ago, Yellow was half as old as Green will be when Green is one year older than Blue will be at the time when Yellow will be five times as old as Blue will be 2 years from now.

Ten years from now Blue will be twice as old as Green was when Yellow was nine times as old as Blue.

When Blue was one year old, Yellow was three years older than Blue will be when Green is three times as old as Yellow was six years before the time

when Green was half as old as Blue will be when Yellow will be ten years older than Yellow was when Green was 1/3 rd as old as Blue will be when Yellow will be three times as old as she was when Green was born.

Q 29. How old is Blue?

1. 4
2. 6
3. 2
4. 3

Answer: (4) 3

Q 30. How old will Green be 10 years from now?

1. 17
2. 8
3. 18
4. none of these

Answer: (3) 18

Q 31. How old would have Yellow been 6 years ago?

1. 15
2. 8
3. 9
4. none of these

Answer: (3) 9

Solution (Q29 - Q31):

This should be solved either by assumption using answer options or by forming equations. Since none of these is also involved, its better to go by using equations

Let $y_1, y_2 \dots$ be the indefinite years. Let t be the year blue was born, j green and m - yellow.

Let y be the current year $y - 8 - m = \frac{1}{2} (y_2 - j) = 1 + y_3 - t y_3 - m = 5(y + 2 - t) \dots (1)$

$y + 10 - t = 2(y_1 - j) \quad y_1 - m = 9(y_1 - t) \dots (2)$

$t + 1 - m = 3 + y_4 - t y_4 - j = 3(y_5 - 6 - m) \quad y_5 - j = \frac{1}{2} (y_6 - t) \quad y_6 - m = 10 + y_7 - m y_7 - j = \frac{1}{3} (y_8 - t) \quad y_8 - m = 3(j - m)$

$t = y - 3j = y - 8m = y - 15$

Therefore, green= 8 years, blue= 3 years & yellow = 15 years

Directions (Q32 - Q36):

After the 2nd MOCK CSAT, Seven friends – Charles, David, Hanish, Kedar, Mahoud, Ninja and Raul are comparing their scores in this exam. We know the following information about their scores.

- All of them had distinct scores.

- Kedar scored the same marks as the average of the marks scored by Charles and David where Charles scored more marks than David.
- Both Mahoud and Ninja scored less marks than Hanish but more than Raul and the marks scored by Raul is not the least
- The number of persons who scored more marks than Kedar is same as the number of persons who scored less marks than Kedar.
- Charles scored less marks than Mahoud.

Q 32. Among them who scored the second highest marks?

1. Ninja
2. Mahoud
3. Chandru
4. Cannot be determined

Answer: (2) Mahoud

Q 33. Among them who scored the second lowest marks?

1. Charles
2. Raul
3. Ninja
4. Cannot be determined

Answer: (2) Raul

Q 34. How many people scored more marks than Charles?

1. 5
2. 4
3. 3
4. 2

Answer: (4) 2

Q 35. What is the number of persons whose scores are in between the scores of Ninja and David?

1. 3
2. 2
3. 1
4. 0

Answer: (3) 1

Q 36. Which of the following is true?

1. Ninja scored more than Mahoud.
2. David scored more than Ninja.
3. Raul scored more than Kedar
4. Ninja scored more than David.

Answer: (4) Ninja scored more than David

Solution (Q32 - Q36):

Let the marks scored by Charles, David, Hanish, Kedar, Mahoud, Ninja and Raul be represented by C, D, H, K, M, N and R respectively.

From (a), all scored distinct marks:

From (b), $C > K > D$

From (c), $H > M, N > R$

From (d), Kedar scored the fourth highest marks.

From (e), $M > C$

From (c), R is not the least marks scored.

\therefore D is the least.

From (b), (c) and (e), $H > M > C > K > D$

As K is the fourth highest score and D the lowest score and as $N > R$, N and R must be the fifth and sixth highest scores respectively.

$H > M > C > K > N > R > D$

Directions (Q37 - Q40):

To assess the SOPS handed out in the Union budget during a prime time program, a news channel must choose 2 GDA members and 2 RGP members. At least one should be an economist and at least one should be an industrialist. The GDA members are A,B,C,D and E, RGP members are F,G,H and I. C,F, and G are economists. D and I are industrialists. F and C are at loggerheads, and will not appear together. F will take part only if A takes part. D refuses to participate if G is present and E refuses to participate if I is present.

Q 37. Which of the following is not an acceptable panel?

1. F,H,A,D
2. G,H,A,C
3. H,I,B,C
4. F,I,A,D

Answer: (2) G,H,A,C

Q 38. How many acceptable panels can be put together?

1. 9
2. 5
3. 10
4. 11

Answer: (FHAD) (HIBC) (FIAD) (AFDI) (ABFI) (ACHI) (CDHI) (BCGI) (CEDH) – 9 panels

Q 39. Which of the nine members in the panel will feature in the greatest number of different acceptable panels?

1. C
2. F
3. A
4. I

Answer: (4) I

Solution: I appears on 7 panels

Q 40. If A and B are chosen as the GDA members, then who will represent the panel from the RGP party?

1. F and I only

2. G and H
3. G and I only
4. a or c

Answer: (4) a or c

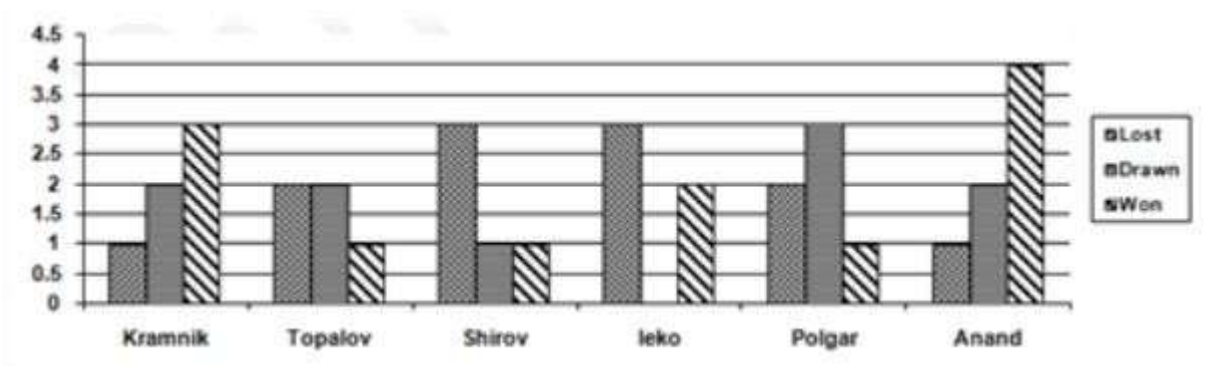
Directions (Q41 - Q45): Six players, Kramnik, Topalov, Shirov, Leko, Polgar and Anand participate in a chess tournament.

In the first round, each player plays one match against every other player. The winning player is awarded 3 points and the losing player gets 1 point.

In case of a draw, each player is awarded 2 points. The player with the highest number of points enters the final.

The semifinal is played between the next two players. The winner of the semifinal enters the final. The winner of the finals is declared the champion.

There can be no draws in the final and the semifinal. The results of all the matches played by the players at the end of the tournament are given below.



Q 41. Who is the champion?

1. Kramnik
2. Topalov
3. Leko
4. Anand

Answer: (4) Anand

Q 42. The semifinal is played between players

1. Kramnik and Topalov
2. Topalov and Polgar
3. Kramnik and Anand
4. Polgar and Anand

Answer: (4) Polgar and Anand

Q 43. Find the points of the semifinalists before the semifinal

1. 9,10
2. 10,10
3. 10,11

4. 11,11

Answer: (3) 10,11

Q 44. Which two players played the final?

1. Kramnik and Topalov
2. Topalov and Leko
3. Kramnik and Anand
4. Topalov and Anand

Answer: (4) Topalov and Anand

Q 45. Which of the following is/are true?

- I. The top three rankings at the end of the tournament are the same as those at the end of the first round.
- II. Anand won the maximum number of matches in the first round.
- III. Kramnik has the highest number of points at the end of first round.
 1. I only
 2. II only
 3. III only
 4. I, II and III

Answer: (3) III only

Directions (Q46 - 50): The Poolside chess club management had misplaced the order of its annual winners from 2001 to 2005, among Pavan, Bishu, Rahul, Arti and Gavin.

When 5 of the regular staff (A,B,C,D,E) in the club were questioned about the winners, each gave their respective orders as shown in the table.

When the records were finally retrieved, the management, out of sheer exuberance, decided to reward the staff as follows. If any of the staff had named all 5 in the right order he would get Rs 10000 as cash prize. If the staff names "n" out of all 5 years correctly, he will get (n+1) thousand Rupees as cash. It was found that each staff won a different amount of money

Q 46. Who won the chess tournament in 2003?

1. Pavan
2. Gavin
3. Arti
4. none of these

Answer: (1) Pavan

Q 47. How many of the staff correctly mentioned the winner of 2003 ?

1. 1
2. 4
3. 0
4. 3

Answer: (2) 4

Q 48. Who won the least amount as reward?

1. A

2. D
3. B
4. C

Answer: (2)

Q 49. Who won the chess tournament in 2001?

1. Arti
2. Rahul
3. Bishu
4. cannot be determined

Answer: (4) cannot be determined

Q 50. How much was the middle amount won as reward money?

1. 2000
2. 4000
3. 1000
4. none of these

Answer: (4) none of these