Number of Questions : 32

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

Five friends, namely Pranav, Mayank, Sameer, Ashutosh and Sumit with their surnames being Sharma, Mahajan, Gemini, Singh and Tiwari (not necessarily in that order), went for shopping. Each friend prefer an apparel of a particular brand.The brands are Colour plus, Pepe, Numero Uno, Levis, and Raymonds (not necessarily in that order). They purchased Jeans, T-shirt, Shirt, Suit and Pant. The amounts spent by each of them is Rs. 300, Rs. 800, Rs. 900, Rs. 1600 and Rs. 2100 (not necessarily in that order).

i.   Mr Singh spent Rs. 1300 more than Pranav Sharma but less than the man who purchased the brand Numero Uno.
ii.   Sameer spent thrice as much as man who purchased the T-shirt.
iii.   The Numero Uno item purchased cost seven times as much as the Levis item.
iv.   The person who purchased Jeans spent less than the man who buys brand Raymonds but more than the man who bought Color plus brand.
v.   Mr Gemini spent more than man who bought brand Levis or one who bought Shirt but less than both Ashutosh or Mr. Tiwari.
vi.   Suit was the costliest item.
vii.   One person is having the name and surname starting with same alphabet.

1.   Who purchased Jeans?
       (1) Pranav   (2) Mayank
       (3) Sameer   (4) Ashutosh

2.   Suit is from which Brand?
       (1) Raymonds   (2) Color plus
       (3) Pepe   (4) Numero Uno

3.   Mayank's surname is
       (1) Singh   (2) Mahajan
       (3) Tiwari   (4) Gemini

4.   How much money was spent by Ashutosh?
       (1) Rs. 2,100   (2) Rs. 800
       (3) Rs. 900   (4) Rs. 1,600

Directions for questions 5 to 8: Answer the questions on the basis of the information given below.

Six friends namely Brijesh, Vijay, Shishir, Ujjawal, Jeetu and Narayan planned to watch the 3rd ODI of the on-going cricket match series between India Vs Pakistan in Kanpur. They decided to board from New Delhi to Kanpur on a certain day. Each of the friend board a different train on the same day between 7:45 pm to 11:30 pm. The trains were namely Shramshakti Express, Licchavi Express, Mahabodhi Express, Shivganga Express, Purushottam Express and Gorakhdham Express. The timings for the departure of the trains were 8:00 pm, 9:40 pm, 8:30 pm, 10:20 pm, 11:15pm and 9:10 pm (not necessarily in the same order). Further, it is given as

(i)   Shishir and Vijay departs within half-an hour and Ujjawal and Jeetu departs within 40 minutes.
(ii)   Brijesh departs from Purushottam Express and the one who departs at last, doesn't departs by Licchavi.
(iii) Gorakhdham and Shramshakti departs within half an hour.

(iv)   Jeetu and Shishir departs from Shivganga and Shramshakti respectively.

(v)   Ujjawal left immediately after Brijesh, who departs at 9:10 pm.

5.   Among all the given trains, "Licchavi Express" departs at
        (1) 9:40 pm   (2) 9:10 pm
        (3) 10:20 pm   (4) 11:15 pm

6.   Who departs at last among all the friends?
        (1) Vijay   (2) Ujjawal
        (3) Narayan   (4) Shishir

7.   Which was the last train from 'New Delhi' to 'Kanpur' ?
        (1) Purushottam Express
        (2) Mahabodi Express
        (3) Shivganga Express
        (4) Gorakhdham Express

8.   If "Shram-Shakti Express" departs at 8:00 pm, then after what time does the "Mahabodi Express " departs?
        (1) 30 minutes   (2) 80 minutes
        (3) 140 minutes   (4) 195 minutes

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

Five friends Pankaj, Purushottam, Pulkit, Parinita and Prerna wrote test in Zoology, Botany and Chemistry. They got different ranks according to the performance by them in their respective test. Rank 1 is best rank followed by rank 2, 3, 4 and 5. No two persons got the same rank in same test taken and got different ranks in different subjects.

(i)   Pulkit got better rank than Parinita in Zoology and Pankaj in Chemistry

(ii)   Prerna didn't get the best rank in any of the subject taken and she got third rank in Zoology.

(iii)   Person with rank 5 in Chemistry got rank 2 in Botany.

(iv)   Purushottam got rank 5 in Botany and his best possible rank is 3.

(v)   Parinita and Pankaj both got best rank and worst rank.

(vi)   Pankaj got rank 1 in Zoology and Parinita got rank 4 in Chemistry.

9.   Who got rank 3 in Botany?
        (1) Pulkit   (2) Purushottam
        (3) Parinita   (4) Pankaj

10.   Who got best rank in Chemistry?
        (1) Pulkit   (2) Prerna
        (3) Purushottam   (4) Either (2) or (3)

11.   Who got rank 2 in Botany?
        (1) Pankaj   (2) Prerna
        (3) Purushottam   (4) Parinita

12.   Who got lowest rank in Zoology?
        (1) Pulkit   (2) Prerna
        (3) Purushottam   (4) Parinita

Directions for questions 13 to 16: Answer the questions on the basis of the information given below.

Five friends A, B, C, D and E bought 10 chocolates and distributed those among themselves such that each of them received a distinct integral number of chocolates. Each of them also likes to watch a TV show among Sportscenter, Raw, Wrestlemania, Smackdown and Hitz (not necessarily in that order). Sportscenter and Hitz are sports shows and rest are wrestling shows. No two persons like the same TV show.

Following informations are also given:

(i)   C, who didn't receive any chocolate, does not like any wrestling show.

(ii)   A received more chocolates than B, whereas E did not receive the maximum number of chocolates.

(iii)   Difference in the number of chocolates with A and C is equals to the difference in the number of chocolates with D and B.

(iv)   B and C like TV shows starting with the same alphabet.

(v)   The person receiving the maximum number of chocolates likes a sports show.

13.   The sum of the number of chocolates with B and D is
        (1) 3   (2) 4
        (3) 5   (4) 6

14.   Who likes Wrestlemania?
        (1) A   (2) E
        (3) D   (4) Cannot be determined

15. If the person with 3 chocolates likes Raw, then how many chocolates does the person who like Wrestlemania have?
(1) 1   (2) 2
(3) 3   (4) 4

16. D likes
(1) Raw   (2) Wrestlemania
(3) Hitz   (4) Cannot be determined

Directions for questions 17 to 20: Answer the questions on the basis of the information given below.

Four friends - Pawan, Qureshi, Radhika and Sameer - practise Lawn Tennis from Monday to Saturday every week. Exactly two friends practice every day. A different pair practices on each day of a week and no two pairs practice for an equal number of hours during a week. The number of hours for which any pair practices is a natural number less than 10. It is also known that:
(i) Pawan doesn't practice on Monday. Also, he doesn't practice on any two consecutive days.
(ii) The number of hours for which Sameer practices on any day is a multiple of 3.
(iii) Radhika practices on three consecutive days but not on Monday.
(iv) Sameer doesn't practice on Wednesday and Saturday.
(v) The number of hours for which Qureshi practices on any day is an odd prime number.
(vi) The distinct values of the number of hours for which different pairs practice during a week contain two odd perfect squares.
(vii) The sum of the number of hours for which practice is done on Friday and Saturday is 1 more than the sum of the number of hours for which practice is done on Tuesday and Wednesday.

17. For how many hours in a week does Radhika practice?
(1) 17   (2) 16
(3) 15   (4) 14

18. On which of the following days does Qureshi practice with Pawan?
(1) Saturday   (2) Thursday
(3) Wednesday   (4) Tuesday

19. Which of the following combinations of pair of friends-day-number of hours of practice is correct?
(1) Radhika and Qureshi-Wednesday-5 hours
(2) Radhika and Sameer-Friday-9 hours
(3) Pawan and Sameer-Thursday-6 hours
(4) None of these

20. On which day Radhika's partner on Wednesday and Radhika's partner on Friday play together?
(1) Monday   (2) Tuesday
(3) Thursday   (4) Saturday

Directions for questions 21 to 24: Answer the questions on the basis of the information given below.

A group of college friends went to a discotheque. The boys were Ammy, Swapi, Yeshu, Rajju, Siddhu, Hemlu, and Anshu. The girls were Apara, Nishthu, Sisha, Teenu and Jyoti.

The entry charges for a couple (boy and a girl) are Rs. 500. The entry for a single girl is free whereas a stag (single boy) has to pay Rs. 400 for an entry. The group had two couples. People having boyfriends/girlfriends make entry together as couples. However, those not having a boyfriend or a girlfriend can form a couple with any available person and gain entry.

I. Apara and Jyoti have boyfriends in the group.
II. Sisha formed a couple with either Ammy or Anshu.
III. No girl made a single entry.
IV. Teenu made couple entry with Yeshu or Siddhu.
V. Rajju has a girlfriend in the group.
VI. Nishthu formed a couple with either Rajju or Ammy.

21. Nishthu made couple entry with
(1) Ammy   (2) Rajju
(3) Swapi   (4) Anshu

22. If Swapi has a girlfriend, then who made stag entries?
(1) Two out of the four Yeshu, Siddhu, Hemlu, Anshu
(2) Siddhu and Hemlu
(3) Definitely Hemlu and either Siddhu or Anshu
(4) Definitely Hemlu and either Yeshu or Siddhu

23. Sisha made couple entry with
    (1) Ammy or Anshu (2) Ammy
    (3) Anshu   (4) Rajju

24. If all the given restrictions are waived and the group wants to minimize overall expenditure, then how many couples, stags and single girls should make entry?
    (1) 0, 7, 5   (2) 5, 2, 0
    (3) 2, 5, 3   (4) 2, 4, 4

Directions for questions 25 to 28: Answer the questions on the basis of the information given below.

A, B, C, D, E, F, G, H, I and J are 10 friends. These 10 friends are divided into three different groups namely group X, group Y and group Z. Each group must contain at least two friends.

Additional Information Given:
1. B and J are in the same group.
2. D, E and F are in different groups.
3. A is in group X.
4. C is not in group Y and D is not in group Z.
5. H, I and C are in the same group.

25. If C and D are in the same group, then which of the following can never be in the group which has exactly three friends?
    (1) B   (2) E
    (3) F   (4) G

26. If F is in group X and G is not in group Y, then how many of the following pairs of friends cannot be in the same group?
    I. (J, F)   II. (D, G)
    III. (C, E)   IV. (D, I)
    V. (B, E)   VI. (A, H)

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

27. If one of the groups has exactly six friends, then which of the following people can never be in that group?
    (1) A   (2) G
    (3) D   (4) A, G and D

28. If there are exactly five friends in group Z, then which of the following people is definitely in group Y?
    (1) J   (2) D
    (3) E   (4) G

Directions for questions 29 to 32: Answer the question on the basis of the information given below. BCCI has to select a committee of five persons to serve as their representative on the board of ICC. The committee must have two coaches and three players. There are three coaches namely A, B, and C and five players namely D, E, F, G, and H that are available for selection.

Additional information given:
- B and H cannot be selected simultaneously.
- F and G cannot be selected simultaneously.
- E and H cannot be selected simultaneously.

29. For every possible acceptable selection of the committee representing BCCI on the board of ICC, which of the following replacement will always result in another acceptable selection of the committee representing BCCI on the board of ICC?
    (1) B for C   (2) F for E
    (3) F for G   (4) B for A

30. If A is always selected in the committee, who else will definitely be selected in the committee?
    (1) C   (2) E
    (3) D   (4) None of these

31. If A is always selected in the committee, in how many ways can the committee be selected?
    (1) 6   (2) 4
    (3) 7   (4) 5

32. The number of different committees in which both C and D are present is
    (1) 8   (2) 6
    (3) 4   (4) 2

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1	3	**2**	4	**3**	2	**4**	4	**5**	1	**6**	3	**7**	2	**8**	4	**9**	1	**10**	1
11	1	**12**	4	**13**	3	**14**	4	**15**	2	**16**	3	**17**	1	**18**	1	**19**	2	**20**	1
21	1	**22**	4	**23**	3	**24**	1	**25**	4	**26**	2	**27**	4	**28**	1	**29**	3	**30**	3
21	1	**22**	2																	

For questions 1 to 4:

From statement (i), Mr. Singh must have spent Rs. 1600 (as, 1600-300 = 1300) and Numero Uno is the costliest item costing Rs. 2100 and it is the suit (statement-vi). From statement (ii), Sameer must have spent Rs. 900 (as, only 900 = 3 × 300). The T-shirt must have cost Rs. 300 which is from Levis brand (statement-iii). According to statement (v), Mr. Gemini spent more than two persons and less than two persons. So, he must would have spent Rs. 900 and the person paying 800, bought shirt.

Now, from statement (vii), Mayank must be Mahajan (because two people cannot have surname starting with same letter. So, Sumit can not be Singh)

Hence, Ashutosh must be Singh and Sumit must be Tiwari.

Now, with the help of statement (vi) following table can be formed:

Pranav	Sharma	Levis	T-Shirt	300
Mayank	Mahajan	Colour Plus	Shirt	800
Sameer	Gemini	Pepe	Jeans	900
Ashutosh	Singh	Raymonds	Pant	1600
Sumit	Tiwari	Numero Uno	Suit	2100

1. 3   Sameer purchased jeans.

2. 4   Suit is from Numero Uno brand.

3. 2   Mayank's surname is Mahajan.

4. 4   Ashutosh spent Rs. 1600.

For questions 5 to 8:

With the help of statements (ii), (iv) and (v) following table can be made:

Brijesh	Puroshottam	9:10
Vijay		
Shishir	Shramshakti	
Ujjawal		9:40
Jeetu	Shivganga	
Narayan		

From statement (iii), Gorakhdham and Shramshakti depart at 8:00 and 8:30 respectively, or 8:30 and 8:00 respectively (as 9:10 and 9:40 is not possible due to departure of Purushottam exp. at 9:10).

Now from statement (i), Jeetu departs at 10:20 (because it cannot be Brijesh).

From statement (ii), Licchvi Express cannot depart at last, so it must depart at 9:40 (as it cannot depart at other times).

Hence, possible arrangements are

Brijesh	Purushottam	9:10
Vijay	Gorakhdham	8:00/8:30
Shishir	Shramshakti	8:30/8:00
Ujjawal	Licchvi	9:40
Jeetu	Shivganga	10:20
Narayan	Mahabodhi	11:15

5. 1   Licchvi Express departs at 9:40.

6. 3   Narayan departed last.

7. 2   Last train was Mahabodhi Express.

8. 4   The difference between the timing of two trains is 3 hours and 15 minutes i.e. 195 minutes total.

For questions 9 to 12:
From statements (ii), (iv) and (vi) following table can be made

Name	Zoology	Botany	Chemistry
Pankaj	1		
Purushottam		5	
Pulkit			
Parinita			4
Prerna	3		

Now, from statement (iv) Purushottam's best possible rank is 3, so he must be at rank 4 in Zoology and at rank 3 in Chemistry (as he cannot be at 3rd rank in Zoology and 4th rank in Chemistry)
From statement (v) Parinita must be at rank 5 in Zoology and at rank 1 in Botany (as she canno be at rank 1 in Zoology). Hence, Pulkit is at rank 2 in Zoology. Further, Pankaj would be at rank 5 in Chemistry and he got rank 2 in Botany (statement (iii)).
Now, Prerna has already got rank 3 in Zoology. So, she cannot get rank 3 in Botany.
Hence, she is getting rank 4 in Botany and Pulkit is getting rank 3 in Botany.
So, following conclusion can be made:

Name	Zoology	Botany	Chemistry
Pankaj	1	2	5
Purushottam	4	5	3
Pulkit	2	3	1
Parinita	5	1	4
Prerna	3	4	2

9. 1   Pulkit got rank 3 in Botany.

10. 1   Pulkit got rank 1 in Chemistry.

11. 1   Pankaj got rank 2 in Botany.

12. 4   Pranita got lowest rank in Zoology.

For questions 13 to 16:
The chocolates can be divided as 0, 1, 2, 3, 4 among themselves.
From statements (i) and (iv), C must be liking Sportscentre and B likes Smackdown.

From statement (ii), B must be receiving 1 or 2 or 3 chocolates (because it must be more than 0, as C gets 0 chocolates, and less than the maximum number of chocolates, as A is getting more than B). Whereas, A can get 2 or 3 or 4 chocolates.
From statement (iii),
No. of chocolates with D – No. of chocolates with B = number of chocolates with A.

Now, following cases can be made:

	No. of Chocolate with A	No. of Chocolate with B	No. of Chocolate with D
Case I.	2	2	4
Case II.	2	1	3
Case III.	3	1	4

Case-I is not possible because two people cannot get same number of chocolates.

Case-II is also not possible because in this case, E would be getting 4 chocolates, which is maximum and it will violate statement (ii).

Now, with the help of statement, (v), we can made the table as,

Names	No. of chocolates	TV shows
A	3	Raw /Wrestlemania
B	1	Smackdown
C	0	Sportscentre
D	4	Hitz
E	2	Wrestlemania/Raw

13. 3   1 + 4 = 5 i.e. 5 chocolates.

14. 4   Either A or E anyone can like wrestlemania. So, it can't be determined uniquely.

15. 2   Person liking Wrestlemania gets 2 chocolates.

16. 3   D likes Hitz.

For questions 17 to 20:
We denote Pawan, Quraishi, Radhika and Sameer as P, Q, R and S respectively.

So, the couples can be formed as PQ, PR, PS, QR, QS, RS.

From statements (i) and (iii), P and R do not play on Monday. So, Q and S must be playing on Monday. R neither can practice on Tuesday, Wednesday, Thursday nor on Thursday, Friday, Saturday because practice days of P will become consecutive, which violates statement (i).

So, R will practice on Wednesday, Thursday, Friday and P has to practice on Tuesday, Thursday and Saturday.

Since, S doesn't practice on Wednesday and Saturday, the only days left for S are Tuesday and Friday which implies that Q will practice on Wednesday and Saturday. So we get the following arrangement

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
S – Q	P – S	R – Q	P – R	R – S	P-Q

From the statements (ii), (v) and (vi) the possible hours are 1, 3, 5, 6, 7, 9.

The pair of S and Q must be playing for 3 hours. From statement (iii), Sameer must practice for 6 or 9 hours.

From statement (v), Q will play for 7 or 5 hours on Wednesday or Saturday.

Hence, from statement (vii), the only possible combination is

Mon	Tue	Wed	Thur	Fri	Sat
SQ	PS	RQ	PR	RS	PQ
3	6	7	1	9	5

13 hours   14 hours

17. 1   Radhika practices for $7 + 1 + 9 = 17$ hours

18. 1   Saturday

19. 2   Radhika played with Sameer for 9 hours on Friday.

20. 1   Radhika's partner on Wednesday is Quraishi, and on Friday is Sameer. Hence, Sameer and Quraishi play together on Monday.

For questions 21 to 24:
From statements (i) and (v), Rajju is boyfriend of Apara or Jyoti. From statement (vi), Nishthu must form couple with Ammy (as Rajju cannot be with Nishthu) which implies Sisha must form a couple with Anshu (statement ii).

On combining rest statements, we get the following two possibilities.

Pssibility (1)		Pssibility (2)	
Girls	Boys	Girls	Boys
Apara	Rajju	Apara	
Jyoti		Jyoti	Rajju
Nishthu	Ammy	Nishthu	Ammy
Teenu	Yeshu/Siddhu	Teem	Yeshu/Siddhu
Sisha	Anshu	Sisha	Anshu

21. 1   Nishthu made entry with Ammy.

22. 4   If Swapi has a girlfriend, which means Hemlu is definitely making stag entry and either Siddhu or Yeshu is making stag entry.

23. 3   Anshu

24. 1   From option 1, $0 \times 500 + 7 \times 400 + 5 \times 0 = 2800$ rupees
From option 2, $5 \times 500 + 2 \times 400 + 0 \times 0 = 3300$ rupees

From option 3, $2 \times 500 + 5 \times 400 + 3 \times 0 = 3000$ rupees
From option 4, $2 \times 500 + 4 \times 400 + 4 \times 0 = 2600$ rupees

But in option (4), we are not sure about the 7th person (whether it is a boy or a girl). Hence, 1st option gives the minimum expenditure.

25. 4   From statement (iv) and additional informations given in the question, C and D both are in group X and from statement (v), H and I will also be in group X.
So, we are sure that A, H, I, C and D all are in group X.
Now, E and F has to be in different group (statement 2) and B and J are together (statement 1).
Hence, only two combinations are possible for group Y and Z which are EBJ, FG or EG, BJF.
So, G cannot be in the group of three.

26. 2   Since, F is in group X, and D is not in group Z (statement 4) and D, E, F are in different groups (statement 2), so D and E must be in group Y and Z respectively.

Now, from statements (4) and (5), HIC can be in group X or group Z and since G is not in group Y, following arrangements are possible.

Group X	Group Y	Group Z
AFCHI	DBJ	EG
AFG	DBJ	ECHI
AF	DBJ	ECGHI

Hence, (J, F), (D, G), (D, I) and (B, E) cannot be in the same group.

27. 4   Since one of the groups has exactly six friends, other two groups must contain two friends each. Since, A is in group X (statement iii) and DEF are in different groups (statement ii). Hence, group X has two people. While groups Y and Z have one person each.

So, HIC and BJ must be together and in the same group. Since, C is not in group Y and group X already contains two people, HFC and BJ must be in group Z.

Hence, following arrangements are possible.

	Group containing 2 people		Group contains 6 people
	Group X	Group Y	Group Z
1	AD	EG	FHICBJ
2	AD	FG	EHICBJ
3	EA	DG	FHICBJ

Hence, A, G and D cannot be in the group containing 6 people.

28. 1 Since one of D, E or F is already present in group X (statement 2) and A is also in group X (statement 3). Thus, group X already contains two people, and groups Y and Z have exactly one people each(statement 2). Now, BJ cannot be in group X because group X will become a group with four people and group Z contains 5 people (given), which implies that group Y contains only one person, which is not possible.

Similarly, HIC cannot be in group X or group Y.

Hence, HIC must be in group Z and group Z also contains another person (statement 2) i.e. total four people.

Hence, BJ cannot be in group Z (as it will become a group with six people).

So, BJ must be in group Y.

Hence, option (1) is correct.

For questions 29 to 32:

Since, out of the three coaches, we have to select any two, the possible cases are AB, BC or AC.

Following the conditions given in the question, these selections are possible.

A B D E F
A B D E G
B C D E F
B C D E G
A C E D G
A C E D F
A C H D F
A C H D G

29. 3 F and G are related to themselves only and F and G are mutually exclusive i.e. options (1), (2) and (4) are not possible. Hence, option (3) is the correct answer.

30. 3 If A is always selected, D is definately in that group.

31. 1 There are 6 possible arrangements with A is in the group.

32. 2 C and D both are present in 6 groups.