Directions: Q. No. 1 to 5: Study the following information carefully to answer these questions.

Six persons A, B, C, D, E and F are sitting in two rows, three in each. E is not at the end of any row. D is second to the left of F. C, the neighbor of E, is sitting diagonally opposite to D. B is the neighbor of F.

1. Which of the following are sitting diagonally opposite to each other?
   a. F and C
   b. D and A
   c. A and C
   d. A and F
   Answer: d. A and F

2. Which of the following are in the same row?
   a. A and E
   b. E and D
   c. C and B
   d. A and B
   Answer: a. A and E

3. Which of the following are in one of the two rows?
   a. FBC
   b. CEB
   c. DBF
   d. AEF
   Answer: C. DBF

4. After Interchanging seat with E, who will be the neighbors of D in the new position?
   a. C and A
   b. F and B
   c. Only B
   d. Only A
   Answer: a. C and A

5. Which of the following occupies the middle positions in both the rows?
   a. B and F
   b. A and C
   c. B and E
   d. E and C
   Answer: c. B and E

6. A train moves at a constant speed of 120 km/hr for 1 km and at 40 km/hr for the next 1 km. What is the average speed of the train.
   a. 48 kmph
   b. 50 kmph
   c. 80 kmph
   d. 60 kmph
   Answer: d. 60 kmph

7. A can do a piece of work in 20 days and B can do it in 15 days and C can finish it in 25 days, then how long will they take to complete the work?
   a) 6(18/47) days
   b) 12 days
   c) 2(8/11) days
   d) 47(6/18) days
   Answer: a. 6(18/47) days
8. Nishu and Archana can do a piece of work in 10 days and Nishu alone can do it in 12 days. In how many days can Archana do it alone?
   a) 60 days  
   b) 30 days  
   c) 50 days  
   d) 45 days  

   Answer: a. 60 days

9. A and B undertake to do a piece of work for Rs.100. A can do it in 5 days and B can do it in 10 days. With the help of C, they finish it in 2 days. How much should C be paid for his contribution?
   a) Rs.40  
   b) Rs. 20  
   c) Rs. 60  
   d) Rs. 30  

   Answer: a. Rs.40

10. In the following figures two six fold cubes are given. Each side of the cube is painted as shown in these figures. These sides are White, Yellow, Orange, Red, Blue. Studying the arrangement of colours tell when Blue colour is on top which colour will the bottom have?

   (i)  
   (ii)  
   (iii)  

   (a) Red  
   (b) Green  
   (c) Orange  
   (d) Yellow  

   Answer: d. Yellow

11. Given below are three different positions of a dice. Find the number of dots on the face opposite the face bearing 3 dots.

   (i)  
   (ii)  
   (iii)  

   (a) 4  
   (b) 5  
   (c) 6  
   (d) Cannot be determined  

   Answer: c. 6

12. What is the unit digit in the product \((3^{65} \times 6^{59} \times 7^{71})\)?

   A. 1  
   B. 2  
   C. 4  
   D. 6  

   Answer: c.4

13. If the number 653xy is divisible by 90, then \((x + y) = ?\)

   A. 2  
   B. 3  
   C. 4  
   D. 6  

   Answer: C. 4
14. If the number 517*324 is completely divisible by 3, then the smallest whole number in the place of * will be:
   - A. 0
   - B. 1
   - C. 2
   - D. None of these

   Answer: C. 2

Directions (Q.No. 15 - 17): The six winners – K, L, M, N, O and P – of a national science contest each won a college scholarship. The prizes for first through sixth place were $30,000, $25,000, $20,000, $15,000, $10,000, and $5,000. The following information concerning the winners was released:

O won the $20,000 prize.
K won less money than L did.
The difference between the winnings of M and P was $5,000.
The difference between the winnings of N and P was at least $10,000.

15. Which of the following could be the ranking, from sixth place through first place, of the six students?
   - a. M, P, L, O, N, K
   - c. N, M, K, O, L, P
   - d. M, P, K, O, N, L

   Answer: d. M, P, K, O, N, L

16. If K won $10,000, how much money in total did M and P win?
   - a. $15,000
   - b. $25,000
   - c. $35,000
   - d. $55,000

   Answer: d. $55,000

17. If L won $25,000, which of the following must be true?
   - a. N won $30,000
   - b. K won $15,000
   - c. P won $15,000
   - d. M won $5,000

   Answer: a. N won $30,000

18. A and B are married couple. X and Y are brothers. X is the brother of A. How is Y related to B?
   - a. Brother-in-Law
   - b. Brother
   - c. Son-in-law
   - d. Cousin

   Answer: a. Brother-in-law

19. If
   (i) M is brother of N;
   (ii) B is brother of N; and
   (iii) M is brother of D,

   then which of the following statements is definitely true?
   - a. N is brother of B
   - b. N is brother of D
   - c. M is brother of B
   - d. D is brother of M

   Answer: c. M is brother of B
20. What will come in the place of a question mark?

(a) 5  
(b) 9  
(c) 11  
(d) 13  

Answer: b. 9

21. What number should come in the place of question mark?

(a) 18  
(b) 33  
(c) 135  
(d) 145  

Answer: c. 135

Directions for the following 4 (Four) items:

Examine carefully the following statements and answer four items that follow:

(i) A and B play Football and Hockey  
(ii) C and D play Badminton and Cricket  
(iii) B and C play Cricket and Football  
(iv) A and D play Hockey and Badminton

22. One who plays Badminton, Football and Hockey

(a) A  
(b) B  
(c) C  
(d) D  

Answer: a. A

23. One who plays Badminton, Football and Cricket

(a) A  
(b) B  
(c) C  
(d) D  

Answer: c. C

24. One who plays Cricket, Football and Hockey

(a) A  
(b) B  
(c) C  
(d) D  

Answer: b. B

25. One who does not play cricket

(a) A  
(b) B  
(c) C  
(d) D  

Answer: a. A

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