

# DI MIXED –1

**DIRECTIONS for Questions 1 to 5: Answer the questions on the basis of the information given below.**

In an organization, the salary components of four employees viz S, Y, M and V are shown below. The salary consists of four parts - Basic, DA, HRA and Bonus. HRA depends upon employee's city of residence and bonus depends upon the percentage of sales targets achieved by the employees. Table - I shows the detail of basic and DA of the four employees. Each employee resides in a city of a different class as shown in the Table - III and earns a different amount in bonus as shown in the Table - II

Table - I

Employees	Basic (in Its.)	DA as % of Basic
<b>S</b>	10000	40
<b>Y</b>	12000	35
<b>M</b>	8000	30
<b>V</b>	12000	25

Table - II

Sales target achieved	Bonus (Rs.)
<b>100%</b>	10000
<b>90%</b>	8000
<b>80%</b>	6000
<b>70%</b>	5000

Table - III

Class of City	HRA(Rs.)
<b>Metro</b>	7000
<b>A</b>	5000
<b>B</b>	4000
<b>C</b>	2000

- S lives in Delhi and has achieved the lowest percentage sales target.
- Y lives in Pune and M lives in Raipur.
- V lives in Bokaro and has achieved a lower percentage sales target than that achieved by Y. She gets Rs. 8000 in Bonus.
- Delhi is a Metro class city, Pune is a B class city and Bokaro is a C class city.
- Total tax on the salary = 30% of Basic + 20% of HRA + 10% of Bonus. DA is exempted from tax.

- What is the salary of V?  
a) Rs. 25000      b) Rs. 20000      c) Rs. 32000      d) Rs. 26000      e) Rs. 21400
- What is the total tax on the salary of S?  
a) Rs. 5100      b) Rs. 5400      c) Rs. 4000      d) Rs. 4800      e) Rs. 4900
- The total tax on Y's salary is approximately what percent of his salary?  
a) 20%      b) 18%      c) 15%      d) 22%      e) 25%
- The DA component of M's salary is what percent of the HRA component of his salary?  
a) 60%      b) 50%      c) 55%      d) 48%      e) 75%
- For which of the employees, tax as a percentage of salary is the highest?  
a) S      b) Y      c) M      d) V      e) Both V and Y

**DIRECTIONS for Questions 6 to 10: Answer the questions on the basis of the information given below.**

Eight cabinet ministers A, B, C, D, E, F, G and H from India visited one or more than one out of the six different countries Germany (GER), Russia (RUS), USA (USA), Brazil (BRZ), Pakistan (PAK) and Chile (CHI) in the year 2007. If any of the given cabinet ministers visited a country, it was said to be one "Visit" by that cabinet minister to that particular country. The maximum and the minimum possible number of visits by any of the given cabinet ministers to any of these given countries were six and two respectively. The given table provides details about the number of "Visits" to each of the given countries.

Each of the given countries was visited by five different cabinet ministers. The following table also lists down the different cabinet ministers that visited each of the given countries.

	Total number of visits	Cabinet Ministers				
GER	10	H	D	B	E	C
RUS	27	A	F	G	D	H
USA	19	F	B	C	A	G
BRZ	13	G	A	F	C	E
PAK	18	H	C	B	A	D
CHI	28	B	D	E	G	H

6. How many out of the given cabinet ministers have visited more number of countries than E but lesser number of countries than C in the year 2007?  
a) Zero                      b) One                      c) Four                      d) Three                      e) Two

**Additional Information for questions 7 and 8:**

The prime minister formed distinct groups such that each group had three of the given cabinet ministers, out of which one was G. Also, there were at least two countries which have been visited by all the cabinet ministers in the group.

7. The total number of groups formed by the prime minister is  
a) Five                      b) Six                      c) Four                      d) Two                      e) Three
8. What is the ratio of the number of groups in which the countries that have been visited by all the cabin ministers is 3 to the groups in which the countries that have been visited by all the cabinet ministers is 2?  
a) 1 : 1                      b) 1 : 4                      c) 2 : 3                      d) 1 : 3                      e) 1 : 2
9. The total number of "Visits" by C in the year 2007 could not be more than  
a) 19                      b) 20                      c) 18                      d) 17                      e) 16
10. The total number of "Visits" by D in the year 2007 could not be less than  
a) 12                      b) 11                      c) 10                      d) 9                      e) 13

**DIRECTIONS for Questions 11 to 14: Answer the questions on the basis of the information given below.**

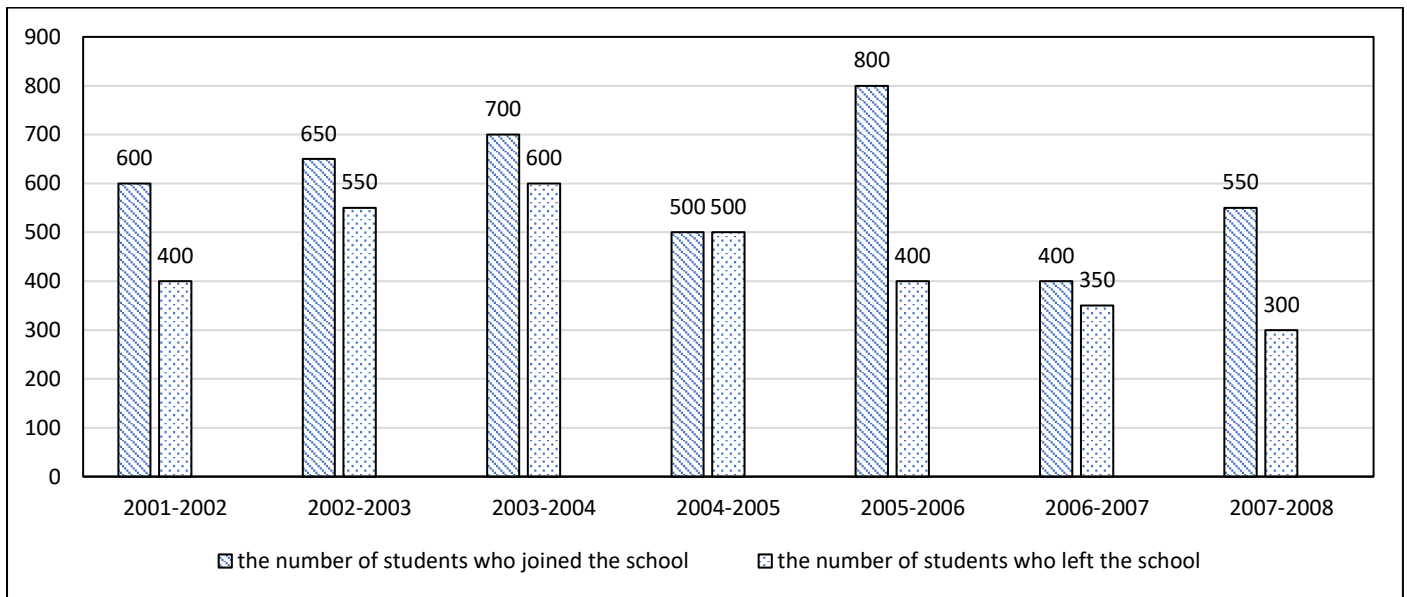
ABC College has junior, Senior and Post Graduation (PG) sections. The total number of students studying in the college is 1000.

	Boys	Girls	Percentage
Junior	450		
Senior			
PG			10
Percentage		40	

11. If the number of boys in Senior and PG sections combined is not less than the number of girls in these two sections combined. Then what is the maximum possible number of students in the senior section?  
a) 199                      b) 210                      c) 200                      d) 196                      e) 201
12. If the ratio of boys to girls in the junior section is one third of that in the other two sections combined, then the ratio of boys to girls in the PG section cannot be:  
a) 3 : 2                      b) 17 : 3                      c) 7 : 3                      d) 11 : 9                      e) 13 : 7
13. In the month of December, the college organizes a sports event. 10% of boys from the senior section and 20% of girls from the junior section participate in the event. If the number of girls in the senior section is 90 and if 'n' stands for the number of participants in the sports event, then which of the following statements is true?  
a)  $57 \leq n \leq 62$                       b)  $57 \leq n \leq 67$                       c)  $55 \leq n \leq 65$   
d)  $50 \leq n \leq 62$                       e) None of these
14. In the month of April, exams were conducted. The number of boys who passed the exam exceeds the number of girls who passed the exam by 60. x% of boys pass the exam and (x + 15)% of girls passed the exam. How many students in all failed the exam?  
a) 220                      b) 660                      c) 300                      d) 340                      e) CBD

**DIRECTIONS for Questions 15 to 17: Answer the questions on the basis of the information given below.**

A school was started in the academic year 2001-2002. The following bar graph gives the number of students who joined in the beginning of each academic year, from 2001-2002 to 2007-08, and also the number of students who left the school at end of each academic year, from 2001-2002 to 2007-2008.



Any student can join the school only at the beginning of an academic year and can leave the school only at the end of an academic year.

In any academic year, the annual fee for all students, irrespective of the class in which they study, is the same. The following table gives the annual fee per student in each academic year, from 2001-2002 to 2007-2008.

Academic year	2001-02	2002-03	03-04	04-05	05-06	06-07	07-08
Annual fee (Rs)	18000	19500	21000	20600	19900	18400	21300

15. What is the maximum possible number of students who have left the school after studying for exactly three consecutive academic years, during the period 2001-02 to 2007-08  
 a) 700                      b) 900                      c) 1400                      d) 1500                      e) None of these
16. What is the minimum of students each of whom would have paid a total fee of at least Rs. 40000, during the period 2001-2002 to 2007-08?  
 a) 600                      b) 800                      c) 850                      d) 450                      e) none of these
17. What is the minimum possible number of student who studied for not more than one academic year, during the period 2001-02 to 2007-08?  
 a) 800                      b) 1150                      c) 750                      d) 1050                      e) none of these

**DIRECTIONS for Questions 18 to 22: Answer the questions on the basis of the information given below.**

Two traders, Chetan and Michael, were involved in the buying and selling of MCS shares over five trading days. At the beginning of the first day, the MCS share was priced at Rs 100, while at the end of the fifth day it was priced at Rs 110. At the end of each day, the MCS share price either went up by Rs 10, or else, it came down by Rs 10. Both Chetan and Michael took buying and selling decisions at the end of each trading day. The beginning price of MCS share on a given day was the same as the ending price of the previous day. Chetan and Michael started with the same number of shares and amount of cash, and had enough of both. Below are some additional facts about how Chetan and Michael traded over the five trading days.

- 1) Each day if the price went up, Chetan sold 10 shares of MCS at the closing price. On the other hand, each day if the price went down, he bought 10 shares at the closing price.
- 2) If on any day, the closing price was above Rs 110, then Michael sold 10 shares of MCS, while if it was below Rs 90, he bought 10 shares, all at the closing price.

18. If Chetan sold 10 shares of MCS on three consecutive days, while Michael sold 10 shares only once during the five days, what was the price of MCS at the end of day 3?  
 a. Rs 90                      b. Rs 100                      c. Rs 110                      d. Rs 120                      e. Rs 130

19. If Chetan ended up with Rs 1300 more cash than Michael at the end of day 5, what was the price of MCS share at the end of day 4?
- a. Rs 90                      b. Rs 100                      c. Rs 110                      d. Rs 120                      e. Not uniquely determinable
20. If Michael ended up with 20 more shares than Chetan at the end of day 5, what was the price of the share at the end of day 3?
- a. Rs 90                      b. Rs 100                      c. Rs 110                      d. Rs 120                      e. Rs 130
21. If Michael ended up with Rs 100 less cash than Chetan at the end of day 5, what was the difference in the number of shares possessed by Michael and Chetan (at the end of day 5)?
- a. Michael had 10 less shares than Chetan.  
b. Michael had 10 more shares than Chetan.  
c. Chetan had 10 more shares than Michael,  
d. Chetan had 20 more shares than Michael.  
e. Both had the same number of shares.
22. What could have been the maximum possible increase in combined cash balance of Chetan and Michael at the end of the fifth day?
- a. Rs 3700                      b. Rs 4000                      c. Rs 4700                      d. Rs 5000                      e. Rs 6000