Surprise Quant sectional Test 4



Directions (1-5): Go through the charts below and answer the questions based on it. The bar-charts shown here represent the earning of a sales executive Mohit. Bar chart (1) gives us the details of his earnings in the four quarters of the year across the five regions - West, North, South, East and Central. Bar chart (2) gives the details of his total earning in the four quarters in three different years. Bar chart (1) is applicable for bar chart (2) and vice-versa.



Q1. Across the given years, which quarter has given the maximum earning to Mohit?

- (a) Qtr 1
- (b) Qtr 2
- (c) Qtr 3
- (d) Qtr 4
- (e) Cannot be determined

Q2. Which region has brought maximum earning for Mohit in the year 2000?

- (a) South
- (b) West
- (c) East
- (d) Central
- (e) North

Q3. What is the difference between Mohit's earning due to the Central zone during 2001 and earning due to the East zone during 2001?

- (a) 4000
- (b) 1000
- (c) 2000
- (d) 3000
- (e) 5000

Q4. What is the maximum difference between any two regional earnings in any quarter? (a) Rs. 15500

- (b) Rs. 13000
- (c) Rs. 14500
- (d) Rs. 17500

(e) None of the above

Q5. Find the percentage change in Mohit's earning due to the south zone during 2001 over the previous year.

- (a) 14%
- (b) 20%
- (c) 25% (d) 33%
- (e) None of the above

Q6. Number of passages she has done on the last day :

- (a) 30
- (b) 41
- (c) 31
- (d)22
- (e) None of these

Q7. Total number of passages that she has completed in those 10 days:

- (a) 84
- (b) 180
- (c) 175
- (d) can't be determined
- (e) None of these

Q8. At the centre of a city's municipal park there is a large circular pool. A fish is released in the water at the edge of the pool. The fish swims North for 300 feet before it hits the edge of the pool. It then turns East and swims for 400 feet before hitting the edge again. What is the area of the pool?

- (a) 62500π
- (b) 125000 π
- (c) 250000π
- (d) 500000π
- (e) Cannot be determined

Q9. Rohan pick up Sohan from college at 3:30 pm. One day Sohan left the college at 2:30 pm, and start walking to home at 6 km/hr. He meets Rohan in the way who start at his normal time and reach home 24 minutes earlier than usual. Find Rohan's speed.

- (a) 24 km/h
- (b) 66 km/h
- (c) 6 km/h
- (d) 36 km/h
- (e) None of these

Q10. 70% of the students who joined XLRI last year play football, 75% play cricket, 80% play basketball and 85% play carom. The minimum percentage of students who play all four games is

(a) 5%

- (b) 10%
- (c) 15%
- (d) 20%
- (e) None of these

Surprise Quant sectional Test 4



11. In an examination a student attempted all 60 questions. He gets 2 marks for every right answer and minus 1 marks for each wrong answer. Find how many wrong questions were he attempted if got total 72 marks ?

1) 48

2) 58

3) 16

4) 20

5) None of these

4) 570

5) None of these

15. A man travels 25% part of the Journey at the speed of 50 km/hr, next 60 % part of the journey at the speed of 40 km/hr. and rest part of the journey at the speed of 20 km/hr. Find average speed of the men during whole journey ?

1) 34 4/11 km/hr

2) 37 4/11 km/hr

- 3) 36 4/11 km/hr
- 4) 80 km/hr
- 5) None of these

12. Average monthly salary of 8 technicians of a workshop was Rs. 1200 and average monthly salary of non-technician was Rs. 300. Find total number of employee of this workshop if average monthly salary of all the employee was Rs. 500 ?

1) 16

2) 36

3) 56

4) 40

5) None of these

13. A shopkeeper buys some quantity of lemon at the rate 3 in Rs. 2 and buys same quantity of lemon at the rate 2 in Rs.3. He sold all of them at the rate 5 in Rs. 5. If during the transaction the shopkeeper losses Rs. 30. Find the quantity of the first types of lemon that he mixed ?

1) 360

2) 280

3) 180

4) 240

5) None of these

14. A shopkeeper gives two successive discount of 50% and 40% respectively. If second discount is Rs. 180. Find selling price of this article ?

1) 900

- 2) 270
- 3) 370

Surprise Quant sectional Test 4



Solutions:

S1. Ans.(c)

Sol. Use the second bar chart. It is a visual inspection solution.

S2. Ans.(d) Sol

Region	Annual earnings for the region (in thousands)			
West	$0.4 \times 10 + 0.3 \times 5 + 0.3 \times 15 = 10$			
North	$0.1 \times 10 + 0.4 \times 5 + 0.1 \times 25 + 0.2 \times 15 = 8.5$			
South	$0.2 \times 10 + 0.2 \times 5 + 0.3 \times 25 = 10.5$			
East	$0.1 \times 5 + 0.2 \times 25 + 0.3 \times 15 = 10$			
Central	$0.3 \times 10 + 0.4 \times 25 + 0.2 \times 15 = 16$			

S3. Ans.(d)

Sol. Mohit's earning due to the Central zone during 2001 = 20000 * 0.3= 6000

Mohit's earning due to the East zone during 2000 = 10000 * 0.3 = 3000Required Difference = 6000 - 3000 = 3000

S4. Ans.(d)

Sol. Maximum quarterly zonal earnings are for central Region during quarter III, 2002 = Rs. 18000

Minimum quarterly zonal earnings are East Region during quarter II, $2000 = \text{Rs.}\ 500$

Hence, Maximum difference = 18000 - 500 = Rs. 17500

S5. Ans.(a)

So	

Region	Annual earnings for the region		
West	$0.4 \times Q1 + 0.3 \times Q11 + 0.3 \times QIV$		
North 0.1×Q1 + 0.4×Q11 + 0.1×Q111 + 0			
South	0.2×Q1+0.2×Q11+0.3×Q111		
East	0.1×Q11 + 0.2×Q111 + 0.3×QIV		
Central	$0.3 \times Q1 + 0.4 \times QIII + 0.2 \times QIV$		

Earning in South Region in 2001 $= 20000 \times 0.2 + 10000 \times 0.2 + 20000 \times 0.3 =$ Rs. 12000 Earning in South Region in 2000 $= 10000 \times 0.2 + 5000 \times 0.2 + 25000 \times 0.3 =$ Rs. 10500 Therefore, percentage change = 1500/10500

Let she did x number of pages on the first day. It means second, third, fourth_{ands} nineth and tenth day she did (x + 3)(x + 6)(x + 9) ... (x + 24) and (x + 27) passages, Now since (x + 24) = 4(x + 3)

 $\Rightarrow 3x = 12$ $\Rightarrow \chi = 4$

Therefore the number of passages she did on the last day = x + 27 = 31.

7. (c) Total number of passages = $x + (x + 3) + (x + 5) \dots + (x + 27)$ $= (4 \times 10) + (3 + 6 + 9 + ... + 27)$ $=40 + 3(1 + 2 + 3 + \ldots + 9)$ =40 + 135 = 175

West East South

From this diagram, it is easy to understand that $\angle B$ is a right angle. Now, since $\triangle ABC$ is a right angle triangle, so AC must pass through the centre of the circle and thus AC is the diameter of the circle. Now, In $\triangle ABC$, $AC^2 = AB^2 + BC^2 \Rightarrow AC = 500$ It means radius of the circle $=\frac{500}{2}=250$ ft. Therefore, area of the circle $=\pi(250)^2=62500\pi$ sq ft Hence, choice (a) is the correct one.

8. (a) Have a look at the following diagram to get a better picture of what you need to understand.

9. (a)				
A <	- Rohan -	-> <	— 5ohan —	> B
Home -+		P		← College
				Soltan

+-2:30 PM Let P is a point where the Rohan and Sohan meets. They reached home 24 min earlier because Sohan left the college 1 hour earlier and meet Rohan on the way at P. They saved 24 min because they did not travel the distance $_{\overline{PB}}^{0}$ and $_{\overline{DP}}^{0}$.

Time take by <u>Rohan</u> in travelling this distance $=\frac{24}{2}=12$ min. It means Rohan meets Sohan at P on 3:18 pm. Now, distance of PB = $6 \times \frac{49}{60} = \frac{49}{10}$ km This distance covers by Roahn in 12 min. his speed = $\frac{49}{10 \times 12} \times 60 = 24$ km/hr

10. (b) The minimum percentage of students who play all four games $= 100 - \{(100 - 70) + (100 - 75) + (100 - 80) + (100 - 85)\}$ = 100 - (90) = 10

Hence, choice (b) is the correct one.

11). 3

Let he attempted 'x' correct and 'y' wrong question

2x - y = 72----- (I) and x + y = 60 ----- (II)

Solving (I) and (II) x = 44, y = 16

12). 2

Let number of non technician = x

 $1200 \times 8 + 300 \times x = (8 + x) \times 500$

9600 + 300 x = 500 x + 4000

Total employee = 8 + 28 = 36

13). 3

Let no. of Ist type lemon = No. of IInd type lemon = x

$$CP = 2x/3 + 3x/2 = 13x/6$$

$$SP = 2x * 5/5 = 2x$$

$$13x/6 - 2x = 30$$





13x - 12x = 180

x = 180

14). 2

Let cost of article after Ist discount is x

x * 40/100 = 180

x = 450

SP after IInd discount = 450 - 180 = 270

15). 3

Let total distance is 100KM

T1 = 25/50 = 1/2 hour

T2 = 60/40 = 3/2 hour

T3 = 15/20 = 3/4 hour

T = 1/2 + 3/2 + 3/4 = 11/4 hour

Avg speed = 100/(11/4) = 36 4/11 km/hr