Date Interpretation Info Chart Questions Quiz for SBI PO Pre, IBPS PO Pre, SBI Clerk Mains and IBPS Clerk Mains Exams.

DI Info Chart Quiz 10

Directions: Study the given information carefully to answer the questions.

Ram goes to a hill station by car. While going upwards (uphill) the consumption of petrol was increased by 25% of the normal consumption of petrol but while going downwards (downhill) the consumption of petrol was decreased by 50% of the normal consumption of petrol. He goes from the point A to the point B. The total distance between point A and point B is 525 km in which the total distance travelled by him uphill is 2.5 times of the total distance travelled by him downhill and the total distance travelled by him on the plane surface is 140 km. While coming back from the point B to point A, he saves 15 litres of petrol and the consumption of petrol is normal on plane surface.

1. What is the mileage of the car on downhill?

A. 1 litre per 10 kilometers
B. 1 litre per 15 kilometers
C. 1 litre per 17.5 kilometers
D. 1 litre per 15.5 kilometers
E. None of these

2. If point A to point B were a plane surface then how many litres of petrol he would have consumed more while going and coming back?

A. 12 litres
B. 18.33 litres
C. 15.33 litres
D. 11.67 litres
E. 12.67 litres

3. The quantity (in litres) of petrol consumed for the entire journey (from point A to point B and from point B to point A) is

A. 114.4 litres
B. 145.2 litres
C. 120.4 litres
D. 110.5 litres
E. 115.6 litres

4. If the speed of car is 55 km per hour on the plane surface and while going uphill, the car's speed was decreased by 25% of the normal speed and while going downhill the car's speed was increased by 50% of the normal speed then approximately how much time he would have taken during the entire journey? (if he returns immediately from point B to point A)

A. 21.09 hours
B. 19.09 hours
C. 19.90 hours
D. 21.10 hours
E. 21.90 hours

5. What is the difference between the mileage of car on downhill and that on uphill?

A. 1 litres per 33 kilometres
B. 1 litres per 22 kilometres
C. 1 litres per 11 kilometres
D. 1 litres per 9 kilometres
E. 1 litres per 10 kilometres

Correct Answers:

1	2	3	4	5
E	D	E	B	C

Common explanation :

Let the normal consumption of petrol = 4x litres per kilometre

While going Uphill, consumption of petrol = 5x litres per km (While going upwards (uphill) the consumption of petrol was increased by 25% of the normal consumption of petrol)

While going downhill, consumption of petrol = 2x litres per kilometre (while going downwards (downhill) the consumption of petrol was decreased by 50% of the normal consumption of petrol)

The total distance between A and B = 525 KM

Let the total distance travelled by him downhill = d km then, the total distance travelled by him uphill = 2.5d km

According to the question,
$2.5d + d + 140 = 525$

By solving, $d = \frac{385}{3.5} = 110$ km

Total uphill distance = 110 × 2.5 = 275 km

Total downhill distance = 110 km

While going from the Point A to point B, the car will consume total petrol of

5x × 275 + 2x × 110 + 4x × 140 litres = 2155x litres .....(i)

While coming from point B to point A, plane surface will be plane only but downhill distance will become uphill and the uphill distance will become downhill then plane surface distance = 110 km

Downhill distance = 275 km, uphill distance = 110 km

The total consumption of petrol while coming back from the point B to point A = 2X × 275 + 5X × 110 + 4X × 140 = 1660x litres ..... (II)

According to the question, while coming back from the point B to point A, he saves 7 litres of petrol

It means, 2155x – 1660x = 15 litres

$x = \frac{15}{495} = \frac{1}{33}$

Answers :-

1. Following the common explanation, we get

2x litre per kilometre = $\frac{2}{33}$ litre per kilometre

= 1 litre per 16.5 kilometres

Hence, option E is correct.

2. Following the common explanation, we get

The total petrol consumption while going and coming back

$= \frac{2155}{33} + \frac{1660}{33} = \frac{3815}{33}$ litres

The mileage of car on the plane surface = 4x litre per km

$= 4 \times \frac{1}{33}$ litre per kilometre

While going and coming back, the total distance = 525 × 2 = 1050 km

1 km = $\frac{4}{33}$ litre

1050 km = $1050 \times \frac{4}{33}$ litre = $\frac{4200}{33}$ litres

Reqd. difference = $\frac{4200}{33} - \frac{3815}{33} = \frac{385}{33}$ litres = 11.67 litres

Hence, option D is correct.

3. Following the common explanation, we get

The total petrol consumption while going and coming back

$= \frac{2155}{33} + \frac{1660}{33} = \frac{3815}{33}$ litres = 115.6 litres

Hence, option E is correct.

4. Following the common explanation, we get

While going from Point A to point B, Distance = 275 km uphill + 110 km downhill + 140 km on the place surface -------- (i)

While coming back from the point B to point A

Distance = 140 km on the plane surface + 110 km uphill + 275 km downhill ------- (ii)

The total distance while going and coming back = 280 km on the plane surface + 385 km uphill + 385 km downhill (by adding equation (i) and equation (ii))

On the plane surface, the speed of car = 55 km per hr

On uphill, the speed of the car = 75% of 55 = 41.25 km per hour

On downhill, the speed of the car = 150% of 55 = 82.50 km per hour

The total time taken = $\frac{280}{55} + \frac{385}{41.25} + \frac{385}{82.50}$

= 5.09 + 9.33 + 4.67 = 19.09 hours approximately

Hence, option B is correct.

5. Following the common explanation, we get

The required difference = 5x – 2x = 3x = 3/33 = 1/11 litres per kilometres = 1 litres per 11 kilometres

Hence, option C is correct.