Placement Papers: Sify Paper 2009

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Some questions are:

1. 2 nos: LCM = 693, GCM = 11 one no: 77 find the other? ans: 99

2. 5 children, youngest 3yrs old and no 2 children hve the same age, sum of their age is 26. Find the age of eldest. 7,8, 10, ... Ans: 8

3. second no: Is twice the first no: And first no: Is thrice the third no: Their avg is 20. Find the greatest no: Ans: 36

4. RS232 cable-bit transfer rate? 0 – 50000,5000 – 50000_____

5. If CPU wants to stop the IO process and continue with main processing, then which device it uses: Control Unit, IO Divertor, Channel Divertor, None

6. connnecting 2 diff networks: Ans: Gateway

Practice Sets

1. There is a 4 inch cube painted on all sides. This is cut down into of 1 inch cubes. What is the no of cubes which have no pointed sides. Ans: 8

2. At 6 'o a clock ticks 6 times. The time between first and last ticks is 30 seconds. How long does it tick at 12' o clock. Ans: 66 sec.

3. Complete the series: 5, 20, 24, 6,2, 8, Ans: 12 (as $5 * 4 = 20, 20 + 4 = 24$, $\frac{24}{4} = 6, 6 - 4 = 2, 2 * 4 = 8, 8 + 4 = 12$).

4. Find the values of each of the alphabets. N O O N S O O N + M O O N J U N E Ans: 9326

5. If a clock takes 7seconds to strike 7, how long will the same clock take to strike 10? Ans: The clock strikes for the first time at the start and takes 7 seconds for 6 intervals-thus for one interval time taken = $\frac{7}{6}$. Therefore, for 10 seconds there are 9 intervals and time taken is $9 * \frac{7}{6} = 10$ and $\frac{1}{2}$ seconds.

6. An escalator is descending at constant speed. A walks down and takes 50 steps to reach the bottom. B runs down and takes 90 steps in the same time as A takes 10 steps. How many steps are visible when the escalator is not operating? Ans: 150 steps

7. A chain is broken into three pieces of equal lengths containing 3 links each. It is taken to a blacksmith to join into a single continuous one. How many links are to to be opened to make it? Ans: 2.

8. There is a safe with a 5 digit number as the key. The 4th digit is 4 greater than second digit, while 3rd digit is 3 less than 2nd digit. The 1st digit is thrice the last digit. There are 3 pairs whose sum is

11. Find the number. Ans: 65292

9. An orange glass has orange juice and white glass has apple juice both of equal volumes. 50ml of the orange juice is taken and poured into the apple juice. 50ml from the white glass is poured into the orange glass. Of the two quantities, the amount of apple juice in the orange glass and the amount of orange juice in the white glass, which one is greater and by how much? Ans: The two quantities are equal

10. The shape in the sketch below is that of a square attached to half of a similar square. Divide it into four equal pieces Ans: Hint: The figure can be divided into 12 equal triangles

11. Fifty minutes ago if it was four times as many minutes past three o'clock, how many minutes is it to six o'clock? Ans: Twenty six minutes.

12. Everyday in his business a merchant had to weigh amounts from 1 kg to 121kgs, to the nearest kg. What are the minimum number of weight required and how heavy should they be? Ans: The minimum number is 5 and they should weigh 1,3, 9,27 and 81kgs.

13. A car is traveling at a uniform speed. The driver sees a milestone showing a 2-digit number. After traveling for an hour the driver sees another milestone with the same digits in reverse order. After another hour the driver sees another milestone containing the same two digits. What is the average speed of the driver. Ans: 45kmph

14. A hotel has 10 storeys. Which floor is above the floor below the floor, below the floor above the floor, below the floor above the fifth. Ans: The sixth floor.

15. Albert and Fernandes have two leg swimming race. Both start from opposite ends of the pool. On the first leg, the boys pass each other at 18 m from the deep end of the pool. During the second leg they pass at 10 m from the shallow end of the pool. Both go at constant speed but one of them is faster. Each boy rests for 4 seconds at the end of the first leg. What is the length of the pool? Ans.

16. Shahrukh speaks truth only in the morning and lies in the afternoon, whereas Salman speaks truth only in the afternoon. A says that B is Shahrukh. Is it morning or afternoon and who is A- Shahrukh or Salman. Ans: Afternoon; A is Salman.

17. A person with some money spends $\frac{1}{3}$ for cloths, $\frac{1}{5}$ of the remaining for food and $\frac{1}{4}$ of the remaining for travel. He is left with ₹ 100/-. How much did he have with him in the beginning? Ans: ₹ 250/-

18. Ram, Shyam and Gumnaam are friends. Ram is a widower and lives alone and his sister takes care of him. Shyam is a bachelor and his niece cooks his food and looks after his house. Gumnaam is married to Gita and lives in large house in the same town. Gita gives the idea that all of them could stay together in the house and share monthly expenses equally. During their first month of living together, each person contributed ₹ 25. At the end of the month, it was found that ₹ 92 was the expense so the remaining amount was distributed equallyamong everyone. The distribution was such that everyone received a whole number of Rupees. How much did each person receive? Ans. ₹ 2 (Hint: Ram's sister, Shyam's niece and Gumnaam's wife are the same person)

19. There are 3 societies A, B, C. A lent cars to B and C as many as they had already. After some time B gave as many tractors to A and C as many as they have. After sometime c did the same thing. At the

end of this transaction each one of them had 24. Find the cars each originally had. Ans: A had 39 cars, B had 21 cars & C had 12 cars

20. Sam and Mala have a conversation. Sam says I am certainly not over 40 Mala says I am 38 and you are at least 5 years older than me Now Sam says you are at least 39 All the statements by the two are false. How old are they really? Ans: Mala = 38 yrs, Sam = 41 yrs.

21. Each alphabet stands for one digit in the following multiplication. T H I S x I S X F X X X X U X X X N X X What is the maximum value T can take? Ans: T max value = 4

22. Grass in lawn grows equally thick and in a uniform rate. It takes 24 days for 70 cows and 60 days for 30 cows to eat the whole of the grass. How many cows are needed to eat the grass in 96 days. Ans: 20 [Hint: g-grass at the beginning, r-rate at which grass grows, per day y-rate at which one cow eats grass, per day n-no of cows to eat the grass in 96 days g + 24 ∗ r = 70 ∗ 24 ∗ y g + 60 ∗ r = 30 ∗ 60 ∗ y g + 96 ∗ r = n ∗ 96 ∗ y, Solving, n = 20.]

23. Three criminals were arrested for shop lifting. However, when interrogated only one told the truth in both his statements, while the other two each told one true statement and one lie. The statements were: ALBERT: Chander passed the merchandise. Brucecreated the diversion. BRUCE: Albert passed the merchandise. I created the diversion. CLIVE: I took the goods out of the shop. Bruce passed them over. Ans: Albert passed the goods. Bruce created the diversion. Clive took the goods out of the shop.

24. I bought a car with a peculiar 5 digit numbered license plate which on reversing could still be read. On reversing value is increased by 78633. Whats the original number if all digits were different? Ans: Only 0 1 6 8 and 9 can be read upside down. So on rearranging these digits we get the answer as 10968

25. There N stations on a railroad. After adding X stations on the rail route 46 additional tickets have to be printed. Find N and X. Ans. x = 2 and N = 11 (Let initially, N (N − 1) = t; After adding (N + X) , (N + X − 1) = t + 46; Trail and error method)

26. Complete the Table given below: Three football teams are there. Given below is the group table. Fill in the x's Played Won Lost Draw Goals For Goals Against A 2 2 × x × 1 B 2 x × 1 2 4 C 2 × x × 3 7 Ans: The filled table is given below Played Won Lost Draw Goals For Goals Against A 2 2 0 0 7 1 B 2 0 1 1 2 4 C 2 0 1 1 3 7

27. A bird keeper has got P pigeons, M mynas and S sparrows. The keeper goes for lunch leaving his assistant to watch the birds. Suppose p = 10, m = 5, s = 8 when the bird keeper comes back, the assistant informs the x birds have escaped. The bird keeper exclaims: "Oh no! All my sparrows are gone." How many birds flew away? When the bird keeper comes back, the assistant told him that x birds have escaped. The keeper realized that at least 2 sparrows have escaped. What is minimum no of birds that can escape? Ans.

28. Seven members sat around a table for three days for a conference. The member's names were Abhishek, Amol, Ankur, Anurag, Bhuwan, Vasu and Vikram. The meetings were chaired by Vikram. On the first evening members sat around the table alphabetically. On the following two nights, Vikram arranged the seating so that he could have Abhishek as near to him as possible and absent minded Vasu as far away as he could. On no evening did any person have sitting next to him a person who had previously been his neighbor. How did Vikram manage to seat everybody to the best advantage on the second and third evenings? Ans: Second evening: Vikram, Ankur, Abhishek,

Amol, Vasu, Anurag and Bhuwan. Third evening: Vikram, Anurag, Abhishek, Vasu, Bhuwan, Ankur, Amol.

29. Two twins have certain peculiar characteristics. One of them always lies on Monday, Wednesday, Friday. The other always lies on Tuesdays, Thursdays and Saturdays. On the other days they tell the truth. You are given a conversation. Person A--today is Sunday my name is Anil Person B--today is Tuesday, my name is Bill What day is today? Ans: Today is Tuesday.

30. Four prisoners escape from a prison. The prisoners, Mr. East, Mr. West, Mr. South, Mr. North head towards different directions after escaping. The following information of their escape was supplied: The escape routes were The North Road, South Road, East Road and West Road. None of the prisoners took the road which was their namesake. Mr. East did not take the South Road Mr. West did not the South Road. The West Road was not taken by Mr. East What road did each of the prisoners take to make their escape? Ans: Mr. East took the North Road Mr. West took the East Road Mr. North took the South Road Mr. South took the West Road.

31. A hotel has two wings, the east wing and the west wing. Some east wing rooms but not all have an ocean view. All west wing rooms have a harbor view. The charge for all rooms is identical, except as follows: Extra charge for all harbor view rooms on or above the 3rd floor Extra charge for all ocean view rooms except those without balcony Extra charge for some harbor rooms on the first two floor & some east wing rooms without ocean view but having kitchen facilities. Which of the following cannot be determined on the basis of the information given:

    a. Whether there are any rooms without a balcony for which an extra charge is imposed.

    b. Whether any room without a kitchen or a view involves an extra charge.

    c. Whether two extra charges are imposed for any room.

32. Given that April 1 is Tuesday. A, B, C are 3 persons told that their farewell party was on A-May 8, Thursday B-May 10, Tuesday C-June 5, Friday Out of A, B, C only one made a completely true statement concerning date, day and month. The other told two one told the day right and the other the date right. What is correct date, month, day. Ans: B- (May 10) SUNDAY, C-June 6 (Friday) .

33. Answer the following questions based on the conditions from the choices A, B, C, D, E as described below:

    a. if a definite conclusion can be drawn from condition 1

    b. if a definite conclusion can be drawn from condition 2

    c. if a definite conclusion can be drawn from condition 1 and 2

    d. if a definite conclusion can be drawn from condition 1 or 2

    e. no conclusion can be drawn using both conditions

34. person 1 says N < 5

35. person says N > 5

36. person 3 says 3N > 20

37. person 4 says 3N > 10

38. person 5 says N < 8

39. What is the value of N?

Practice Sets

1. In a railway station, there are two trains going. One in the harbor line and one in the main line, each having a frequency of 10 minutes. The main line service starts at 5 o'clock and the harbor line starts at 5.02A. M. A man goes to the station every day to catch the first train that comes. What is the probability of the man catching the first train? Ans: 0.8

2. Next number in the series is: 1, 2, 4, 13,31, 112, Ans: 224 (No number has digits more than 4. All of them are 1, 2, 4, 8, 16,32, 64 converted to base 5) .

3. Father's age is three years more than three times the son's age. After three years, father's age will be ten years more than twice the son's age. What is the father's present age? Ans: 33 years.

4. Light glows for every 13 seconds. How many times did it glow between 1: 57: 58 and 3: 20: 47 am. Ans: 383 + 1 = 384

5. From a vessel, $\frac{1}{3}$ rd of the liquid evaporates on the first day. On the second day $\frac{3}{4}$ th of the remaining liquid evaporates. What fraction of the volume is present at the end of the second day. Ans: 50%

6. Supposing a clock takes 7 seconds to strike 7. How long will it take to strike 10? Ans: 10 $\frac{1}{2}$ seconds.

7. There are 20 poles with a constant distance between each pole. A car takes 24 second to reach the 12th pole. How much will it take to reach the last pole. Ans: 41.45 seconds (Let the distance between two poles = x, Hence 11x: 24: 19x:)

8. How can 1000000000 be written as a product of two factors neither of them containing zeros Ans: 2 power 9 × 5 power 9

9. Two trains starting at same time, one from Bangalore to Mysore and other in opposite direction arrive at their destination 1 hr and 4 hours respectively after passing each other. How much faster is one train from other? Ans: Twice

10. Every day a cyclist meets a train at a particular crossing. The road is straight before the crossing and both are traveling in the same direction. The cyclist travels with a speed of 10kmph. One day the cyclist comes late by 25 min. And meets the train 5km before the crossing. What is the speed of the train? Ans: 60kmph

11. A man collects cigarette stubs and makes one full cigarette with every 8 stubs. If he gets 64 stubs how many full cigarettes can he smoke. Ans: 8 + 1 = 9

12. The minute and the hour hand of a watch meet every 65 minutes. How much does the watch lose or gain time and by how much? Ans: Gains; $\frac{5}{11}$ minutes

13. A survey was taken among 100 people to find their preference of watching T. V. Programs. There are 3 channels. Given the no of people who watch at least channel 1 at least channel 2 at least channel 3 no channels at all at least channels 1and 3 at least channels 1 and 2 at least channels 2 and 3 Find the no of people who watched all three. Ans.

14. Two trains start from stations A and B spaced 50kms apart at the same time and speed. As the trains start, a bird flies from one train towards the other and on reaching the second train, it flies

back to the first train. This is repeated till the trains collide. If the speed of the trains is 25 km/h and that of the bird is 100km/h. How much did the bird travel till the collision. Ans: 100kms.

15. Four persons A, B, C and D are playing cards. Each person has one card, laid down on the table below him, which has two different colors on either side. The colors visible on the table are Red, Green, Red and Blue. They see the color on the reverse side and give the following comment. A: Yellow or Green B: Neither Blue nor Green C: Blue or Yellow D: Blue or Yellow Given that out of the 4 people 2 always lie find out the colors on the cards each person. Ans.

16. Sometime after 10: 00 PM a murder took place. A witness claimed that the clock must have stopped at the time of the shooting. It was later found that the position of both the hands were the same but their positions had interchanged. Tell the time of the shooting (both actual and claimed) . Ans: Time of shooting = 11: 54 PM Claimed Time = 10: 59 PM

17. Some statements are given below: L says all of my other four friends have money M says that P said that exactly one among them has money N says that L said that precisely two among them have money O says that M said that three of the others have money P, L and N said that they have money All the above statement are false. Who has money & who doesn't have any money? Ans.

18. The Bulls, Pacers, Lakers and Jazz ran for a contest. Anup, Sujit, John made the following statements regarding results. Anup said either Bulls or Jazz will definitely win Sujit said he is confident that Bulls will not win John said he is confident that neither Jazz nor Lakers will win When the result came, it was found that only one of the above three had made a correct statement. Who has made the correct statement and who has won the contest. Ans: Sujith; Lakers

19. There are five persons with surnames Mukherjee, Misra, Iyer, Patil and Sharma. There are 4 persons having first or middle name of Kumar, 3 persons with Mohan, 2 persons with Dev and 1 Anil. Either Mukherjee and Patil have a first or middle name of Dev or Misra and Iyer have their first or middle name of Dev. Of Mukherkjee and Misra, either both of them have a first or middle name of Mohan or neither have a first or middle name of Mohan. Either Iyer or Sharma has a first or middle name of Kumar but not both. Who has the first or middle name of Anil? Ans: Kumar Misra Dev, Mohan Iyer Dev, Kumar Patil Mohan, Mohan Sharma Kumar

20. Ann, Boobie, Cathy and Dave are at their monthly business meeting. Their occupations are author, biologist, chemist and doctor, but not necessarily in that order. Dave just told the biologist that Cathy was on her way with doughnuts. Ann is sitting across from the doctor and next to the chemist. The doctor was thinking that Boobie was a goofy name for parent's to choose, but didn't say anything. What is each person's occupation? Ans: Since Dave spoke to the biologist and Ann sat next to the chemist and across the doctor, Cathy must be the author and Ann the biologist. The doctor didn't speak, but David did, so Bobbie is the doctor and Dave the chemist.

21. There are 6 volumes of books on a rack kept in order (i.e.. . , vol. 1, vol. 2 and so on) . Give the position after the following changes were noticed. All books have been changed Vol. 5 was directly to the right of Vol. 2 Vol. 4 has Vol. 6 to its left and both weren't at Vol. 3's place Vol. 1 has Vol. 3 on right and Vol. 5 on left An even numbered volume is at Vol. 5's place Find the order in which the books are kept now. Ans: 2, 5, 1,3, 6,4

22. A soldier looses his way in a thick jungle. At random he walks from his camp but mathematically in an interesting fashion. First he walks one mile East then half mile to North. Then $\frac{1}{4}$ mile to West, then $\frac{1}{8}$ mile to South and so on making a loop. Finally how far he is from his camp and in which

direction Ans: Distance traveled in north and south directions: $\frac{1}{2}$ - $\frac{1}{8}$ + $\frac{1}{32}$ - $\frac{1}{128}$ + $\frac{1}{512}$ -_____ = $\frac{1}{2}$ / (1- (- $\frac{1}{4}$)) Similarly in east and west directions: 1- $\frac{1}{4}$ + $\frac{1}{16}$ - $\frac{1}{64}$ + $\frac{1}{256}$ ... = 1/ (1- (- $\frac{1}{4}$)) Add both the answers

23. Conversation between two mathematicians: First: I have three children. The product of their ages is 36. If you sum their ages, it is exactly same as my neighbor's door number on my left. The second mathematician verifies the door number and says that it is not sufficient. Then the first says "Ok one more clue is that my youngest is really the youngest" Immediately the second mathematician answers. Can you answer the question asked by the first mathematician? What are the children ages? Ans 1,6 and 6

24. 500 men are arranged in an array of 10 rows and 50 columns according to their heights. Tallest among each row of all are asked to fall out. And the shortest among them is A. Similarly after resuming that to their original positions that the shortest among each column are asked to fall out. And the tallest among them is B. Now who is taller among A and B? Ans. A

25. There are six boxes containing 5, 7, 14, 16,18, 29 balls of either red or blue in color. Some boxes contain only red balls and others contain only blue. One sales man sold one box out of them and then he says, "I have the same number of red balls left out as that of blue" Which box is the one he sold out? Ans: Total no of balls = 89 and (89- $\frac{29}{2}$) = $\frac{60}{2}$ = 30 and also 14 + 16 = 5 + 7 + 18 = 30

26. Ram Singh goes to his office in the city, every day from his suburban house. His driver Gangaram drops him at the railway station in the morning and picks him up in the evening. Every evening Ram Singh reaches the station at 5 o'clock. Gangaram also reaches at the same time. One day Ram Singh started early from his office and came to the station at 4 o'clock. Not wanting to wait for the car he starts walking home. Mangaram starts at normal time, picks him up on the way and takes him back house, half an hour early. How much time did Ram Singh walk? Ans.

27. A family X went for a vacation. Unfortunately it rained for 13 days when they were there. But whenever it rained in the mornings, they had clear afternoons and vice versa. In all they enjoyed 11 mornings and 12 afternoons. How many days did they stay there totally? Ans: 18

28. There are N coins on a table and there are two players A & B. You can take 1 or 2 coins at a time. The person who takes the last coin is the loser. A always starts first. If N = 7

     a. A can always win by taking two coins in his first chance

     b. B can win only if A takes two coins in his first chance.

     c. B can always win by proper play

     d. none of the above

29. Ans.

30. Mr. Mathurs jewels have been stolen from his bank locker. The bank has lockers of 12 people which are arranged

in an array of 3 rows and 4 columns like:

1 2 3 4

5 6 7 8

9 10 11 12

The locker belonging to JONES was to the right of BLACK's locker and directly above MILLAR's.

BOOTH's locker was directly above MILLAR's.

SMITH's locker was also above GRAY's (though not directly) .

GREEN's locker was directly below SMITH's.

WILSON's locker was between that of DAVIS and BOOTH.

MILLAR's locker was on the bottom row directly to the right of HERD's.

WHITE's locker was on the bottom right hand corner in the same column as BOOTH's.

Which box belonged to Mr. Mathurs?

Ans: Box number 9 belongs to Mr. Mathurs.