PUZZLE -3

Direction for questions (1 -3): Five friends, viz. Sonu, Rajeev, Sachin, Rohit and Rajesh are living in five different cities named Kunnamangalam, Joka, Vastrapur, Bannerghatta and Prabandhnagar, not necessarily in that order. Their salaries are 700000, 800000, 900000, 1100000, 1300000 (INR per annum), in no particular order. Further, the following information is given about them:

I.   Rohit, who does not live in Bannerghatta, earns a salary that is a prime number multiple of 100000.
II.   Rajeev made a call to one of his four mentioned friends who lives in Prabandhnagar and earning a perfect square multiple of 100000 INR in salary.
III. Sachin's salary is 100000 INR more than the average salary of Rohit and Sonu
IV.   Rajeev lives in the city, which has the shortest name amongst the above cities.

1. If Rohit lives in Vastrapur, then what is the average salary of the persons living in Bannerghatta and Kunnamangalam?
    a) Rs.9 lakh   b) Rs.10 lakh   c) Rs.12 lakh   d) Rs.10.5 lakh   e) Data Insufficient

2. Who stays in Prabandh Nagar?
    a) Sonu   b) Rajeev   c) Rajesh   d) Sachin   e) Rohit

3. If Rajeev and Sachin live in cities with names starting with consecutive alphabets, then who lives in Vastrapur?
    a) Sonu   b) Rajeev   c) Rajesh   d) Sachin   e) Rohit

Direction for questions (4 – 6): 5 married couples come together to play a game. Among them, 5 teams each consisting of a man and woman are created such that the team members are not married to each other. The men include Rajesh, Vimal, Akash, Krishna and Mohit. The women include Sunita, Mamta, Alka, Maya and Neha. The team names include Red, Blue, Green, Yellow and Black. The following information is also known.

–Mohit is married to Sunita.
–Neha is married to the person from the Red team.
–Akash is in the Green team.
–Rajesh is in the Black team.
–Krishan's wife is in the Red team.
–Neha is in the Blue team.
–Rajesh's wife is in the Yellow team.
–Maya's husband is in the Green team.

4. To which team does Rajesh belong?
    a) Mohit   b) Sunita   c) Vimal   d) Maya

5. Who is Mohit teamed up with?
    a) Mamta   b) Neha   c) Alka   d) Cannot be determined

6. If Alka is in the Yellow team, to which team does Mamta's husband belong?
    a) Yellow   b) Either Black or Yellow
    c) Either Blue or Yellow   d) Either Blue or Yellow or Black

Direction for questions (7 – 10): Aman, Sohan, Param, Vinod, and Ganesh are from Mumbai, Chennai, Nagpur, Delhi and Kanpur (not necessarily in that order). They planned a trip to Dubai during the holy holidays. They stayed in three different rooms in the same resort. The rooms were Standard room, Luxury room, and Deluxe room. Only one person stayed in the Deluxe room while two persons each stayed in the Standard and Luxury rooms.
Vinod stayed in the Luxury room and his roommate was not from Chennai. The person who stayed in the Deluxe room is from Mumbai. Sohan is from Nagpur and his roommate is neither from Kanpur nor Delhi. Param is neither from Mumbai nor Chennai and his roommate is not from Kanpur. Aman didn't stay in the Deluxe room and his roommate is not from Chennai.

7. Which among the following statements is true?
    a) Aman is from Chennai.   b) Vinod is not from Delhi.
    c) Vinod and Param are roommates.   d) Param is from Kanpur.

8. Who is from Mumbai?
    a) Ganesh   b) Vinod   c) Sohan   d) Cannot be determined

9. Which among the following statements can be true?
    a) Friends from Delhi and Kanpur are staying in the Luxury room.

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b) Friends from Nagpur and Chennai are staying in the Standard room.
c) Sohan and Vinod are staying in the Luxury room.
d) All of the above

10. For how many friends can their city of origin be uniquely known?
    a) 3   b) 2   c) 1   d) 0

Direction for questions (11 – 14): Total five students, named Amit, Bipin, Chandan, Dev, and Eissan from five different colleges, named P, Q, R, S and T (not necessarily in the same order) participated in a debate competition. The highest score by any participant was 105 and the lowest score was 90. The students were ranked from 1 to 5 in the descending order of their scores.
Student Bipin scored 6 more points than the student from college R and 9 more points than student Dev.
Student Eissan was not from college P.
Student Chandan's margin over the student from college T was twice that of student Amit's margin over the student from college Q.
The student from college S scored 3 points more than student Eissan.

11. What is the sum of the scores of the five students?
    a) 478   b) 488   c) 492   d) None of these

12. For how many students can their exact scores be found?
    a) 2   b) 3   c) 1   d) 5

13. What is the difference in the scores of the student from college Q and student B?
    a) 0   b) 3   c) 9   d) 6

14. Which among the following is the correct order of the scores of the colleges in the competition?
    a) P > S > Q   b) Q > T > R   c) R > S > P   d) P > R > T

DIRECTIONS for question(15 – 17): 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.

15. The woman who spent Rs. 1193 is
    a) Archana   b) Chellamma   c) Dhenuka   d) Helen

16. Which of the following amounts was spent by one of them?
    a) Rs. 1139   b) Rs. 1378   c) Rs. 2571   d) Rs. 2718

17. What was the amount spent by Helen?
    a) Rs. 1193   b) Rs. 1340   c) Rs. 2234   d) Rs. 2517

DIRECTIONS for questions(18 – 21): Seven friends, Sachin, Mahendra, Rohit, Zaheer, Dinesh, Virat and Rahul were invited to a birthday party. On being asked about their visit to the party, followings were their responses.
1. Rahul : Sachin was the first person to arrive at the party and I was the second. I left the party with Mahendra immediately after Zaheer arrived.
2. Sachin : I left the party with one friend. However, I returned to the party again because it was my best friend's party, to find that only Rohit and Virat were present at the party.
3. Zaheer : When I arrived at the party there were three friends Sachin, Rahul and Mahendra. Mahendra left the party the second time before I left.
4. Mahendra : I went to the party twice and when I went the second time Sachin was still there and Rohit was the only new person that I met on my second visit.

5. Rohit : When I was dancing at the party with my friend, who was the only one at the party besides me amongst us seven friends, I saw Sachin entering the party.
6. Dinesh : When I arrived, Sachin, Zaheer and Rohit were the only three persons present at the party. I left immediately with Sachin, while Zaheer and Rohit continued at the party.

18. What was the maximum number of friends (out of 7) present in the party at any given time?

19. How many friends did Virat meet at the party?
   a) 3   b) 4   c) 5   d) CBD

20. Statement made by which of the following friends is redundant and doesn't help us in determining the order of arrival of friends?
   a) Zaheer   b) Mahendra   c) Rohit   d) Dinesh

21. Who were the last three friends left at the party?
   a) Sachin, Rohit and Virat
   b) Virat, Sachin and Zaheer
   c) Virat, Rohit and Mahendra
   d) Sachin, Rohit and Zaheer

Direction for Question (22-27): Amudha, Bharatan, Chandran, Dhinesh, Ezhil, Fani and Gowtham are seven people in a town. Any pair of them could either be strangers, acquaintances, or friends. All relationships are mutual. For example, if Amudha is a friend of Bharatan, then Bharatan is also a friend of Amudha. Similarly, if Amudha is a stranger to Bharatan, then Bharatan is also a stranger to Amudha. Partial information about the number of friends, acquaintances, and strangers of each of these people among them is given in the table below.

	No. of friends	No. of Acquaintances	No. of Strangers
Amudha		1	4
Bharatan			
Chandan		1	
Dhinesh			2
Ezhil			1
Fani	1		
Gawtham		3	2

The following additional facts are also known.
1. Amudha, Bharatan, and Chandran are mutual strangers.
2. Amudha, Dhinesh, and Fani are Ezil's friends.
3. Chandran and Gowtham are friends.
4. Every friend of Amudha is an acquaintance of Bharatan, and every acquaintance of Bharatan is a friend of Amudha.
5. Every friend of Bharatan is an acquaintance of Amudha, and every acquaintance of Amudha is a friend of Bharatan.

22. Who are Gowtham's acquaintances?
a) Bharatan, Dhinesh and Ezhil
b) Dhinesh, Ezhil and Fani
c) Amudha, Dhinesh and Fani
d) Amudha, Bharatan and Fani

23. Which of these pairs share the same type of relationship?
a) (Bharatan, Chandran) and (Dhinesh, Ezhil)
b) (Bharatan, Ezhil) and (Fani, Gowtham)
c) (Amudha, Gowtham) and (Ezhil, Fani)
d) (Chandran, Ezhil) and (Dhinesh, Gowtham)

24. Who is an acquaintance of Amudha?
   a) Fani   b) Gowtham   c) Ezhil   d) Dhinesh

25. Who is an acquaintance of Chandran?
   a) Ezhil   b) Fani   c) Dhinesh   d) Bharatan

26. How many friends does Ezhil have?

27. How many people are either a friend or a friend-of-a-friend of Ezhil?

Direction: Ganga, Kaveri, and Narmada are three women who buy four raw materials (Mango, Apple, Banana and Milk) and sell five finished products (Mango smoothie, Apple smoothie, Banana smoothie, Mixed fruit smoothie and Fruit salad). Table-1 gives information about the raw materials required to produce the five finished products. One unit of a finished product requires one unit of each of the raw materials mentioned in the second column of the table.

Table -1

Finished Product	Raw Materials required
Mango Smoothie	Mango, Milk
Apple Smoothie	Apple, Milk
Banana Smoothie	Banana, Milk
Mixed Fruit Smoothie	Mango, Apple, Banana, Milk
Fruit Salad	Mango, Apple, Banana

One unit of milk, mango, apple, and banana cost ₹5, ₹3, ₹2, and ₹1 respectively. Each unit of a finished product is sold for a profit equal to two times the number of raw materials used to make that product. For example, apple smoothie is made with two raw materials (apple and milk) and will be sold for a profit of ₹4 per unit. Leftover raw materials are sold during the last business hour of the day for a loss of ₹1 per unit.

The amount, in rupees, received from sales (revenue) for each woman in each of the four business hours of the day is given in Table-2

Table -2

Business Hour	Ganga	Kaveri	Narmada
Hour 1	23	19	31
Hour 2	21	22	21
Hour 3	29	30	23
Hour 4 (last hour)	30	27	22

The following additional facts are known.
1. No one except possibly Ganga sold any Mango smoothie.
2. Each woman sold either zero or one unit of any single finished product in any hour.
3. Each woman had exactly one unit each of two different raw materials as leftovers.
4. No one had any banana leftover.

28. What BEST can be concluded about the number of units of fruit salad sold in the first hour?
a) Either 0 or 1 or 2.   b) Either 1 or 2.
c) Exactly 1.   d) Exactly 2

29. Which of the following is NECESSARILY true?
a) Kaveri sold one unit of leftover mangoes.
b) Narmada sold one unit of leftover milk.
c) Ganga did not sell any leftover mangoes.
d) Ganga did not sell any leftover apples.

30. What BEST can be concluded about the total number of units of milk the three women had in the beginning?
a)   Either 18 or 19 units.
b)   Either 17 or 18 or 19 units.
c)   Either 19 or 20 units.
d)   Either 18 or 19 or 20 units.

31. If it is known that three leftover units of mangoes were sold during the last business hour of the day, how many apple smoothies were sold during the day?

Answer Key

1. E	2. C	3. E	4. D	5. D	6. A	7. D	8. A
9. D	10. A	11. A	12. A	13. C	14. B	15. C	16. A
17. B	18. 4	19. D	20. C	21. A	22. B	23. B	24. D
25. B	26. 3	27. 4	28. B	29. C	30. D	31. 6	